

# **SELF- ASSESSMENT OF FMI PRINCIPLES**

**INDIA INTERNATIONAL CLEARING  
CORPORATION (IFSC) LIMITED  
("India ICC")**

**2021**

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**Responding institution**

India International Clearing Corporation (IFSC) Ltd. (“INDIA ICC”)

**Jurisdiction(s) in which the FMI operates**

India (Special Economic Zone)

**Authorities regulating, supervising or overseeing the FMI**

International Financial Services Centres Authority (IFSC Authority)

The month of this disclosure is March 2021.

This disclosure can be found at: [www.indiaicc.com](http://www.indiaicc.com)

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## Executive Summary

### About INDIA ICC

India ICC is a Qualifying Central Counterparty (QCCP), regulated by the IFSC Authority since October 1, 2020. Prior to October 1, 2020, India ICC was regulated by the Securities and Exchange Board of India (SEBI). India ICC is also recognised as a third country central counterparty (TC-CCP) by the European Securities Markets Authority (ESMA) and the Bank of England. India ICC was the first clearing corporation to be established at the International Financial Services Centre, GIFT City, Gandhinagar, Gujarat, India. India ICC commenced operations from January 16, 2017. India ICC presently provides clearing & settlement, risk management and collateral management services to the India International Exchange (IFSC) Ltd. (India INX). List of products cleared by India ICC are provided as Annexure 1.

India ICC observes the CPMI – IOSCO Principles of Financial Market Infrastructures (PFMI). India ICC follows the best practices of Corporate Governance which is reflected through its Board structure, management team, various policies, rules, regulations and bye-laws. INDIA ICC has developed various systems to monitor and manage members' exposure and risk. The Collateral System ("CLASS") developed by INDIA ICC, keeps track of the collaterals deposited by the Clearing Members with INDIA ICC on a real-time basis and the Real Time Risk Management System (RTRMS) monitors on a real time basis the permissible exposure for a Clearing Member based on the collaterals deposited by the member. INDIA ICC has established categories of admissible Clearing Members and admission criteria and strictly monitors members' net worth, collaterals, exposures, compliances with rules, regulations and byelaws of INDIA ICC etc. India ICC conducts its funds settlement through seven clearing banks presently, namely ICICI Bank Ltd., State Bank of India, Kotak Bank Ltd., YES Bank Ltd., HDFC Bank Ltd., IndusInd Bank Ltd. and Axis Bank Ltd. and has entered into agreements with these banks for their services. INDIA ICC has developed an integrated and comprehensive risk management framework, which has been approved by its Board, to monitor, manage and report on all relevant risks. India ICC's risk management policies, procedures, systems and controls form a part of a coherent and consistent governance framework which is reviewed and updated regularly. Besides this INDIA ICC has also developed an Investment Policy, Inspection Policy, Information Security Policy, BCP / DR Policy, HR Policy etc. Periodical Audits viz. System Audits, Collateral Audit, Internal Audit, Statutory Audit etc. are conducted at INDIA ICC to assess areas of performance and efficiency of processes and systems. INDIA ICC has also created a dedicated Default Fund, which is readily and unconditionally available to meet settlement obligations of INDIA ICC in case of Clearing / Custodian member(s) failing to honour settlement obligation. INDIA ICC conducts daily stress tests, reverse stress tests, back testing, liquidity stress tests etc. to ensure robustness of risk management framework and adequacy of its default fund.

## Overview

### Governance

India ICC follows the best practices of Corporate Governance which is reflected through its Board Structure, management team, various policies, rules, regulations and bye-laws.

India ICC has a Board comprising of 5 directors. The Company's management team consists of Managing Director & CEO, Chief Risk & Regulatory Officer, Chief Information Security Officer, Chief Financial Officer and Company Secretary.

The Company has framed and implemented the following policies for effective functioning:

- a. Risk Management Policy as per PFMI
- b. Information Security Management Policy
- c. Inspection Policy for Clearing Members
- d. Code of Ethics Policy
- e. Conflict of Interest Policy
- f. Board evaluation Policy
- g. Investment Policy

The Company has framed its Bye-Laws, Rules and Regulations which are approved by the regulator.

### Novation

INDIA ICC undertakes to act as the central counterparty to all the trades executed on the India INX (Exchange) and provides full novation, unless specified otherwise.

In essence, INDIA ICC splits the original contract between the initiating counterparties into two new contracts; one each between INDIA ICC and the initiating counterparties. The initiating parties are only exposed to INDIA ICC and no longer face the other initiating party's credit risk. Elimination of counterparty risk is achieved through the process of novation and the interposition of INDIA ICC as the common counterparty. Novation enables INDIA ICC to be the universal counterparty to all contracts and allows greater flexibility and discretion in its clearing and settlement practices.

### Collateral System

The Collateral System ("CLASS"), keeps track of the collateral deposited by the Clearing Members with INDIA ICC on a real-time basis. CLASS maintains the utilized and unutilized collateral for all members; asset-wise and instrument-wise, with valuation done after applying applicable haircut, if any. The Collateral system is also made available to

the members on a free-of-cost basis through which they can themselves add collateral, withdraw excess unutilized collateral etc.

## Real-Time Risk Management System

INDIA ICC employs a robust real-time risk management system in which the permissible exposure for a Clearing Member is based on the collateral deposited by the member with INDIA ICC. The Real-time Risk Management System (“RTRMS”), accepts the trades from the trading engine on a real-time basis. RTRMS calculates the margin at client level, on a near real-time basis and blocks it in the collateral system CLASS. The RTRMS system is also made available to the members on a free-of-cost basis through which they can monitor their risk profile as well as the risk profile of their trading members and the clients. The RTRMS system also generates various alerts at different collateral utilization levels (70%, 80% and 90%) and disables the trading terminal of a member when the collateral utilization exceeds 90%.

## Membership

INDIA ICC ensures equal, unrestricted, transparent and fair access to all persons without any bias towards their associates and related entities. INDIA ICC has established categories of admissible Clearing Members and admission criteria. The different categories of members, costs, fees, penalties, to be borne by members are also available on the website

## Types of Membership

No.	Type	Description
1	Self Clearing Member (SCM)	A member of the Exchange and the Clearing Corporation who executes trades and clears and settles the trades executed on his own account as well as on account of his clients.
2	Trading Cum Clearing Member (TCM)	A member of the Exchange and the Clearing Corporation who executes trades on his own account as well as on account of his clients and clears and settles trades executed by himself as well as by other trading members who choose to use clearing services of the Member.

No.	Type	Description
3	Professional Clearing Member (PCM)	A member of the Clearing Corporation who does not trade either for themselves or on behalf of their clients but only clears and settles trades of such trading members of the Exchange who choose to clear and settle their trades through the Member.

### Membership Criteria (Networth, Fees, Deposits)

Particulars	SCM	TCM	PCM
Networth	INR 5 Crores	INR 10 Crores	INR 10 Crores
Application processing charge	US \$500	US \$500	US \$500
Security Deposit (Refundable)*	USD 75,000	USD 75,000	USD 75,000

### Clearing Banks

India ICC conducts its fund settlement through seven clearing banks namely ICICI Bank Ltd., State Bank of India, Kotak Bank Ltd., YES Bank Ltd., HDFC Bank Ltd., Indusind Bank Ltd. and Axis Bank. Members may open their settlement accounts with any of the empanelled clearing banks for the purpose of funds settlement of transactions. Clearing Banks are empanelled based on criteria such as networth, infrastructure etc.

### Risk Management

The India International Clearing Corporation (IFSC) Limited (“India ICC”) maintains an integrated and comprehensive view of risk and ensures that its risk management tools can manage and report on, all relevant risks. India ICC’s risk management policies, procedures, systems and controls form a part of a coherent and consistent governance framework which is reviewed and updated regularly.

Participant Exposure and Settlement Default Risk, Credit Risk, Liquidity Risk, Legal Risk, Operational Risk, Custody and Investment Risk, Technology Risk, Clearing Bank Risk etc. are some of the risks that India ICC deals with on a continuous basis. India ICC has a sound framework for the comprehensive management of all material risks and established documented policies, procedures, systems and controls to identify, measure, monitor and manage such risks. India ICC’s risk management policy shall be in accordance with the Principles for Financial Market Infrastructures (“PFMI”) published by the Committee on

Payments and Market Infrastructures (“CPMI”) and the Technical Committee of the International Organization of Securities Commissions (“IOSCO”).

India ICC’s risk control mechanisms include:

- ❖ Periodical Audits viz. System Audits, Collateral Audit, Accounts Audit, Statutory Audit etc.
- ❖ Daily Stress Tests are conducted to assess the adequacy of the Default Fund
- ❖ Back testing to arrive at the adequacy of margins
- ❖ On-line/off-line surveillance is done to monitor risks associated with member’s trading exposure
- ❖ Clearing bank’s net-worth is monitored on a periodic basis
- ❖ Clearing member’s (“CM”) net-worth is monitored on a periodic basis
- ❖ Eligible collateral, as prescribed by the regulator, in the form of cash or cash equivalent and non-cash equivalent, is subject to concentration limits and appropriate haircuts
- ❖ Business Continuity Plan (BCP) plan for systems in place
- ❖ Different categories of admissible Clearing Members (CMs) and admission criteria

Mitigation and management of risk is central to the clearing corporation. India ICC undertakes to act as the central counterparty to all the trades executed on the Stock Exchange for which India ICC clears trades and provides full novation, unless specified otherwise. In essence, India ICC splits the original contract between the initiating counterparties into two new contracts; one each between India ICC and the initiating counterparties. The initiating parties are only exposed to India ICC and no longer face the other initiating party’s credit risk. Elimination of counterparty risk is achieved through the process of novation and the interposition of India ICC as the common counterparty. Novation enables India ICC to be the universal counterparty to all contracts and allows greater flexibility and discretion in its clearing and settlement practices. India ICC remains the counterparty to trades from the time of the execution of the trade until settlement/expiry/delivery.

## **Default Fund**

Inia International Clearing Corporation (IFSC) Limited (“India ICC”) has created a dedicated “Default Fund”, which is readily and unconditionally available to meet settlement obligations of India ICC in case of Clearing / Custodian member(s) (“CMs”) failing to honour settlement obligation.

## **Corpus of Default Fund**

The corpus of the fund may be utilised to meet out, inter-alia, the contingencies arising on account of failure of any member(s). The risk or liability to the fund would depend on various factors such as trade volume, open positions, maximum settlement liability of the members, the history of defaults, capital adequacy of the members, the degree of safety



measures employed by the clearing corporation etc. In order to assess the fair quantum of the corpus of Default Fund, India ICC would consider the following factors:

1. Risk management system in force
2. Track record of defaults of members (number of defaults, amount in default)

However, Minimum Default Fund (“MDF”) size for would be subject to the following:

- (i) The MDF shall be fixed for a month.
- (ii) By 15th of every month, India ICC shall review and determine the MDF for next month based on the results of daily stress tests of the preceding month. (For example, by 15th February, India ICC shall determine MDF for March based on results of various stress tests conducted in January). India ICC shall also review and determine by 15th of every month, the adequacy of contributions made by various contributors and any further contributions to the Default Fund required to be made by various contributors for the next month.
- (iii) For every day of the preceding month (i.e., January as per example in (ii) above), uncovered loss numbers shall be estimated by the various stress test scenarios (with or without weightages) for credit risk conducted by the India ICC and highest of such numbers shall be taken to arrive at the worst case loss number for the day.
- (iv) Average of all the daily worst case loss numbers determined in (iii) above shall be calculated.
- (v) The MDF for next month (i.e., March as per example in (ii) above) shall be highest of MDFs for the preceding months.
- (vi) Contribution towards Default Fund in excess of MDF may be released by India ICC to the contributors on a pro-rata basis.

## **Default Waterfall**

1. Monies of defaulting member (including defaulting member's primary contribution to Default Fund(s))
2. Insurance, if any
3. India ICC and Exchange's contribution to Default Fund to the extent of at least 5% of the MDF
4. Remaining Default Fund: (i) Penalties (ii) India ICC's contributions to the extent of at least 10% of the MDF (iii) Remaining Default Fund: India ICC's contribution, Exchange's contribution and non-defaulting members' primary contribution to Default Fund on pro-rata basis.
5. Remaining India ICC resources (excluding clearing corporation's contribution to any other funds and amount required for recovery and resolution)
6. Capped additional contribution by non-defaulting members (subject to a cap of USD 50,000)\*
7. Any remaining loss to be covered by way of pro-rata haircut of variation margin gains for the settlement day of the default(s)

*\*In case of any such additional contribution being called, India ICC may not call for additional contribution from such members for next 30 calendar days.*

## **Margining Framework**

A strong and robust Margining Framework is at the heart of India ICC's Risk Management Policy. The margining framework is designed keeping in mind best practices prevalent globally and is in accordance with the Principles for Financial Market Infrastructures ("PFMI") published by the Committee on Payments and Market Infrastructures ("CPMI") and the Technical Committee of the International Organization of Securities Commissions ("IOSCO").

## **Margins**

The margins levied to members shall be levied and collected in USD or any other non INR currency as may be specified by India ICC from time to time. The margin parameters for the products traded on India International Exchange (IFSC) Ltd. (India INX) would be as follows:

## **Initial Margin**

### **Computation of Initial Margin**

INDIA ICC shall adopt Standard Portfolio Analysis of Risk (SPAN®) methodology or any other system for the purpose of real time initial margin computation as prevalent at clearing corporations globally and in compliance with the PFMI.

In order to take an integrated view of the risk involved in the portfolio of each individual client, currently, the SPAN methodology has been adopted by the INDIA ICC.

Initial Margin requirement shall be based on a worst scenario loss of a portfolio of an individual client comprising his positions in options and futures contracts across different underlying and maturities for various scenarios of price and volatility changes. The initial margin requirements shall be set to provide coverage of atleast a 99% single-tailed confidence interval of the estimated distribution of future exposure over a one day time horizon.

### **Initial margin requirement**

The initial margin shall be deducted upfront on an on-line real-time basis from the available liquid assets deposited by the Clearing Member with INDIA ICC.

## **Portfolio based margining system**

The Standard Portfolio Analysis of Risk (SPAN®) methodology shall be used to take an integrated view of the risk involved in the portfolio of each individual client comprising his positions in contracts across different maturities. The client-wise margins would be grossed across various clients at the Trading /Clearing Member level. The proprietary positions of the Trading / Clearing Member would be treated as that of a client for margining purpose.

## **Real time computation**

The computation of worst scenario loss would have two components. The first is the valuation of the portfolio under the various scenarios of price changes. At the second stage, these scenario contract values would be applied to the actual portfolio positions to compute the portfolio values and the initial margin. The scenario contract values shall be updated at the start of the business day, then every 1.5 hours and finally at the end of the business day. The latest available scenario contract values would be applied to member/client portfolios on a real time basis.

Risk parameters generated based on the updated details shall be available on the INDIA INX website.

## **Calendar Spread Margins**

A futures position at one expiry month which is hedged by an offsetting position at a different maturity would be treated as a calendar spread. The benefit for a calendar spread would continue till expiry of the near month contract. The calendar spread margin shall be deducted from the liquid net worth of the clearing member on an online, real time basis.

The margin for options calendar spread would be the same as specified for futures calendar spread. The margin would be calculated on the basis of delta  $\Delta$  of the portfolio in each month. A portfolio consisting of a near month option with a delta  $\Delta$  of 100 and a far month option with a delta  $\Delta$  of -100 would bear a spread charge equal to the spread charge for a portfolio which is long 100 near month futures and short 100 far month futures.

## **Short Option Margin**

Deep-out-of-the-money short options may show zero or minimal Scan Risk given the price and volatility moves in the 16 market scenarios, yet still present risk in the event that these options move closer-to-the-money or in-the-money, thereby generating potentially large losses. Hence a Short Option Minimum Margin is applied to each product

to account for this potential exposure. The Short Option Minimum Margin is calculated on the Notional Value of all short options.

### **Exposure Margin**

Exposure margin on the mark to market value of the gross open positions or as may be specified by the relevant authority from time to time, shall be deducted upfront from the available liquid assets of the clearing member on an on line, real time basis. The exposure margin shall be deducted from the liquid assets of the clearing member on an online, real time basis.

### **Imposition of Additional Margins**

As a risk containment measure, INDIA ICC may require clearing members to make payment of additional margins as may be decided from time to time. This shall be in addition to the initial margin and exposure margin, which are or may have been imposed from time to time.

### **Mode of payment of Margin**

Clearing members shall provide for margin in any one or more of the eligible collateral modes as specified by the INDIA ICC. The margins shall be collected/adjusted from the liquid assets of the member on a real time basis.

### **Payment of Margins**

The initial margin and exposure margins shall be payable upfront by the clearing members. Initial margins and exposure margins are required to be collected by the member from the client/ constituent on an upfront basis. It is mandatory for all clearing/trading members to report details of such margins collected to INDIA ICC.

### **Collateral Limit for Trading Members**

Clearing members clearing and settling for other trading members - shall specify the maximum collateral limit permitted for each trading member. Such limits may be set up by the clearing member, up to the time specified by INDIA INX / India ICC through the facility as may be provided by INDIA INX/ INDIA ICC from time to time.

### **Risk Reduction Mode**

All Trading Members are put in Risk Reduction Mode (RRM), when collateral / trading limit utilization of member reaches 90%. Following features shall be applicable during Risk Reduction Mode:

1. All unexecuted orders shall be cancelled.
2. Fresh orders which reduce open position shall be accepted.
3. Fresh orders which increase open position shall be checked for margin sufficiency. If sufficient margin is not available, such orders shall be rejected.
4. Fresh orders can be placed for immediate or cancel (IOC) only.

### Assignment Margin

Assignment Margin shall be levied on assigned positions of the clearing members towards exercise settlement obligations for option contracts. For option positions exercised, the seller shall be levied assignment margins which shall be 100% of the net exercise settlement value payable by a clearing member, till the completion of pay-in towards exercise settlement. Assignment margins shall be computed as net of assignment settlement and futures final settlement.

### Settlement schedules

The trading / settlement schedule at India ICC is as follows:-

Trading			Download of files	Funds Settlement	
Business Date (example)	Session No.	Trading session Timeline	Download of settlement files to members / Banks	Pay-in Timings	Pay-out timings
10/4/2020	1	4:30:00 Hours to 17:00:00 Hours (10/4/2020)	By 18:00:00 Hours (10/4/2020)	8:00:00 hrs (11/4/2020)	8:15:00 hrs (approx.) (11/4/2020)
10/4/2020	2	17:00:01 Hours to 2:30:00 Hours (11/4/2020)	By 3:30:00 Hours (11/4/2020)	16:30:00 hrs (11/4/2020)	16:45:00 hrs (approx.) (11/4/2020)

- As mentioned in the above table, the trading for 'Business Date' of 10-Apr-2020 shall be conducted over two trading sessions and span across two calendar days viz. 10-Apr-2020 and 11-Apr-2020.
- The first trading session shall start at 4:30:00 hours in the morning and shall end at 17:00:00 in the evening of 10-Apr-2020.
- The second session shall start at 17:00:01 on 10-Apr-2020 and end at 2:30:00 am of 11-Apr-2020.

- *The 'Business Date' shall be provided to the members through the file name of the contract master file.*

All contracts at the India ICC are presently cash settled.

### **Legal and Regulatory Framework**

INDIA ICC is regulated by the IFSC Authority and its rules, regulations and byelaws are approved by the regulator.

## 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.**

### **KC 1.1 The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.**

INDIA ICC is regulated by the IFSC Authority under Securities Contract (Regulation) Act, 1956 (SCRA), Securities and Exchange Board of India (International Financial Services Centre) Guidelines, 2015 and rules and regulations made there under. INDIA ICC is also subjected, on an on-going basis, to Rules and Regulations that are consistent with the Principles for Financial Market Infrastructures (PFMIs) issued by the Committee on Payments and Market Infrastructures (CPMI) and International Organization of Securities Commissions (IOSCO).

Legal certainty to activities is derived from the Securities Contracts Regulation Act, 1956 (SCRA), Securities Contracts (Regulation) (Stock Exchanges and Clearing Corporation) Regulations, 2018 ("SECC Regulations, 2018), Securities and Exchange Board of India (International Financial Services Centre) Guidelines, 2015 and Byelaws, Rules and Regulations of INDIA ICC which are approved by the regulator. The SCRA provides INDIA ICC, the power to make Byelaws and Rules, which are applicable to all members of INDIA ICC.

The jurisdiction with regards to each material aspect of the INDIA ICC's activities lies with IFSC Authority under various guidelines and regulations issued by IFSC Authority and then with INDIA ICC from time to time under the Byelaws, Rules and Regulations. The main laws, rules and regulations are as under:

- ❖ Section 8A of the Securities Contract (Regulation) Act, 1956
- ❖ SECC Regulations, 2018 (except for certain provisions)
- ❖ International Financial Services Centres Authority Act, 2019 Securities and Exchange Board of India (International Financial Services Centre) Guidelines, 2015
- ❖ Companies Act, 2013
- ❖ The regulations, guidelines, etc. issued by IFSC Authority
- ❖ The Byelaws, Rules and Regulations of INDIA ICC

The material aspects of INDIA ICC that require legal certainty are:

❖ **Novation arrangements**

INDIA ICC has the legal basis for Novation. The Byelaws, Rules and Regulations guarantee the settlement of trades done on the trading system of the stock exchange. INDIA ICC has a Default Fund, the objects of the Fund is: “to guarantee the settlement of trades executed on the stock exchange. In the event of a Clearing Member (member) failing to honor settlement commitments, the Default Fund shall be used to fulfil the obligations of that member and complete the settlement without affecting the normal settlement process.”

❖ **Netting and set-off arrangements;**

Clearing and settlement of deals may be on netted basis or gross basis or trade-for-trade basis or any other basis as may be specified by the Relevant Authority from time to time. "Relevant Authority" shall mean the Board of INDIA ICC (Board), Securities and Exchange Board of India, Managing Director of Clearing Corporation, Exchange, such other person or committee, as the context may admit or require, or any person/committee as may be specified by the Board from time to time. Settlement shall be effected by the CMs selling the securities by giving delivery and receiving payment and by the CMs buying securities by receiving securities and paying funds, as the case may be or as specified by the Relevant Authority from time to time.

❖ **Right of the Clearing Corporation in the collaterals deposited by the Participants**

Byelaw 8.5 of INDIA ICC provides Lien on Margins. The cash or substitute thereof, paid or deposited by the CM as margin shall be subject to first and paramount lien for all sums due to INDIA ICC. Margin shall be available in preference to all other claims against the CM for due fulfillment of his obligations and liabilities arising out of or incidental to any deals made subject to the Byelaws, Rules and Regulations of INDIA ICC or anything done in pursuance thereof.

❖ **Risk management system including margin system**

The Byelaws, Rules and Regulations of INDIA ICC and the regulatory specifications provide a sound legal basis for other aspects of INDIA ICCs operations and risk management procedures.

❖ **Settlement finality (i.e. the point at which settlement of obligations becomes final); settlement of securities and funds; guarantee of settlement of trade finality**

As per Byelaw 7.5 of INDIA ICC, all the dealings in the securities on INDIA ICC will be inviolable and shall be cleared and settled in accordance with the Byelaws and Regulations of INDIA ICC.



### ❖ **Default Procedure**

Default procedures are well defined in the Byelaws, Rules and Regulations. INDIA ICC Byelaws clearly state circumstances under which the participant is declared as defaulter and accordingly INDIA ICC declares the defaulter by direction/circular/notification by the Relevant Authority. In case default occurs, the Byelaws give authority to deal with the assets of defaulter available to INDIA ICC. The Byelaws, Rules and Regulations of INDIA ICC provide for prompt close out or to manage the positions of a defaulting participant and to apply the defaulting participants' collateral or other resources. Statutory protection of the assets available with INDIA ICC in case of winding up, insolvency proceedings, sovereign dues of the members, etc. certainty while dealing with instances of default. Chapter X of the Byelaws of INDIA ICC deals with the Default provisions.

### ❖ **Link arrangements**

INDIA ICC at present does not have Link arrangements with any other CCP in India or abroad.

### **KC 1.2 An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.**

The rules, procedures and contracts are clearly and comprehensibly formulated. The same are required to be approved by the Board of Directors of INDIA ICC and the regulator.

After the approval from the regulator, the Byelaws and Rules are published in the Official Gazette. INDIA ICC makes provision in its rules for such revised guidelines as IFSC Authority may prescribe from time to time. INDIA ICC also consults IFSC Authority on any proposed changes to the rules before they are made. IFSC Authority has the authority to disallow, alter or supplement any changes proposed.

For the purpose of clarity and easy understanding, INDIA ICC issues circulars from time to time providing detailed explanation on the operational aspects. These circulars are part of the rules and regulations and must be adhered to by clearing members.

### **KC 1.3 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.**

INDIA ICC has a legal basis for the activities of the clearing corporation under the provisions of the Securities Contracts Regulation Act, 1956 (SCRA), Securities Contracts (Regulation) (Stock Exchanges and Clearing Corporation) Regulations, 2018 ("SECC Regulations, 2018), Securities and Exchange Board of India (International Financial Services Centre) Guidelines, 2015. Further, under the powers vested to INDIA ICC under the Byelaws, Rules and Regulations, the legal basis for various activities are further articulated by issuing circular/notice to the market participants from time to time.

INDIA ICC also holds meetings with / makes presentations to market participants to provide further clarity on the legal basis. INDIA ICC also publishes materials on its website and other informational paraphernalia in order to educate the market participants.

**KC 1.4 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.**

INDIA ICC is regulated and supervised by the IFSC Authority. Legal certainty to its activities is derived from the Securities Contracts Regulation Act, 1956 (SCRA), Securities Contracts (Regulation) (Stock Exchanges and Clearing Corporation) Regulations, 2018 ("SECC Regulations, 2018), Securities and Exchange Board of India (International Financial Services Centre) Guidelines, 2015 and Byelaws, Rules and Regulations of INDIA ICC which are approved by the regulator. The regulatory framework within which INDIA ICC functions provides certainty to its activities. The SCRA and the SECC Regulations, 2018 grants the power to make Byelaws to INDIA ICC. The Byelaws and Rules of INDIA ICC are approved by the regulator. Any additional change or modification to such Byelaws and Rules require prior approval from IFSC Authority. Therefore, the said Byelaws, Rules and Regulations have a legal status and hence there is a little chance that such Byelaws, Rules and Regulations would be voided, reversed or stayed. The same has been upheld to be statutory in nature by the Hon'ble Securities Appellate Tribunal, the Hon'ble High Court and the Hon'ble Supreme Court whenever they have come before the Hon'ble courts.

**KC 1.5 An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.**

INDIA ICC acts as a CCP for trades executed in the International Financial Services Centre in a Special Economic Zone under the Gujarat International Finance Tec-City (GIFT) located at Gandhinagar, Gujarat, India. It doesn't operate in other jurisdictions. Thus the issue pertaining to conflict of laws due to conducting business in multiple jurisdictions is not applicable.

## Principle 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.**

### **KC 2.1 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 INDIA ICC has been clearly provided in the Memorandum and Articles of Association of INDIA ICC. The Main Object Clause of the Memorandum states that the objective is to facilitate, set up and carry on the business of clearing and settlement of transactions in various securities. INDIA ICC's objective is to provide robust clearing and settlement services and act as a Central Counter Party (CCP) for providing settlement guarantee as per prevalent Laws, Regulatory Guidelines and Byelaws, Rules and Regulations of INDIA ICC.

INDIA ICC provides efficient and safe Clearing and Settlement Systems including settlement guarantee to enhance the confidence of market participants in the overall securities market settlement system. Financial stability is maintained by strict adherence to various settlement activities, timely completion of settlements, settlement guarantee, comprehensive risk management framework, constant upgradation of technology, etc., by INDIA ICC.

INDIA ICC's strives to uphold the confidence and integrity of the financial markets by aligning its systems with the industry's best- practices.

### **KC 2.2 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.**

INDIA ICC has governance arrangements which are clearly specified and well-documented.

INDIA ICC's governance arrangements include:

- ❖ the composition, role and responsibilities of the Board;
- ❖ the roles and responsibilities of the management;
- ❖ the senior management structure;
- ❖ the reporting lines between the senior management and the Board;

- ❖ organizational structures based on roles and responsibilities and reporting hierarchy
- ❖ the procedures for the appointment of Board members and senior management;
- ❖ the design of the risk management, compliance and internal control functions;
- ❖ the policies and processes to identify and address conflict of interest

The Board formulates or approves policy and oversees and directs the overall management of INDIA ICC's business by its officers/management team. The Board, from time to time, delegates suitable authority to the INDIA ICC officers/management team or to others to act on behalf of INDIA ICC. Further, governance arrangements are clearly articulated in the Articles of Association of INDIA ICC and in the Rules of INDIA ICC.

The MD & CEO is responsible for the overall functioning of INDIA ICC. There are various departments with respective heads to handle various key functions namely operations, risk management, compliance, finance and accounts, secretarial etc. The accountability of INDIA ICC is provided as far as owners are concerned through submission of the annual reports under the provisions of Companies Act, 2013 and by seeking their approval on the resolution proposed by INDIA ICC. As far as participants and other stakeholders are concerned, accountability is provided by acting in accordance with the framework laid down by IFSC Authority, its Byelaws, Rules, Regulations and periodical dissemination of information.

The Articles of the Association of INDIA ICC are available with the Registrar of Companies. All the rules, regulations, byelaws, circulars, notifications, etc. are displayed publicly on the website of INDIA ICC. The details of Board of Directors and senior management are also disclosed on the website of the India ICC.

**KC 2.3 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.**

In the Articles of Association of INDIA ICC, the roles and responsibilities of the Board of Directors are clearly stated. The Board of Directors need to adhere to the code of conduct and ethics. The procedures of the Board to identify, address and manage member conflicts of interest are provided in the Conflict of Interest policy.

The Board of Directors periodically review the following:

- ❖ Review the overall operations of the company including financial and regulatory aspects
- ❖ Status of compliance with IFSC Authority letters/ circulars
- ❖ Review the functioning of departments including the adequacy of resources dedicated to various functions.

- ❖ Identify important issues which may involve conflict of interest for INDIA ICC or may have significant impact on the market and if identified report the same to IFSC Authority.
- ❖ Board's overall performance and the performance of its individual Board members.

The Board meeting minutes are recorded and circulated to all members and important decisions taken at the meeting are reported to IFSC Authority in its monthly report.

**KC 2.4 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).**

INDIA ICC Board Members are identified among persons of eminence, based on their track record, qualifications, integrity, expertise among other factors. The individual profiles of the Board of Directors are published on the website. INDIA ICC doesn't provide any incentives to the members of the Board for joining the Board and the Directors are paid only sitting fees. The composition of the Board is governed by the guidelines prescribed by the regulator(s) from time to time and includes representation of independent members. Currently there are two independent members out of a Board strength of six.

**KC 2.5 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.**

INDIA ICC's management structure comprises of the MD & CEO, various heads of departments and Officers handling respective functions. The MD & CEO is responsible for the overall functioning of INDIA ICC. The Chief Risk and Regulatory Officer, Chief Financial Officer, Company Secretary, Head – Operations etc., handle various departments. The roles and responsibilities of senior management are clearly defined and communicated.

INDIA ICC's senior management is responsible for:

- ❖ ensuring consistency of INDIA ICC's activities with the objectives and strategies determined by the board
- ❖ designing and establishing compliance and internal control procedures promoting the INDIA ICC's objectives
- ❖ regularly reviewing and testing internal control procedures
- ❖ ensuring that sufficient resources are devoted to each functional area
- ❖ the risk control process
- ❖ ensuring that risks posed to INDIA ICC by its clearing and related activities are addressed

INDIA ICC Board of Directors broadly set the roles and objectives of the senior management based on the guidelines set by the regulator. Educational qualification, relevant experience, skills, expertise and track record are the criteria for selecting senior management. INDIA ICC ensures that senior management positions are filled by staff with the required skills necessary for the operation and risk management. The performance of the key management are evaluated on an annual basis. The decision to remove the senior management, if necessary, is taken by the Managing Director and CEO or by the Board of Directors. Relevant section of the Companies Act, 2013 pertaining to key managerial personnel is enclosed.

### **Companies Act 2013**

**203. (1)** every company belonging to such class or classes of companies as may be prescribed shall have the following whole-time key managerial personnel,

- i) Managing director, or Chief Executive Officer or Manager and in their absence, a Whole-Time Director;
- ii) Company secretary; and
- iii) Chief Financial Officer

**(2)** Every whole-time key managerial personnel of a company shall be appointed by means of a resolution of the Board containing the terms and conditions of the appointment including the remuneration.

**(3)** A whole-time key managerial personnel shall not hold office in more than one company except in its subsidiary company at the same time.

Provided that nothing contained in this sub-section shall disentitle a key managerial personnel from being a director of any company with the permission of the Board.

**KC 2.6 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.**

INDIA ICC has implemented a robust risk management framework which has been approved by its Board. It has implemented risk practices at the operational level through its Byelaws, Rules, Regulations, Circulars and notifications. The risk management framework is reviewed at least annually by the Board. The Board is presented with data and analysis by the management team in order to validate the risk management framework. INDIA ICC has a concurrent audit process, the results of which are presented to the Board of Directors. INDIA ICC is also subject to Statutory Audit and Internal Audit conducted on a quarterly basis, the results of which are presented to the Board of Directors. INDIA ICC also undergoes annual system audit, the results of which are informed to the Board of Directors of INDIA ICC and IFSC Authority. INDIA ICC has a

dedicated risk management team and a Chief Risk Officer dedicated to oversee the functions of risk management. The Chief Risk Officer reports to the MD & CEO. The BCP and DR plans are in place as part of risk mitigation. INDIA ICC has an Executive Committee Group (ExCo) comprising of senior officials of the clearing corporation. The ExCo is responsible for day to day management decisions, crisis management and has financial powers delegated by the Board.

**KC 2.7 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.**

INDIA ICC takes feedback of the market participants while designing new services and systems. All major decisions impacting the market participants are published as circulars and notifications, while any amendments in the Byelaws are pre-published for comments from market participants, before the Byelaws are finally put in force.

The decisions made by the Board concerning the stake holders at large are informed through circulars and the decisions made by the Board concerning the public at large are informed through circulars/press releases and are made available on the website. INDIA ICC ensures that the design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders and clearly discloses the major decisions to relevant stakeholders.

## **Principle 3: Framework for the comprehensive management of risks**

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

**KC 3.1 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.**

INDIA ICC has identified the following types of risks as major risks: Legal Risk, Participant Exposure and Settlement Default Risk, Credit Risk, Liquidity Risk, Operational Risk, Custody and Investment Risk etc. The risk management system adopted by INDIA ICC has the following mechanism to identify, measure, monitor and manage the risks:

- ❖ Periodical Audits viz. System Audits, Collateral Audit, Accounts Audit, Statutory Audit, etc.
- ❖ Daily Stress Tests are conducted to assess the adequacy of the Default Fund
- ❖ Daily liquidity stress tests to assess funds position
- ❖ Back testing to identify adequacy of margins as per principles of FMI
- ❖ On-line surveillance is done to monitor risks associated with member's trading exposure
- ❖ Clearing Bank's net-worth is monitored on a periodic basis
- ❖ Clearing Member's net-worth is monitored on a periodic basis

Concurrent audit, quarterly Statutory Audit and Internal Audit are conducted at the India ICC, the results of which are presented to the Board of Directors. INDIA ICC also undergoes annual system audit, the results of which are shared with the Board of Directors. A Disaster Recovery (DR) Site has been established by India ICC at a different seismic zone from its primary site and a Business Continuity Plan (BCP) has been put in place in order to mitigate operational risk. INDIA ICC conducts back testing and periodical reverse stress tests for adequacy of margins, daily stress tests to assess the adequacy of Default Fund, daily liquidity stress test to assess the adequacy of liquidity arrangements. INDIA ICC is also subject to periodical audits of various systems and processes. INDIA ICC has an independent risk function, headed by the Chief Risk Officer. The Chief Risk Officer reports independently to the MD & CEO and is responsible for implementation of the risk management policy. The risk management function is separate from business and operations functions. The risk management framework of INDIA ICC is approved by the Board and reviewed at least annually and if required more frequently. Relevant



information, data is presented to the Board to carry out the review and implement changes to the risk management framework if necessary.

**KC 3.2 An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.**

To assist members manage their risks, INDIA ICC provides its members with the risk management terminals (RTRMS), free of cost, to monitor and manage their own risks and that of their constituents. The tools provided in the Real Time Risk Management System (RTRMS) terminal, enables members to track collateral utilization on a real time basis, allows them to set limits for themselves and their constituents and generate customized alerts for member's own risk management needs. For managing risks on an on-line real time basis, trade files are provided online to the members for their back office process in order to manage the risks associated with the trading and exposure limits. Also, when the trader/trader terminal limits are reached, the system generates alerts and flashes on the screens of the Clearing Members (CMs) /Trading Members (TMs). Besides this, various reports/ files are provided to the TMs to generate client-wise obligations and collateral utilization details. TM is required to provide daily reports to their clients pertaining to their collateral deposits lying with the TMs and utilization details of such collateral.

**KC 3.3 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.**

INDIA ICC has following risks as a result of interdependency:-

- ❖ Risk of settlement delay
- ❖ Risk of settlement shortages
- ❖ Credit Risk from Clearing Banks and Banks issuing collaterals

**Clearing Banks**

INDIA ICC has stringent criteria for selection of clearing banks, which includes their networth and support infrastructure. INDIA ICC monitors net worth and key financial aspects of the concerned banks. INDIA ICC ensures that only banks with requisite net worth and financial creditworthiness become eligible as clearing banks and there have been no instances of failure of banks in fulfilling their settlement commitments till date.

**Clearing Members**

INDIA ICC has prescribed criteria for admission of clearing members, which includes their networth, deposits etc. INDIA ICC monitors net worth and key financial aspects of the clearing members. Clearing members place collaterals with INDIA ICC in the form of highly liquid instruments on which exposure is given to the members. INDIA ICC monitors

on an on line, real-time basis the collateral utilization and the system alerts clearing members / trading members at various levels of collateral utilization. INDIA ICC ensures that only adequately capitalized entities become eligible as clearing members and they place requisite deposits before being allowed to take exposure in the markets. On-line, real time monitoring of exposure, margining systems, adequate capitalization of members and its monitoring etc. mitigate settlement delays and defaults.

### **Trading Venues**

In the IFSC, GIFT City, only stock exchanges, recognized, permitted and regulated by the IFSC Authority are allowed to be trading venues. INDIA ICC acts as a central counter party (CCP) to India International Exchange (IFSC) Ltd. (INDIA INX), a stock exchange recognized by IFSC Authority. The stock exchanges are subject to extremely stringent risk management measures by IFSC Authority. The stock exchanges also have trade annulment policies to protect the market against erroneous trades. INDIA ICC also has provisions in its Byelaws to, in its sole discretion, approve admission of deals or defer, or reject admission of deals for clearing and settlement on INDIA ICC, subject to such terms as it may deem fit.

### **Liquidity Providers**

INDIA ICC has established lines of credit with a clearing bank at the IFSC, GIFT City and is in the process of establishing lines of credit with other banks, the credit lines being in excess of its average daily funds pay-out.

**KC 3.4 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.**

INDIA ICC may be unable to perform its operations in case of systems and process failures, breakdown in support services or bankruptcy of service providers. INDIA ICC has adequate systems' capacity for on-line/real time risk management of trades cleared and settled and is supported by a suitable BCP including a DR site. INDIA ICC conducts periodic audit of various systems and processes in order to identify various gaps in the systems and processes and to identify scenarios that may potentially prevent INDIA ICC from being able to provide its critical operations and services. INDIA ICC has contractual agreements with all its service providers. INDIA ICC keeps track that there are adequate number of service providers in India for all its services who would serve as replacement without adversely affecting the ability of INDIA ICC to act as a CCP. INDIA ICC has an Executive Committee Group which consists of functional heads of various functions of INDIA ICC. The Executive Committee Group is responsible for crisis management in times of any emergency besides other operational and financial powers delegated by the Board.

INDIA ICC has its DR site fully equipped to handle DR as well as orderly wind-down situations. The DR site has capacity build for handling contingencies.

## Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposures 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 participants and their affiliates that would potentially cause the largest aggregate credit exposure to 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 to the CCP in extreme but plausible market conditions.

**KC 4.1 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.**

INDIA ICC has put in place a comprehensive risk management framework to manage the exposures of its participants. The risk management framework assists INDIA ICC to effectively measure, monitor and manages credit exposures to participants and those risks arising from payment, clearing and settlement processes. Members can avail trading limits only against collaterals deposited by them with INDIA ICC. INDIA ICC has established and implemented policies to determine prudent haircuts to apply to the collateral value and concentration limits to apply to collaterals. INDIA ICC reviews the haircut and concentration limits periodically and whenever a material change occurs that affects INDIA ICC's risk exposure.

INDIA ICC's credit risk in clearing and settlement process arises out of its members and clearing banks. To mitigate the credit risk arising out of clearing banks, INDIA ICC has prescribed stringent norms for eligibility to act as clearing bank. For managing the credit risk, INDIA ICC evaluates the historical data and other tests on the credit status from time to time. INDIA ICC ensures that it maintains sufficient financial resources to cover a wide range of potential stress scenarios. INDIA ICC also continuously monitors the adequacy of such financial resources and takes necessary steps to replenish the same in case of a shortfall.

The risk management framework of INDIA ICC is approved by the Board and reviewed at least annual and if required more frequently. Relevant information, data is presented to the Board to carry out the review and implement changes to the risk management framework if necessary.

**KC 4.2 An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.**

INDIA ICC has identified the sources of credit risk as being default/delay by CMs in fulfilling their obligations and default/delay by Clearing Banks in facilitating funds pay-out. Credit Risk due to current as well as potential future exposures to CMs include the risk that the CM will be unable to meet fully its financial obligations when due or at any time in the future viz. default in paying their margins and settlement obligations, decline in the value of the collateral. The credit exposure is determined on the basis of the historical data pertaining to settlement value over a period of time. Credit exposure is calculated daily. INDIA ICC has also put in place a comprehensive risk management system to prevent risk concentration and to mark positions to market on a daily basis over and above other provisions relating to margins and collateral requirements of the participants.

As a Clearing Corporation which does settlement in commercial bank money, INDIA ICC is also exposed to credit risk of such commercial banks acting in the capacity of clearing banks for:-

- ❖ Credit risk arising from settlement obligation between the time funds pay-in is made by the CMs and the time the funds pay-out is made by INDIA ICC
- ❖ Credit risk to the margins and cash collateral maintained by the CMs in INDIA ICC account with clearing banks
- ❖ Default Fund contributions maintained in cash or bank deposits
- ❖ INDIA ICC's own funds maintained in cash or bank deposits.

To limit such risks, INDIA ICC monitors and manages its concentration towards its individual clearing banks.

**KC 4.3 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.**

INDIA ICC provides trading exposures to the members against the collaterals deposited by them with INDIA ICC. INDIA ICC has established line of credit and overdraft facilities with a Clearing Bank which in the event of sudden requirement can provide funds required to complete the settlement. INDIA ICC ensures that it maintains sufficient financial resources to cover a wide range of potential stress scenarios and at a minimum, sufficient resources to cover the exposures of the two participants and their associates that would create the largest aggregate credit exposure in the system. INDIA ICC has also established a Default Fund for immediate recourse in case there is a settlement default by members.

**KC 4.4 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.**

INDIA ICC's current and potential future exposures are fully covered by the collateral deposits and margins received from the participants, Default Fund and INDIA ICC's own net worth. INDIA ICC ensures that it maintains sufficient financial resources to cover a wide range of potential stress scenarios.

Eligible collaterals including cash and cash equivalent component and non-cash equivalent component, concentration limits and haircuts (if applicable) are outlined in detail in Principle 5. Presently, INDIA ICC accepts only cash and cash equivalent collaterals.

INDIA ICC maintains a Default Fund to guarantee the settlement of trades executed at the INDIA INX. The Default Fund is used to fulfil the settlement obligations in case a member fails to fulfil its settlement commitment and helps complete the settlement without affecting the normal settlement process.

**KC 4.5 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 in light of 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.**

INDIA ICC conducts stress test to evaluate adequacy of its Default Fund and liquidity position. In case of sudden volatile market conditions additional tests are conducted to evaluate adequacy of margins and collateral. The result of such tests are shared with the internal authorities of INDIA ICC and Board as required from time to time. INDIA ICC has put in place a comprehensive a risk management framework.

INDIA ICC effectively measures, monitors and manages its credit exposures to its participants and those arising from its payment, clearing, and settlement processes by conducting daily stress tests for credit risk, liquidity stress test for adequacy of liquidity arrangements and back tests for adequacy of margins.

On at least a monthly basis, INDIA ICC performs a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining INDIA ICC's required level of default protection in light of current and evolving market conditions. The results of tests and reviews are communicated for discussion and review by the Board of India ICC.

**KC 4.6 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.**

INDIA ICC carries out daily stress testing for credit risk using at least the standardized stress testing methodology. INDIA ICC has developed its own scenarios for 'extreme but plausible market conditions' (in terms of both defaulters' positions and possible price changes in liquidation periods, including the risk that liquidating such positions could have an impact on the market) and carries out stress testing using self-developed scenarios. Back testing of margins is also conducted by India ICC to evaluate adequacy of margins.

**KC 4.7 An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result 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.**

INDIA ICC has a well-defined default procedure which is also part of the Byelaws of the CCP. The default procedure, as part of the Byelaws is also approved by the regulator and carries legal certainty. Byelaws address in detail rules and procedures for any credit losses India ICC may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. India ICC maintains a Default Waterfall which is as follows:

1. Monies of defaulting member (including defaulting member's primary contribution to Default Fund(s))
2. India ICC and SE's contribution to Default Fund to the extent of at least 5% of the MDF
3. Remaining Default Fund: (i) Penalties India (ii) ICC contributions to the extent of at least 10% of the MDF (iii) Remaining Default Fund: INDIA ICC contribution, Exchange contribution and non-defaulting members' primary contribution to Default Fund on pro-rata basis.
4. Remaining India ICC resources (excluding Clearing Corporation contribution to any other Funds and USD 10 million)
5. Capped additional contribution by non-defaulting members (subject to a cap of USD 50,000)\*



6. Any remaining loss to be covered by way of pro-rata haircut of variation margin gains for the settlement day of the default(s)

*\*In case of any such additional contribution being called, India ICC may not call for additional contribution from such members for next 30 calendar days. However, India ICC may call for contribution from such members towards Default Fund on account of any increase in risk to the CCP (due to increase in positions, volatility, price movements, or any other risk factor) on account of those members*

## 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.

**KC 5.1 An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.**

INDIA ICC accepts the following as collaterals from its CMs:

### Collateral Composition:-

Eligible Collateral	Hair-cut	Concentration Limit
<b>Cash Component: Cash &amp; Cash Equivalent</b>		
Cash in USD	No haircut	No limit
Bank Fixed Deposits Receipts (FDRs) in USD*	No haircut	No limit
Bank Guarantees in USD*	No haircut	No limit
AAA rated international sovereign securities	10%	10% of Cash & Cash Equivalent

\* Issued by bank branches located at IFSC

The collaterals accepted by INDIA ICC are high quality collaterals, with low credit risk and high liquidity.

Before prescribing the eligible types of collaterals, INDIA ICC ensure that:

- ❖ The collateral should be legally enforceable
- ❖ The collateral should be liquid
- ❖ The collateral should be easily realisable in a timely manner
- ❖ The requirements of acceptable collateral are based on the guidelines issued from time to time by the market regulator, IFSC Authority. INDIA ICC accept only those collateral which are specified by the regulator and in compliance with PFMI.

INDIA ICC has a real time collateral management module (CLASS) to manage collateral. The module has in built parameters to control, modify and monitor the collateral deposited by the CMs. The module also monitors the applicable acceptance criteria on a real time basis and does not give benefit for collateral deposited which is outside such applicable acceptance criteria.

**KC 5.2 An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.**

INDIA ICC evaluates the collateral deposited towards margins on a daily basis. The valuation of collateral is done as per the latest available market prices of the securities subject to prescribed haircut. INDIA ICC applies adequate haircuts to reflect the potential for collateral's value to decline over the interval between their last revaluation and the time by which they can be liquidated, taking into account the liquidity risk that may follow the default of a market participant and the concentration risk on certain assets. Cash (in USD), bank fixed deposit receipts (in USD), Bank Guarantee (in USD), AAA rated international sovereign securities with a haircut of 10% are accepted as collateral.

**KC 5.3 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.**

Haircut rates specified by INDIA ICC, as per IFSC Authority<sup>1</sup> guidelines are stable and prudent. They are calibrated to cover extreme price movements observed during periods of stressed market conditions, thus averting the need for procyclical adjustments.

The haircuts are defined either in terms of percentage or based on VaR margin rates, depending on the type of asset. In case of collateral deposited in form of securities/other than liquid mutual fund units, the hair cut is based on the VaR which incorporates the variation in price movement over the specified period, thereby taking care of stressed market conditions. Cash (in USD), bank fixed deposit receipts (in USD), Bank Guarantee (in USD), AAA rated international sovereign securities with a haircut of 10% are accepted as collateral.

**KC 5.4 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**

INDIA ICC has established policies to ensure that the collateral remains sufficiently diversified to allow its liquidation within a defined holding period without a significant market impact. As per present regulations prescribed by the regulator, non-cash component of eligible collaterals may not exceed total of Cash Equivalent. INDIA ICC has in-built checks in the system to monitor the concentration norms as defined by IFSC Authority from time to time.

**KC 5.5 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.**

IFSC Authority has prescribed types of collateral which can be accepted by the clearing corporations. Clearing members may offer foreign securities including units of liquid mutual funds. INDIA ICC ensures that it accepts only those assets as collateral which are liquid and realizable in a timely manner. Through tie ups with international central securities depositories for holding and valuation and with global banks for liquidating the cross border collaterals, INDIA ICC mitigates the risk of holding such cross border collaterals.

**KC 5.6 An FMI should use a collateral management system that is well-designed and operationally flexible.**

The Collateral System (“CLASS”), keeps track of the collateral deposited by the Clearing Members with INDIA ICC on a real-time basis. CLASS maintains the utilized and unutilized collateral for all members; asset-wise and instrument-wise, with valuation done after applying applicable haircut, if any. The Collateral system is also made available to the members on a free-of-cost basis through which they can themselves add collateral, withdraw excess unutilized collateral etc.

CLASS and the Real Time Risk Management System (RTRMS) are fully automated collateral management / risk management systems used by INDIA ICC for evaluating the timely calculation and execution of margin calls, managing the margin call disputes, and the daily reporting of relevant margins. The regulatory framework including Byelaws, Rules and Regulations of INDIA ICC and also various circulars by the INDIA ICC provide for tracking the utilization of different types of collaterals.

The collateral management system of INDIA ICC is parameterized to take care of the requisite changes needed for ongoing monitoring and management of same. Necessary changes are carried out in such module based on the regulatory, internal assessment and participant requirements. The collateral management system of INDIA ICC is adequately staffed and automated to ensure smooth operations of the same during any time of market conditions.

## 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.**

### **KC 6.1 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.**

INDIA ICC has created its margin system for various products based on the characteristics of the instrument it clears. The margining system forms a part of the overall risk management framework which has been approved by the Board of INDIA ICC. INDIA ICC has adopted models and parameters in setting its margin requirements that capture the risk (volatility) characteristics of the products cleared. The risk containment measures employed at INDIA ICC include capital adequacy requirements of members, monitoring of member performance and track record, stringent margin requirements, online monitoring of member positions and automatic disablement from trading when limits are breached etc. The risk management framework is made available on the website of India ICC.

In order to take an integrated view of the risk involved in the portfolio of each individual client, currently, the Standard Portfolio Analysis of Risk (SPAN®) methodology has been implemented by the INDIA ICC for the purpose of initial margin computation. Initial Margin requirement is based on a worst case scenario loss of a portfolio of an individual client comprising his positions in options and futures contracts across different underlying and maturities for various scenarios of price and volatility changes. The initial margin requirements is set to provide coverage of at least a 99% single-tailed confidence interval of the estimated distribution of future exposure over a one day time horizon.

The collateral (liquid assets) deposits are taken from the members based on their exposure requirements. SPAN based margins are collected from all entities online on an upfront basis by adjusting against the collateral deposits of CMs lying with INDIA ICC at the time of trade. Since margins are collected upfront, any risk of payment failure that would cause a shortage of required margin against member's positions, is mitigated. Such margins are released only on completion of the Pay-in. Mark to market settlement is done on T+1 basis for futures, while mark to market Net Option Value is adjusted on a daily basis for options.

**KC 6.2 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.**

The trading system of INDIA INX is connected to the INDIA ICC's risk management system on an online real-time basis. The margins computed on the respective positions of members is on the basis of real-time trade data received directly from the trading system of INDIA INX. For end of day mark to market margin, daily settlement price, which is the last thirty minutes weighted average price arrived at by INDIA INX, is used and in the absence of such price, a theoretical model is used.

**KC 6.3 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 subportfolio 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 (c) to the extent practicable and prudent, limit the need for destabilising, procyclical changes.**

India ICC uses portfolio based SPAN margining system. The SPAN model for portfolio based margining is used to take an integrated view of the risk involved in the portfolio of each individual client. The initial margin requirements are based on worst scenario loss of a portfolio of an individual client to cover 99% VaR over one day horizon across various scenarios of price changes and volatility shifts. The margining system followed by INDIA ICC takes into account volatility and liquidity while deciding the margin rates.

## **Initial Margin**

### **Computation of Initial Margin**

In order to take an integrated view of the risk involved in the portfolio of each individual client, currently, the SPAN methodology has been adopted by the INDIA ICC.

Initial Margin requirement shall be based on a worst scenario loss of a portfolio of an individual client comprising his positions in options and futures contracts across different underlying and maturities for various scenarios of price and volatility changes. The initial margin requirements shall be set to provide coverage of at least a 99% single-tailed confidence interval of the estimated distribution of future exposure over a one day time horizon. The initial margin shall be deducted upfront on an on-line real-time basis from the available liquid assets deposited by the Clearing Member with INDIA ICC.

For the purpose of SPAN® Margin, various parameters are specified hereunder:-

## **Price Scan Range and Volatility Scan Range**

### **Price Scan Range**

The Price Scan Range (“PSR”) would be specified by INDIA ICC from time to time. The standard deviation (volatility estimate) shall be computed using the Exponentially Weighted Moving Average method (EWMA). The estimate at the end of time period t ( $\sigma_t$ ) shall be estimated using the volatility estimate at the end of the previous time period. i.e. as at the end of t-1 time period ( $\sigma_{t-1}$ ), and the return ( $r_t$ ) observed in the futures market during the time period t.

The formula shall be as under:

$$\sigma_t^2 = \lambda(\sigma_{t-1})^2 + (1 - \lambda)(r_t)^2$$

Where,

- ❖  $\lambda$  is a parameter which determines how rapidly volatility estimates changes. The value of  $\lambda$  is currently fixed at 0.94.
- ❖  $\sigma$  (sigma) means the standard deviation of daily returns in the futures market.
- ❖ The "return" is defined as the logarithmic return:  $r_t = \ln (S_t/S_{t-1})$  where  $S_t$  is the price at time t.

### **Volatility Scan Range**

The volatility scan range (“VSR”) for generating the scenarios would be specified by INDIA ICC from time to time. The sigma  $\sigma$  would be the standard deviation  $\sigma$  of daily logarithmic (ln) returns of futures price.

### **Portfolio based margining system**

The Standard Portfolio Analysis of Risk (SPAN®) methodology shall be used to take an integrated view of the risk involved in the portfolio of each individual client comprising his positions in contracts across different maturities. The client-wise margins would be

grossed across various clients at the Trading /Clearing Member level. The proprietary positions of the Trading / Clearing Member would be treated as that of a client for margining purpose.

### **Real time computation**

The computation of worst scenario loss would have two components. The first is the valuation of the portfolio under the various scenarios of price changes. At the second stage, these scenario contract values would be applied to the actual portfolio positions to compute the portfolio values and the initial margin. The scenario contract values shall be updated at the start of the business day, then every 1.5 hours and finally at the end of the business day. The latest available scenario contract values would be applied to member/client portfolios on a real time basis. Risk parameters generated based on the updated details shall be available on the INDIA INX / INDIA ICC website.

### **Calendar Spread Margins**

A futures position at one expiry month which is hedged by an offsetting position at a different maturity would be treated as a calendar spread. The benefit for a calendar spread would continue till expiry of the near month contract. The calendar spread margin shall be deducted from the liquid net worth of the clearing member on an online, real time basis.

The margin for options calendar spread would be the same as specified for futures calendar spread. The margin would be calculated on the basis of delta  $\Delta$  of the portfolio in each month. A portfolio consisting of a near month option with a delta  $\Delta$  of 100 and a far month option with a delta  $\Delta$  of -100 would bear a spread charge equal to the spread charge for a portfolio which is long 100 near month futures and short 100 far month futures.

### **Short Option Margin**

Deep-out-of-the-money short options may show zero or minimal Scan Risk given the price and volatility moves in the 16 market scenarios, yet still present risk in the event that these options move closer-to-the-money or in-the-money, thereby generating potentially large losses. Hence a Short Option Minimum Margin is applied to each product to account for this potential exposure. The Short Option Minimum Margin is calculated on the Notional Value of all short options.

### **Exposure Margin**

Exposure margin on the mark to market value of the gross open positions or as may be specified by INDIA ICC from time to time, shall be deducted upfront from the available liquid assets of the clearing member on an on line, real time basis. The exposure margin



shall be deducted from the liquid assets of the clearing member on an online, real time basis.

SPAN based margins in the form of eligible collaterals (Cash (in USD), bank fixed deposit receipts (in USD), Bank Guarantee (in USD), AAA rated international sovereign securities with a haircut of 10% are accepted as collateral) are collected from all entities online on an upfront basis by adjusting against the collateral deposits of CMs lying with INDIA ICC at the time of trade. Since margins are collected upfront, any risk of payment failure that would cause a shortage of required margin against member's positions, is mitigated. Such margins are released only on completion of the pay-in.

**KC 6.4 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.**

The variation margins are collected on T+1 day. The current exposure is measured on the basis of gross open unsettled positions at a client level. The SPAN based margins along with the exposure margins are collected upfront on an on-line, real-time basis at the time of trade by adjusting against available collateral deposits of CMs. SPAN based margins rates are recomputed every 1.5 hours during the trading day on the basis of last traded price. Besides this, INDIA ICC can also call for additional margins from CMs as and when required. The Byelaws, Rules and Regulations of INDIA ICC and circulars by INDIA ICC provide and define the authority and operational capacity of the INDIA ICC to make and complete intraday margin calls for initial margins and variation margins.

**KC 6.5 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.**

India ICC allows offsets in margin for products which are highly correlated and the overall positions prescribed for each contract in the trade result in significant reduction of risks. The offsets are based on back testing to ensure sufficiency of margins at all times till the positions are open. Presently, India ICC does not have any tie ups with other CCPs for margin offsets.

**KC 6.6 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.**

INDIA ICC has developed own scenarios for a variety of extreme but plausible market conditions'(in terms of both defaulters' positions and possible price changes in liquidation periods, including the risk that liquidating such positions could have an impact on the market).

#### **Back testing for adequacy of margins**

INDIA ICC conducts daily back testing of the margins collected vis-à-vis the actual price changes for the contracts being cleared and settled to assess appropriateness of its margining models.

#### **Adequacy of financial resources**

INDIA ICC ensures that it maintains sufficient financial resources to cover a wide range of potential stress scenarios that include, but are not limited to, the default of the two participants and their associates that would potentially cause the largest aggregate credit exposure to INDIA ICC in extreme but plausible market conditions. Thus, CC shall continuously monitor the adequacy of financial resources (as available in its default waterfall) against the uncovered loss estimated by the various stress tests conducted by INDIA ICC and take steps to beef up the same in case of shortfall.

**KC 6.7 A CCP should regularly review and validate its margin system.**

In order to review and validate its margin system, INDIA ICC conducts daily back testing of the margins collected vis-à-vis the actual price changes for the contracts being cleared and settled to assess appropriateness of its margining models. On a monthly basis, INDIA ICC performs a comprehensive and thorough analysis of stress testing scenarios, models and underlying parameters and assumptions used to ensure they are appropriate for determining INDIA ICC's required level of default protection in light of current and evolving market conditions.

INDIA ICC performs 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 INDIA ICC's participant's increases significantly.

The Board of INDIA ICC reviews and validates the risk management policy of India ICC at least on an annual basis. The Chief Risk Officer identifies monitors and reports the risks to the Managing Director & CEO.

## 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.

### **KC 7.1 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.**

INDIA ICC has a robust liquidity risk management framework to identify, measure and monitor settlement and funding flows, including its use of intraday liquidity. INDIA ICC measures, monitors and manages its liquidity requirements and the adequacy of liquidity arrangements and resources through liquidity stress tests. INDIA ICC's liquidity risk management framework ensure with a high level of confidence that the CCP is able to effect payment and settlement obligations as they fall due, in a timely manner, even under stress scenarios.

INDIA ICC's liquidity needs pertaining to the clearing & settlement activity are in foreign currency (USD). INDIA ICC holds funds in USD and investments in USD linked term deposits. The liquidity needs of the FMI are mainly related to fulfilment of shortfall in settlement that may arise due to delay/non-fulfilment of the obligations by its CMs. INDIA ICC holds sufficient funds to meet its settlement obligations which may arise due to delay/non-fulfilment of the obligations by its CMs. INDIA ICC has established lines of credit and other facilities with a Clearing Bank located at the IFSC, GIFT City, Gandhinagar, which in the event of sudden requirement can provide funds required to complete the settlement.

### **KC 7.2 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.**

INDIA ICC has monitoring tools to keep track of the settlement and funding flows. INDIA ICC monitors on an intra-day, daily and historical basis, the following fund flows and requirements:-

- ❖ Funds pay-in obligations (Settlement) from members
- ❖ Funds pay-in obligations (mark-to-market margins) from members

- ❖ Funds pay-in obligations (part of collateral for margins) from members
- ❖ Funds pay-out obligations (Settlement) to members
- ❖ Funds pay-out obligations (mark-to-market margins) to members
- ❖ Funds pay-out obligations (release of excess collateral) to members

INDIA ICC daily tests the adequacy of its liquidity arrangements in order to ensure that its liquid resources are adequate to meet defaults of CMs that would generate the largest aggregate liquidity obligation for INDIA ICC in extreme but plausible market conditions.

INDIA ICC has put in place the process of daily evaluation of funds requirements for settlement activity. Accordingly, the funding statements are prepared and additional funds requirement, if any, are assessed. These tools help in identifying the liquidity requirements for meeting any immediate needs of funds to complete the settlement process. Based on these tools INDIA ICC decides about the funds movement across Clearing Banks and liquidation/deployment of investments, if required.

**KC 7.3 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.**

INDIA ICC clears and settles in US Dollars and maintains adequate liquidity in US Dollars with clearing banks empaneled by it. INDIA ICC has a fund management process to take care of the liquidity requirements pertaining to settlement at INDIA ICC. Further, INDIA ICC has established lines of credit from a Clearing Bank to take care of sudden liquidity needs. INDIA ICC's additional liquidity requirements are based on periodical evaluations.

INDIA ICC ensures that it maintains sufficient liquid resources to manage liquidity risks from clearing members and clearing banks. INDIA ICC daily tests the adequacy of its liquidity arrangements in order to ensure that its liquid resources are adequate to meet simultaneous default of two CMs and their associates that would generate the largest aggregate liquidity obligation for INDIA ICC in extreme but plausible market conditions and compares such obligation with the resources mentioned hereunder:

- a) Cash
- b) Term Deposit
- c) Committed line of credit available to INDIA ICC

The liquidity risk-management framework of INDIA ICC is set up based on historical data which ensures adequate liquidity. INDIA ICC periodically reviews its liquidity requirements and investment decisions. INDIA ICC has put in place the process of concurrent and periodical audit of its treasury operations conducted by external

auditors. The observations/suggestions of such audits are placed before various senior management and the Board. INDIA ICC periodically conducts stress test and back testing of adequacy of its margins and collaterals.

**KC 7.4 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.**

INDIA ICC clears and settles in US Dollars and maintains adequate liquidity in US Dollars with clearing banks empaneled by it. INDIA ICC has a fund management process to take care of the liquidity requirements pertaining to settlement at INDIA ICC. Further, INDIA ICC has established line of credit from a Clearing Bank to take care of sudden liquidity needs.

INDIA ICC ensures that it maintains sufficient liquid resources to manage liquidity risks from clearing members and clearing banks. INDIA ICC daily tests the adequacy of its liquidity arrangements in order to ensure that its liquid resources are adequate to meet simultaneous default of two CMs and their associates that would generate the largest aggregate liquidity obligation for INDIA ICC in extreme but plausible market conditions and compares such obligation with the resources mentioned hereunder:

- a) Cash
- b) Term deposits
- c) Committed line of credit available to INDIA ICC

The liquidity risk-management framework of INDIA ICC is set up based on historical data which ensures adequate liquidity. INDIA ICC periodically reviews its liquidity requirements and investment decisions. INDIA ICC has put in place the process of concurrent and periodical audit of its treasury operations conducted by external auditors. The observations/suggestions of such audits are placed before various senior management and the Board. INDIA ICC periodically conducts stress test and back testing of adequacy of its margins and collaterals.

**KC 7.5 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.**

INDIA ICC maintains liquid resources commensurate with its liquidity requirements, which are limited to:

- a) Cash deposited at banks;
- b) Term deposits
- c) Committed lines of credit with commercial bank

INDIA ICC's liquid resources are mainly in cash in USD and term deposits placed with clearing banks located at IFSC, GIFT City. In case of extreme but plausible market conditions, INDIA ICC can immediately utilize its liquid resources as per terms and conditions of the banks.

**KC 7.6 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.**

INDIA ICC presently accepts cash, term deposits, bank guarantees and AAA rated international sovereign securities as collaterals. These collaterals are low risk and highly liquid. INDIA ICC's existing size of the liquid resources are adequate to meet its liquidity requirements for completion of settlement as identified through INDIA ICC's stress tests. INDIA ICC's liquid resources are in cash and term deposits which are liquid in nature and easily enforceable. These are kept with RBI approved bank branches located at the IFSC, GIFT City. INDIA ICC does not assume any availability of emergency central bank credit as a part of its liquidity plan.

**KC 7.7 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.**

INDIA ICC on an ongoing basis determines the liquidity requirements based on the historical data. INDIA ICC makes participants aware of margin / deposit requirements, collects deposits and margins from its members and ensures sufficiency of margins at all points of time through daily stress tests and back testing. INDIA ICC has provided its members with collateral management and real time risk management systems to enable members to manage their risks and liquidity needs on a real time basis. The minimum liquid deposits from clearing members with INDIA ICC are invested in liquid assets with banks with sound financials or kept in cash and no exposure is given to members on these deposits. The deposits and margins provide sufficient liquidity cushion for INDIA ICC. The investments made in liquid resources are based on FMI, regulator prescribed investment policy which is periodically reviewed. Investments as and when made, are made in available instruments at the banks operating at IFSC and presently includes only term deposits. At the time of investment, INDIA ICC carries out due diligence of the liquidity providers such as clearing banks.

**KC 7.8 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.**

INDIA ICC meets most of its liquidity requirements through its internal accruals. The FMI does not have any direct liquidity arrangements with its Central Bank.



**KC 7.9 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.**

INDIA ICC ensures that it maintains sufficient liquid resources to manage liquidity risks from members, clearing banks and those generated by its investment policy. INDIA ICC daily tests the adequacy of its liquidity arrangements in order to ensure that its liquid resources are adequate to meet simultaneous default of at least two CMs and their associates that would generate the largest aggregate liquidity obligation for INDIA ICC in extreme but plausible market conditions and compares such obligation with the resources mentioned hereunder:

- a) Cash
- b) Term deposit
- c) Committed line of credit available to India ICC

The liquidity risk-management framework of INDIA ICC is set up based on historical data and the existing investment policy which ensures adequate liquidity. INDIA ICC periodically reviews its liquidity requirements and investment decisions. INDIA ICC has put in place the process of concurrent and periodical audit of its treasury operations conducted by external auditors. The observations/suggestions of such audits are placed before senior management and Board. INDIA ICC periodically conducts stress test and back testing of adequacy of its margins and collaterals and presents the same to the Management and Board.

**KC 7.10 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.**

INDIA ICC takes necessary actions as per its Byelaws, Rules, Regulations and circulars to declare and effect multiple pay-outs, in course of normal business or due to exigencies, including but not limited to banking holidays. INDIA ICC also takes necessary actions as per as per its Byelaws, Rules, Regulations and circulars with regard to withholding/blocking/liquidating collaterals and other deposits of such CMs lying with INDIA ICC and if required may also use its own resources or its Default Fund to declare the pay-out in case of individual or combined default by CMs to settle their payment obligations.

## 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.**

### **KC 8.1 An FMI's rules and procedures should clearly define the point at which settlement is final.**

The main types of settlements at INDIA ICC are:

- ❖ Daily mark-to-market, premium and final settlement of contracts

The norms regarding finality of settlements are laid down in the Byelaws, Rules and Regulations which are approved by the regulator. INDIA ICC covers the procedural details in various circulars by it from time to time regarding the settlement process. The said information is available to all the market participants & public through website. INDIA ICC uses empanelled Clearing Banks for daily settlements.

### **Securities Contracts (Regulation) (Stock Exchanges and Clearing Corporations) (Amendment) Regulations, 2013 dated September 2, 2013**

Settlement and netting.

1. 44 A. The payment and settlement in respect of a transaction in a recognized stock exchange and recognized clearing corporation shall be determined in accordance with the netting or gross procedure as specified in the Byelaws of such recognized stock exchange and recognized Clearing Corporation, with the prior approval of the SEBI.
2. Payment and settlement in respect of a transaction between parties referred to in sub-regulation (1), effected under the Byelaws of a recognized stock exchange or recognized clearing corporation, shall be final, irrevocable and binding on such parties.
3. 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 towards its settlement or other obligations in accordance with the Byelaws 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, as the case may be. Explanation. – 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.

The Byelaws, Rules and Regulations of INDIA ICC ensure that there is finality of settlement between the FMI and the participants including discharge of payment / transfer instructions.

**KC 8.2 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.**

INDIA ICC provides final settlement on the value date. It conducts two settlements during the day for derivatives contracts in order to reduce risks. The participants are required to fulfill their settlement obligations as per the scheduled time-lines prescribed by the INDIA ICC from time to time. The settlement schedules are informed to market participants through circulars and also placed on the website. The Clearing Banks also need to adhere to the settlement time lines for completing their part of settlement activity. INDIA ICC publishes the final settlement schedule date and time on its website. The settlement occurs at the specified timings as published by INDIA ICC, and multiple-batch processing is done since there is more than one settlement in a day. The final settlement obligations are informed to the participants on the same day after the trading hours. INDIA ICC has not experienced any deferment of its settlements.

**KC 8.3 An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.**

INDIA ICC does not permit revocation of settlement obligations by participants once a trade is admitted.

## Principle 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 minimize and strictly control the credit and liquidity risk arising from the use of commercial bank money.**

### **KC 9.1 An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.**

INDIA ICC carries out money settlement in USD through designated Clearing Banks which are Reserve Bank of India / IFSC Authority approved commercial banks operating at the IFSC, GIFT City. INDIA ICC follows a stringent criteria for empaneling clearing banks which includes the banks financial network, manpower and infrastructure. The Clearing Banks are established organizations recognized and regulated by Reserve Bank of India / IFSC Authority that follow best accounting practices, safekeeping procedures and internal controls that fully protect the funds they hold.

### **KC 9.2 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.**

INDIA ICC currently uses a Clearing Bank framework for carrying out its settlements, under which, INDIA ICC has empaneled Clearing Banks, which are Reserve Bank of India / IFSC Authority approved commercial banks operating at the IFSC, GIFT City, for carrying out the money settlements. The Clearing Banks enter into an agreement with INDIA ICC. Settlements are carried out in USD which is a global reserve currency. INDIA ICC only uses those Clearing Banks that satisfy the eligibility criteria specified by INDIA ICC which includes bank's financial network, manpower, infrastructure etc. and regularly monitors the bank's continuing eligibility.

### **KC 9.3 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. In particular, 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.**

INDIA ICC currently uses a Clearing Bank framework for carrying out its settlements, under which, INDIA ICC has empaneled Clearing Banks, which are Reserve Bank of India / IFSC Authority approved commercial banks operating at the IFSC, GIFT City, for

carrying out the money settlements. The Clearing Banks enter into an agreement with INDIA ICC. Settlements are carried out in USD which is a global reserve currency. INDIA ICC only uses those Clearing Banks that satisfy the eligibility criteria specified by INDIA ICC which includes bank's financial network, manpower, infrastructure etc. The Clearing Banks are regulated and supervised by the Reserve Bank of India / IFSC Authority and follow all the guidelines, regulations prescribed by the Reserve Bank of India / IFSC Authority which are intended to keep banks safe and sound financially.

A bank must fulfil INDIA ICC's strict conditions before INDIA ICC allows it to be a Clearing Bank. These conditions include the following:

- ❖ Must hold a banking license in India
- ❖ Recognised by the IFSC Authority
- ❖ The bank must be registered and have a presence at the GIFT IFSC, Gandhinagar, Gujarat, India through a branch
- ❖ Minimum networth of INR 5 billion as per its last audited Balance Sheet in the format as specified by RBI
- ❖ Bank should have a dedicated team to handle the settlement related operations
- ❖ Bank will need to, inter alia, adhere to the timelines for confirming/transferring funds from the member's accounts to the INDIA ICC account as per the files/instructions received from INDIA ICC from time to time
- ❖ Bank will be required to put in place the systems and processes to log-in to various systems provided by INDIA ICC for collateral, margins, funds settlement and any other obligation of the member brokers payable by them to INDIA ICC.
- ❖ Bank should be prepared to implement an on-line interface with INDIA ICC for various activities like collateral deposits by member brokers, settlement confirmation etc.

INDIA ICC monitors net-worth of the Clearing Banks through the periodic financial results published by it and also based on various circulars and reports published by the Reserve Bank of India / IFSC Authority. INDIA ICC also monitors its investments to avoid concentration of credit and liquidity exposures to its commercial clearing (settlement) banks.

**KC 9.4 If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.**

As per SECC Regulations, 2018, a recognized clearing corporation shall not engage in activities that are unrelated or not incidental to its activity as a clearing corporation except through a separate legal entity and as permitted by the Board. Further, the regulator has also mandated that the clearing corporations at the IFSCs can perform only the core functions clearing & settlement and risk management. INDIA ICC therefore does not conduct any money settlements on its own books. INDIA ICC currently uses a Clearing Bank framework for carrying out money settlements for the products traded by members of the INDIA INX. INDIA ICC while empaneling Clearing Banks considers various factors such as the bank's net-worth, branch network, systems and processes, etc. The Clearing

Banks are established organizations recognized and regulated by the Reserve Bank of India / IFSC Authority that follow best accounting practices, safekeeping procedures and internal controls that fully protect the funds they hold.

**KC 9.5 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.**

Clearing Banks are required to enter into an agreement with the INDIA ICC. The detailed obligations of the Clearing Banks form part of the agreement. Inter – bank and intra bank transfers are final when effected and funds received are transferred at near real time through batch processing mode. The funds transfers effected through the clearing banks are protected in terms of the Payment and Settlement Systems Act, 2007.

## Principle 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.**

### **KC 10.1 An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities**

With respect to settlement of all types of securities, INDIA ICC has clearly defined the rights, responsibilities and obligations of all parties with respect to the delivery of instruments through the Byelaws, Rules and Regulations as well as through various circulars and notifications issued from time to time.

### **KC 10.2 An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.**

INDIA ICC does not conduct any settlements which would involve storage and delivery of physical instruments or commodities. INDIA ICC conducts concurrent audit and reconciliation of various physical collaterals documents deposited by members.

The Byelaws of INDIA ICC states the following with respect to delivery of securities:-

#### **6.15 Delivery of Securities**

6.15.1 Delivery and settlement of all securities, documents and papers and payment in respect of all Deals shall be in such manner and at such place(s) as may be prescribed by the Relevant Authority from time to time.

6.15.2 The Relevant Authority shall specify from time to time, the securities, documents and papers which, when delivered in prescribed manner, shall constitute good delivery. Where circumstances so warrant, the Relevant Authority may determine, for reasons to be recorded, whether or not a delivery constitutes a good delivery, and such findings shall be binding on parties concerned. Where the Relevant Authority determines that a delivery does not constitute a good delivery, the delivering party shall be required to substitute such delivery with the good delivery acceptable to the Relevant Authority within such time as may be specified.

6.15.3 The norms and procedures for delivery with respect to market lot, odd lot, minimum lot, part delivery, delivery of partly paid securities etc., shall be as prescribed by the Relevant Authority from time to time.

6.15.4 The requirements and procedures for determining disputed deliveries or defective deliveries, and measures, procedures and system of resolving the dispute or defect in



deliveries or of consequences of such deliveries or their resolution shall, subject to these Bye-Laws and Regulations, be as prescribed by the Relevant Authority from time to time.

## Principle 12: Exchange-of-value settlement systems

**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.**

**KC 12.1 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.**

The exchange traded transactions in derivatives instruments are cash settled based on the netted obligations of the members and therefore does not involve settlement of two linked obligations. For the debt instruments, INDIA ICC conducts a DVP3 (gross) settlement where the securities settlement is conducted through an international central securities depository, Clearstream and the funds settlement through the clearing banks located at the IFSC, GIFT City. The receipt of securities from the seller, in INDIA ICC's account with Clearstream, are matched with the funds received from the buyer in INDIA ICC's account with the clearing bank and only thereafter the payout is conducted for delivery of securities / funds to the receiving entities. This ensures elimination of any principal / settlement risk. In case any of the legs, whether securities or funds remain undelivered by any of the parties, the settlement would stand annulled and the securities / funds returned to the respective clearing member/custodian.

## Principle 13: Participant-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.**

### **KC 13.1 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.**

The procedure to be followed in case of a participant default, including the circumstances under which a default materializes and delineates roles and responsibilities are clearly articulated in the Byelaws of INDIA ICC, which are approved by the regulator. INDIA ICC has set up a Default Fund to guarantee the settlement of trades executed on the India INX. In the event of a CM failing to honor settlement commitments, the Default Fund is used to fulfill the obligations of that member and complete the settlement without affecting the normal settlement process.

#### **Corpus of Default Fund**

The corpus of the fund should be adequate to meet out all the contingencies arising on account of failure of any member(s). The risk or liability to the fund depends on various factors such as trade volume, maximum settlement liability of the members, the history of defaults, capital adequacy of the members, the degree of safety measures employed by the clearing corporation etc. A fixed formula, therefore, has not been prescribed to estimate the risk or liability of the fund. However, in order to assess the fair quantum of the corpus of Default Fund, INDIA ICC considers the following factors:

- ❖ Risk management system in force
- ❖ Current and projected volume/turnover to be cleared and settled by INDIA ICC on guaranteed basis
- ❖ Track record of defaults of members (number of defaults, amount in default)

The MDF of Default Fund is subject to the following:

- i. The MDF is fixed for a month.
- ii. By 15th of every month, INDIA ICC reviews and determines the MDF for next month based on the results of daily stress tests of the preceding month. (For example, by 15th February, INDIA ICC determines MDF for March based on results of various stress tests conducted in January). INDIA ICC also reviews and determines by 15th of every month, the adequacy of contributions made by various contributors and any further contributions to the Default Fund required to be made by various contributors for the next month.

- iii. For every day of the preceding month (i.e., January as per example in (ii) above), uncovered loss numbers are estimated by the various stress tests for credit risk conducted by INDIA ICC and highest of such numbers is taken as worst case loss number for the day.
- iv. Average of all the daily worst case loss numbers determined in (iii) above is calculated.
- v. The MDF for next month (i.e., March as per example in (ii) above) shall be higher of the average arrived in at step iv above and the MDF as per previous review (i.e., review done on 15th January for the month of February).

### **Access to Default Fund**

INDIA ICC may utilize the Default Fund in the event of a failure of member(s) to honor settlement commitment.

### **Further contribution to / Recoupment of Default Fund**

Requisite contributions to Default Fund by various contributors for any month is made by the contributors before start of the month. In the event of usage of Default Fund during a calendar month, contributors shall, as per usage of their individual contribution, immediately replenish the Default Fund to MDF.

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

(i) By INDIA ICC

(ii) By the Stock Exchange

INDIA ICC clearly define the event of default and method for identifying the default situation in its Byelaws and Rules. INDIA ICC Byelaws and Rules clearly lay down the substantive provisions and well-defined procedure for the aforesaid key aspects, which operates within the regulatory framework laid down by the regulator. INDIA ICC Byelaws and Rules allows to use financial resources such as collaterals, Default Fund for covering losses and containing liquidity pressures arising from default.

Byelaws of INDIA ICC clearly define the event of default and method for identifying the default situation including use of financial resources such as collaterals, Default Fund for covering losses and containing liquidity pressures arising from default.

### **KC 13.2 An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.**

The procedure to be followed in case of a participant default which delineates roles and responsibilities are clearly articulated in the Byelaws of INDIA ICC, which are approved by the regulator. In case of default by a participant a notice is issued to the regulator,

Stock Exchange, other participants and other Stock Exchanges and CCPs informing them of the default. The clients of the defaulting member are provided with sufficient time to admit their claims against the defaulting member. INDIA ICC's Board reviews the default procedures from time to time on a need basis in line with the directive issued by the Regulator and the latest domestic and international developments.

**KC 13.3 An FMI should publicly disclose key aspects of its default rules and procedures.**

Chapter X of the Byelaws of INDIA ICC on default rules and procedures covers various issues such as:

- ❖ Declaration Of Default
- ❖ Notice Of Declaration Of Default
- ❖ Defaulter's Books And Documents
- ❖ Defaulter's Assets
- ❖ Distribution
- ❖ Closing Out
- ❖ Application Of Assets
- ❖ Claims Against Defaulter

The same is public and readily accessible to market participants. The Byelaws are published in the Official Gazette as well as the website of INDIA ICC. The circulars of INDIA ICC are publicly available on the website.

**KC 13.4 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.**

The procedure to be followed in case of a participant default which delineates roles and responsibilities are clearly articulated in the Byelaws of INDIA ICC which is available on the website of INDIA ICC for public review. INDIA ICC's Board reviews the default procedures from time to time on a need basis in line with the directive issued by the Regulator and the latest domestic and international developments. INDIA ICC on an on-going basis engages with market participants to review the default and compliance procedures. INDIA ICC's default procedures, close out procedures are available to the public on the website of INDIA ICC under its Byelaws and is open for any comments and suggestions. The procedure to be followed in case of a participant default are clearly articulated in the Byelaws of INDIA ICC and any participant or stakeholder is free to provide their suggestions and views to INDIA ICC incase they feel any changes are required to make the default procedures more effective. Incase there are any changes to the rules and procedures, these are also informed to the participants and stakeholders through circulars / notifications and again, if found necessary the participants and

stakeholders can provide their views and suggestions to the changes which would be considered by INDIA ICC.

## Principle 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.**

**KC 14.1A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions 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.**

The regulator has prescribed various rules and guidelines for segregation of positions of a client from the member's own position and segregation of member's collateral and client's collateral. As per the comprehensive Risk Management Framework of INDIA ICC, margins are imposed on the client level positions. The trading system of the stock exchange maintains client level positions which are segregated from the member's positions for margin purpose. The members are required to maintain client-wise collateral and are prohibited from utilizing one client's collateral against its own positions or positions of other clients in the market. Members are also required to provide details of collateral utilization to each client separately on a daily basis. Client positions can be transferred by the CCP from one member to another member subject to necessary conditions. The regulator has also prescribed guidelines for protection of customer's collateral by the members. Also regular inspections of members are conducted, inter alia, to check compliance of such requirements by the members.

**KC 14.2A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.**

The trading system of the stock exchange maintains client level positions which are segregated from the member's positions. INDIA ICC mandates the segregation of the margins deposited by the CMs for trades on their own account from the margins deposited with it on client account. The client's money is required to be held by the CM on an omnibus basis, for client purpose only.

INDIA ICC holds collaterals deposited by its members, inter alia, to cover all types of margins, settlement obligations and various other obligations of the members to the INDIA ICC. The exposure is provided by INDIA ICC to its CMs on the basis of collateral deposited by them with the INDIA ICC. The CM/TMs are required to maintain separate records of their client collateral. The margins are imposed by the INDIA ICC on a scrip-

wise, client level, net position which is grossed across all clients of a TM. The following process is to be adopted for segregating the client's money vis-à-vis the CM's money:

- i. At the time of opening a position, the member is required to indicate whether it is a client or proprietary position.
- ii. Margins across the various clients of a member are collected on a gross basis and not netted off.
- iii. When a position is closed, the member indicates whether it is the client or his own position being closed.

**KC 14.3A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants.**

INDIA ICC allows for portability of clients' positions with or without the CM defaulting. In the event CM defaults, INDIA ICC can make arrangements which allows it to transfer positions and/or collateral of non-defaulting clients of the defaulting CM to one or more non-defaulting CMs. INDIA ICC may suo moto or on the application of a client of a suspended or defaulter CM or and on such terms and conditions as INDIA ICC deems fit to impose, permit all or any open positions of the CM (whether on his own account or on account of his client) or client to be transferred to another CM who agrees to accept such open positions. The facility is available for transfer of positions of one member to another member subject to fulfilment of collateral, margins and other requirements as prescribed by the regulator and INDIA ICC. Byelaws, Rules and Regulations of INDIA ICC provide for transfer of positions of the participants.

**KC 14.4A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions 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's customers' positions and related collateral.**

All norms of INDIA ICC are available through Byelaws, Rules and Regulations, which are publicly available on INDIA ICC website. INDIA ICC accepts collaterals from the CMs. CMs inturn are required to collect collaterals from clients. CMs can view the amount of collateral held in their accounts by accessing INDIA ICC's online collateral management systems. INDIA ICC does not recognize clients/client collateral and obtain an undertaking from TM/CM that the collateral provided by them even for client trades belongs to the TM/CM. INDIA ICC can make arrangements which allows it to transfer positions and/or collateral of non-defaulting clients of the defaulting CM to one or more non-defaulting CMs.



## Principle 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 materialize. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.**

**KC 15.1 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.**

INDIA ICC has a strong risk governance structure that enables INDIA ICC to identify, monitor and mitigate its general business risks through oversight by the management and Board of Directors who have defined responsibilities and accountabilities.

INDIA ICC has identified various general business risks arising from human errors, technological, physical, economic, political factors. However, INDIA ICC's main business loss risk may arise from its treasury operations, drop in business volumes & fees, regulatory risks and technological failure.

INDIA ICC interacts with all its stakeholders, including shareholders, regulators, and government officials etc. on a continuous basis to understand the intended policy guidelines and take proactive measures. INDIA ICC also scans all industry issues and news and updates management on a daily basis. INDIA ICC has professional and experienced persons on its Board of Directors who perform their roles independently. INDIA ICC also has a professional and experienced senior management team. All important issues pertaining to operations and business are reported and discussed at the Board Level. INDIA ICC has a strong internal control & compliance department. INDIA ICC business and operations are audited by an independent Audit firm on a concurrent / monthly basis and is subject to quarterly review / audit by a statutory auditor. INDIA ICC operations are subject to audit and inspection from its regulator from time to time.

**KC 15.2 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.**

INDIA ICC through daily liquidity stress tests, ensures that the liquid net assets are at all times sufficient to ensure a recovery or orderly wind-down of critical operations and services. INDIA ICC's liquid net assets funded by equity are mainly in the form of cash or

term deposits with Banks at the IFSC, GIFT City. INDIA ICC assesses and monitors its capital positions monthly to ensure that there is adequate capital to support business activities and meet regulatory capital conditions. As per the capital requirements specified by the regulator through SECC Regulations, INDIA ICC must have a networth of INR 1000 million or risk based capital, whichever is higher, within three years of its commencement of operations. Currently, the networth of INDIA ICC is around INR 800 million. As per the capital requirements specified by EU through EMIR, a CCP must have a permanent and available initial capital of at least EUR 7.5 million (~INR 675 million).

**KC 15.3 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 resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.**

INDIA ICC holds enough liquid net assets funded by equity to cover over 6 months of operating expenses. In case of a wind-down, the participants positions would be closed, all their funds returned and they would be ported to another CCP. Currently, the networth of INDIA ICC is around INR 800 million which is held in cash and term deposits. This is apart from the funds held under the Default fund. Since, INDIA ICC funds are invested in high quality and liquid financial assets, it would be able to facilitate the transition in an orderly manner. INDIA ICC maintains separate accounting and investments of its Default Fund which are to be used to cover default of a member. INDIA ICC manages general business risks as per the prevalent laws of the land.

**KC 15.4 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.**

Funds of INDIA ICC are held in cash or term deposits with Reserve Bank of India / IFSC Authority approved commercial banks located at the IFSC, GIFT City. INDIA ICC on a periodic basis reviews the quality and liquidity of its investments and ensures all investments are made in highly liquid assets.

**KC 15.5 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.**

There are adequate provisions in the Byelaws, Rules and Regulations of the FMI to replenish its equity base / the Default Fund. Any capital raising plan would require approval of INDIA ICC's Board.

## **Principle 16: Custody and investment risks**

**An FMI should safeguard its own and its participants' assets and minimize 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.**

**KC 16.1 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.**

Presently, INDIA ICC accepts cash, term deposits, bank guarantees and AAA rate international sovereign securities as collaterals. The banks / custodians / depositories who hold India ICC / clearing member's assets are regulated by the IFSC Authority / foreign regulators and are subject to IFSC Authority / foreign regulator regulations. They have to comply with the criteria relating to fit and proper criteria, minimum capital requirements, adequate infrastructure, safe keeping measures, internal controls, etc. Their activities monitored and audited by the regulators. The operations & procedures in respect of custody of collaterals will be mandated by the agreement entered between the custodian & INDIA ICC.

**KC 16.2 An FMI should have prompt access to its assets and the assets provided by participants, when required.**

INDIA ICC's assets are in cash and term deposits with banks at IFSC. In the event of a member default, INDIA ICC would utilize its own funds / default fund for critical liquidity requirement. The lien on collaterals by INDIA ICC are clearly defined in the Byelaws, Rules and Regulations of INDIA ICC. The INDIA ICC rules and agreements are legally enforceable and INDIA ICC has the legal power to liquidate the collaterals, if required.

**KC 16.3 An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.**

INDIA ICC restricts exposure to various banks on the basis of factors like network, shareholders' funds, assets size etc. INDIA ICC ensures that investments are made in banks whose network is above specified criteria, i.e. INR 5 billion at present. Further, the exposure limit of these banks are also defined. INDIA ICC monitors its exposure to make sure that the prescribed limits are not exceeded.

**KC 16.4 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.**

Presently, the only source of investment at the IFSC, GIFT City are term deposits. INDIA ICC's funds are mainly held in term deposits enabling quick liquidation at minimal risk.

As and when other forms of investments are available and based on the regulatory mandate, INDIA ICC may invest in other forms of investments while taking care:-

- ❖ To invest in securities / deposits that provide the highest level of safety;
- ❖ To provide for adequate liquidity so as to meet any contingencies;
- ❖ To achieve "Risk vs. Return" trade off; and
- ❖ To facilitate overall diversification of risk across the investments.

The investments of INDIA ICC would be cash and/or highly liquid financial instruments with minimal market and credit risk. INDIA ICC does not invest participant assets in the participants' own securities or those of its affiliates.

## Principle 17: Operational 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.**

### **KC 17.1 An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.**

INDIA ICC conducts periodical audits of its systems and processes to identify the operational risk on an ongoing basis to take timely measures to manage such risks. INDIA ICC also carries out analysis of any change in the business environment on account of changes in rules and regulations, business competition etc. and accordingly builds systems to mitigate such risks. INDIA ICC has identified various sources of operational risks namely technological risks, liquidity risk, custody and investment risk, credit exposure risk, market risk etc. which are both internal and external in nature. INDIA ICC has policies and process for identifying & addressing its operational risk. INDIA ICC has developed a comprehensive risk management framework to address various risks including operational risk. INDIA ICC has put in place a BCP to identify and address single points of failure in its operations. INDIA ICC has laid down SOPs which detail the operational procedures to be followed in the post trade activities. The process documents are updated regularly to ensure appropriate implementation of the operational procedures. INDIA ICC has put in place various checks and balances in the systems and processes including concurrent and periodical audits to address the risk of fraud. INDIA ICC has put in place a robust environment for testing the changes in the existing and new systems and processes to ensure smooth functioning of the systems in case of changes in the existing systems and implementation of new major projects. Since human resources play a vital role in the operations of clearing & settlement, risk management, INDIA ICC has laid out a well-designed Human Resources policy, to ensure qualified, skilled personnel are hired for various functions and retained through adequate compensation, fair appraisals and recognition.

**KC 17.2 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.**

INDIA ICC Board of Directors reviews the operational matters and risks arising out of them if any. INDIA ICC has developed a comprehensive risk management framework to address various risks including operational risk. The risk management framework is approved by the Board. The Board has also empowered the management sufficiently to addresses any operational risks / exigencies and inform the Board subsequently. INDIA ICC has laid down periodic schedules to review and carry out audits and tests its systems both internally and with active participation of the members of INDIA ICC, critical service providers and linked FMIs. INDIA ICC's risk management framework is subject to periodical audits. INDIA ICC also undergoes a yearly Systems Audit, the report of which is shared with the Board and the regulator.

**KC 17.3 An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.**

INDIA ICC's operational reliability objective is focused on having a scalable and upgradable system, robust facilities for data back up and DR site pertaining to clearing & settlement and other vital processes to take care of all contingencies and business continuity requirements. The systems are reliable and secured, and they are scaled-up/upgraded on a regular basis. The contingency plan, back up facilities and DR site pertaining to clearing & settlement and other vital processes are periodically tested. INDIA ICC gives top priority to its process of managing operational risk and accordingly has fully integrated the same into its operational risk management framework. INDIA ICC conducts periodic audits of its systems and processes and also conducts periodical testing of its BCP on mock and live environments. INDIA ICC conducts periodic mock sessions for identifying, monitoring, assessing and managing the full range of problems that may be faced. The result and detailed reports of such review and testing are analyzed and appropriate steps are taken to mitigate the operational risks. The systems are designed to meet performance criteria including average, peak and expected capacity, latency, downtime etc. INDIA ICC has also appointed a Systems Auditor to conduct annual system audits. The report, along with the steps taken to rectify the vulnerabilities identified in the report are shared with the Board of INDIA ICC and the regulator on a periodic basis.

**KC 17.4 An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.**

INDIA ICC has adequate systems' capacity for on-line/real time risk management of trades cleared and settled and is supported by a suitable BCP including a far DR. Capacity assessment is performed for every new system or significant change to an existing system. The capacity plans are reviewed and tested on regular basis and relevant reports with detailed analysis are placed with the appropriate committees for taking necessary action.

INDIA ICC has well maintained back-up systems which ensures proper preservation and recovery of data. The systems are in place and are scaled-up/upgraded on a regular basis.

The contingency plan and back up facilities pertaining to trading, clearing & settlement and other vital processes are in place for timely recovery of data. INDIA ICC also conducts periodic testing of its business continuity and contingency arrangements.

The Systems Audit focuses on the following key areas:

- ❖ General Controls for Data Center Facilities
- ❖ Software Change Control
- ❖ Data communication / Network controls
- ❖ Security Controls – General office infrastructure
- ❖ Access policy and controls
- ❖ Electronic Document controls
- ❖ General Access controls
- ❖ Performance audit
- ❖ Business Continuity / Disaster Recovery Facilities
- ❖ IT Support & IT Asset Management
- ❖ Entity Specific Software
- ❖ Any other Item

**KC 17.5 An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.**

INDIA ICC maintains information technology systems which are adequate to deal with the complexity, variety and type of services and activities it performs. In particular, INDIA ICC takes care to ensure that its systems are reliable, secure and resilient (including in stressed market conditions), are scalable, and have sufficient redundancy capacity to process all remaining transactions before the end of the day in circumstances in which a major disruption has occurred. INDIA ICC's policies, processes, controls, and testing take into consideration all relevant standards of security.

INDIA ICC maintains a robust information security framework that appropriately manages its information security risk, including policies to protect information from unauthorized disclosure, ensure data accuracy and integrity and guarantee the availability of the CCP's services. Access to the server room in INDIA ICC's primary

operations center and the data centers are controlled with entry only to authorized persons. All visitors are escorted by authorized staff.

INDIA ICC conducts periodic mock/live sessions for identifying, monitoring, assessing and managing the full range of physical vulnerabilities and threats. INDIA ICC also conducts audits of its systems and other processes and the observations/suggestions of such audits are reviewed and analyzed. INDIA ICC undergoes annual system audit for assessing the systems security risks, the observations/suggestions of which, are reviewed, analyzed and shared with the Board of Directors of INDIA ICC.

The systems security audits are conducted regularly for identifying, monitoring, assessing and managing the full range of information security vulnerabilities and threats on an ongoing basis and help ensure the smooth functioning of the systems in case of changes in the existing systems and implementation of new major projects.

**KC 17.6 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.**

INDIA ICC maintains an organizational structure that ensures continuity and orderly functioning in the performance of its services and activities. INDIA ICC has well maintained back-up systems. The systems are reliable and secured, and they are scaled-up/upgraded on a regular basis. INDIA ICC periodically conducts testing of its business continuity and contingency arrangements. INDIA ICC's DR site is located at a different seismic zone nearly 900 kms away from its primary site at IFSC, GIFT City, Gandhinagar. The DR site replicates the systems and IT infrastructure of the primary site. INDIA ICC tests, implements and maintains a business continuity policy and DR plan to ensure the preservation of its functions, the recovery of operations and the fulfilment of its obligations. INDIA ICC has laid down periodic schedules to review and carry out audits and tests its systems both internally and with active participation of the members of INDIA ICC, critical service providers and linked FMIs. The DR plan allows INDIA ICC to resume operations within a very short span of time in any extreme circumstances. The DR plan allows transactions to be identified in a timely manner in case of a disruption and smooth transition to the DR systems without any loss of data. INDIA ICC has an Executive Committee Group which consists of functional heads of various functions of INDIA ICC. The Executive Committee Group is responsible for crisis management in times of any emergency. INDIA ICC has put in place very efficient crises management procedures. The communication is immediately sent to the concerned team and authorities through various modes viz. email, telephonic communication, circulars/press releases, website, etc. The members of INDIA ICC, critical service providers and linked FMIs regularly



participate in the periodic mock testing from DR site as part of the business continuity and contingency arrangements testing, whenever scheduled.

**KC 17.7An 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.**

In a continuous endeavor to improve the level of compliance of members, INDIA ICC conducts inspections of the members and emphasizes on various compliance related issues. Information is sought from members on an annual/semi-annual basis. In case members don't satisfy the access criteria of the CCP, their membership rights are suspended in accordance with the Byelaws, Rules and Regulations, various circulars by INDIA ICC from time to time prescribing in detail the membership participant requirement. In addition INDIA ICC's Risk Management Framework is designed to manage and mitigated various internal risks and risks which might have a spillover effect on other participants.

INDIA ICC follows an outsourcing process for vendor selection, which inter-alia, covers the following points:-

- ❖ Core activities cannot be outsourced.
- ❖ Outsourced activities will be subject to the same regulatory overview as if they were conducted by INDIA ICC itself.
- ❖ INDIA ICC enters into an agreement with the service providers which, inter alia, covers in detail the terms and conditions, roles, rights and responsibilities of the vendors.

## Principle 18: Access and participation requirements

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

**KC 18.1 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.**

CMs are admitted as members of INDIA ICC. The requirements for participation are publicly available on the website of the INDIA ICC. There is no discretion in the admission of members and the criteria for admission is laid out in a fair and transparent manner. Clearing Banks are also empaneled based on criteria informed to the banks. The participants who are members / empaneled with INDIA ICC are not restricted in any way to access INDIA ICC and INDIA ICC offers fair and open access to its services for all its members. Clearing interface applications are provided to all its CMs to carry out various functions like collateral deposits, releases, viewing of latest margin details, positions etc. INDIA ICC does not accord any priority to any member in terms of processing data, providing reports and other services. All reports are downloaded to members/clearing banks at the same time. Further, INDIA ICC provides various essential and value added services to its members / clearing banks to enhance their efficiency. These services include, but are not limited to facilities to view and download trades online, view margin utilization, downloading/uploading of files from/to the CC etc. All these services are available to members/custodians without any discrimination.

**KC 18.2 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.**

INDIA ICC has established different categories of admissible CMs and admission criteria. Such criteria is non-discriminatory, transparent and objective so as to ensure fair and open access to INDIA ICC and its services. The criteria is risk based and ensures that CMs have sufficient financial resources and operational capacity to meet the obligations arising from participation in a CCP. Criteria are reviewed periodically and modified / enhanced to control risk.

The participation requirements are disclosed to the public through circulars uploaded on the website, notices etc. Further, the net worth requirements / deposits etc., for different classes of members are prescribed depending on the type of CM. The rationale for different criteria is based on the potential risk, size of the business due to the different CM status.

INDIA ICC ensures the safety and efficiency by undertaking regular inspections of the members by conducting surveillance activities, monitoring members' collaterals vis-à-vis their exposures etc.

**KC 18.3 An FMI should monitor compliance with its participation requirements on an ongoing 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.**

INDIA ICC on an ongoing basis monitors compliance by its members. The members are required to make regular filings giving the latest information about their net worth, shareholding pattern etc. The information on the deposits of the members are available with INDIA ICC at all points of time. The same is monitored to ensure compliance with participation criteria. Special monitoring through reports generated for this purpose is done of participants who are perceived to be financially weak.

A member may become ineligible to participate on his committing a default in obligations towards INDIA ICC, failure to comply with regulatory orders and failure to comply with rules and regulations of the INDIA ICC. A member would also become ineligible to participate in INDIA ICC on the orders of the regulator / exchange. INDIA ICC has objective procedures for the suspension and exit of CMs that no longer meet the admission criteria. The procedure with respect to suspension and orderly exit of a member that no longer complies with the requirements is stated in the Byelaws, Rules and Regulations of INDIA ICC.

The following activities are carried out when the risk profile of the participant deteriorates:

- ❖ Blocking of member's deposits.
- ❖ Disablement of the member and preventing him from taking further exposures.
- ❖ Exception handling mechanisms for any shortages during settlement (withholding payouts etc.).

## Principle 19: Tiered participation arrangements

**An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.**

**KC 19.1 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 INDIA ICC are the CMs who hold membership of INDIA ICC. The indirect participants of INDIA ICC are the TMs, whose proprietary and client trades are cleared by the CMs. TMs do not have an account directly with INDIA ICC, rather they hold accounts with CMs. The indirect participants could thus include TMs and clients, customers or intermediaries of CMs. INDIA ICC's rules for CMs allow it to gather relevant basic information to identify, monitor and manage relevant concentrations of risk relating to the provision of services to clients. CMs must, upon request, inform INDIA ICC about the arrangements they have with their TMs / Clients. Responsibility for ensuring that TMs / Clients comply with their obligations remains with CMs. INDIA ICC has robust information and risk-control systems which allow INDIA ICC to obtain timely information and apply risk management policies and procedures appropriately (including sufficient information to ensure that credit and liquidity exposures are monitored continuously at CCP-level, CM-level and, to the extent practicable, TM and client-level).

**KC 19.2 An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.**

The inter dependencies between direct and indirect participants are considered in terms of the trading, clearing and settlement activities. The financial obligations are identified on the basis of various reports generated by the system pertaining to client level traded positions. The source of interdependency is obligation settlement by indirect participants through direct participants. The identification is done on the basis of data provided by the Exchange.

**KC 19.3 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.**

The direct participants with the INDIA ICC are the CMs. The indirect participants are the TMs / Clients. The direct participants through whom the indirect participants settle obligations, have to provide the collateral towards the margin requirements of these

indirect participants. The direct participants are also provided by INDIA ICC with systems through which they can establish additional controls and limits on the indirect participant's exposures. The additional control is in terms of limits defined in the system.

As per the comprehensive risk management framework of INDIA ICC the margins for TMs are levied at a client level. TMs are required to collect margins from their clients and place margins with the CM in case they wish to take an exposure in the markets either for themselves or their clients. All the margin requirements of the CMs are monitored against the limits defined. The CM's terminal goes into risk reduction mode in case of limit violation. The process of upfront collection of margins at client level, automatic squaring off mode (risk reduction mode) the terminals of CMs are put into in case of limit violations helps in managing the risks emanating from indirect participants.

**KC 19.4 An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.**

INDIA ICC continuously reviews its policies, rules and procedures in order to mitigate risks to the FMI arising from tiered participants. The Risk Management framework of INDIA ICC addresses different kinds of risk INDIA ICC is exposed to. INDIA ICC along with the regulator regularly assesses the risks pertaining to the indirect participants and the rules and regulations for the market participants are modified, based on such assessments, for taking corrective actions. INDIA ICC also takes action when the aggregate margin requirement of direct participants (incl. requirement for indirect) exceeds the collateral they have deposited.

## Principle 20: FMI links

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

**KC 20.1 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.**

This key consideration is presently not applicable to INDIA ICC since INDIA ICC presently is not required to connect to any FMI for its day to day operations. However, going forward INDIA ICC may have linkages with depositories. Before entering into a link arrangement with any FMI, INDIA ICC would carry out due diligence of the FMI for a thorough assessment of potential risks. INDIA ICC would enter into necessary agreements with the parties clearly defining the contractual arrangements and the legal aspects.

**KC 20.2 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.**

INDIA ICC has the necessary legal agreements signed with the FMIs clearly defining the contractual arrangements and the legal aspects. The prospective link arrangements are bound by legal agreements.

**KC 20.3 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.**

This key consideration is not applicable to INDIA ICC as a CCP.

**KC 20.4 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.**

This key consideration is not applicable to INDIA ICC as a CCP.

**KC 20.5 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.**

This key consideration is not applicable to INDIA ICC as a CCP.

**KC 20.6 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.**

This key consideration is not applicable to INDIA ICC as a CCP.

**KC 20.7 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.**

This key consideration is not presently applicable to INDIA ICC as a CCP since it does not have any links with other CCPs.

**KC 20.8 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.**

This key consideration is not presently applicable to INDIA ICC as a CCP since it does not have any links with other CCPs.

**KC 20.9 A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related resources.**

This key consideration is not applicable to INDIA ICC.

## Principle 21: Efficiency and effectiveness

**An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.**

**KC 21.1 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.**

INDIA ICC systems and procedures are designed in a manner to meet participant requirements after taking into consideration, factors such as the regulatory requirements, feedback of market participants, efficient and reliable technology, need of the market for the product, etc.

INDIA ICC obtains feedback of participants before the design and also after the launch of the product and services, in order to ensure that various products and services offered by INDIA ICC to meet the requirements on a continuous basis.

Market feedback is taken into account during the formulation of new rules and processes so that the needs of the market participants are met whether it is related to products, operating processes or technology changes.

**KC 21.2 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.**

INDIA ICC's goal is to provide secure Clearing and Settlement products/services with robust Risk Management Systems to the market participants as per the norms/guidelines prescribed by the Regulator, Byelaws, Rules and Regulations of INDIA ICC and under various laws. INDIA ICC provides its members with a RTRMS terminal, free of cost, to monitor and manage their own risks and that of their constituents. The RTRMS terminal enables the member to track the collateral utilisation on a real time basis, allows him to set limits for himself and his constituents and generate customised alerts for his own risk management needs.

INDIA ICC has put in place following mechanism in order to assess the goals and objectives are as follows:

- ❖ Periodical Audit of systems and processes
- ❖ Daily Stress Tests
- ❖ Interaction and feedback from market participants

INDIA ICC has put in place the following guiding principles for operational effectiveness:



- ❖ Completion of the operation with the required output and within the specified time lines.
- ❖ Ensuring safety and confidentiality of the members information while dissemination
- ❖ Ensuring maintenance of Capital Adequacy Requirements as prescribed from time to time.

**KC 21.3 An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.**

INDIA ICC has various audit processes, the results of which are presented to the Board of Directors. INDIA ICC is subject to Statutory Audit and Internal Audit conducted on a quarterly basis. INDIA ICC also undergoes annual systems audit, the results of which are shared with the Board of Directors of INDIA ICC. INDIA ICC conducts stress tests, liquidity stress test and back tests for adequacy of financial resources. INDIA ICC periodically conducts mock and live trading from its Disaster Recovery site, the results of which are reviewed for further improvements in efficiency. INDIA ICC interacts with participants at various forums to seek feedback on its services and operations.

## Principle 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.**

### **KC 22.1 An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.**

INDIA ICC uses commonly accepted communication procedures and standards to communicate with CMs and other entities.

INDIA ICC has a real time module CLASS to manage collateral. The module has in built parameters to control, modify and monitor the collateral deposited by the CMs. The module also monitors the applicable acceptance criteria on a real time basis.

INDIA ICC provides it members with the RTRMS terminal, free of cost, to monitor and manage their own risks and that of their constituents. The RTRMS terminal enables the member to track the collateral utilization on a real time basis, allows him to set limits for himself and his constituents and generate customized alerts for his own risk management needs.

INDIA ICC's systems interact with its customers and participants through various secured modes of communication which are globally followed for communications. These modes provide an online interface as well as a file-based interface. The system interaction with other parties (banks etc.) is achieved by using a combination of binary and text files. For banking transactions, INDIA ICC has defined message formats and communication standards with banks. The formats for these files are defined by INDIA ICC, in consultation with the relevant parties. With the ICSD, viz. Clearstream S.A., INDIA ICC uses the globally accepted SWIFT messaging system for communication.

## Principle 23: Disclosure of rules, key procedures, and market 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.**

**KC 23.1 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.**

INDIA ICC makes information relating to the following available in the public domain as well as on the Company website:

- ❖ Byelaws, Rules and Regulations (including default procedures, risk management systems, rights and obligations of CMs, clearing services, admission, suspension and exit criteria for Clearing Members etc.)
- ❖ Eligible collateral and applicable haircuts
- ❖ Settlement process and timelines
- ❖ Margin requirements
- ❖ Default fund
- ❖ Other General Information

The Byelaws, Rules and Regulations are approved by the regulator. Any amendments to the Byelaws, Rules and Regulations required the approval of the Board and the regulator.

**KC 23.2 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.**

The rights, obligations and risks of CMs are clearly and comprehensively outlined in INDIA ICC's Byelaws, Rules, Regulations, Circulars, Notifications and other information published on the website. In addition, INDIA ICC informs the market participants through various circulars and information on the website about the systems, operations and other requirements required at their end for availing various services offered by the INDIA ICC. A few of the disclosures made by INDIA ICC, to enable participants to assess the risks they would incur are:

- ❖ The products that INDIA ICC clears/settles, the terms and conditions under which transactions will be cleared or settled.
- ❖ Admission criteria for clearing members
- ❖ Fees and deposits

- ❖ Settlement procedure
- ❖ Margining practices
- ❖ Default handling procedure
- ❖ Byelaws, Rules and Regulations

**KC 23.3 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.**

INDIA ICC holds meetings / seminars with CMs to help them become familiar with INDIA ICC's processes, systems and requirements. INDIA ICC, additionally provides specific training and help to CMs whenever necessary and there is a demand from the members. The staff of INDIA ICC are available to clarify any doubts and queries of members. The website of INDIA ICC provides participants valuable information about the rules and procedures of the INDIA ICC, for participants to take an informed decision.

**KC 23.4 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.**

INDIA ICC publicly discloses its deposits and fee structure through circulars and on its website. The changes if any in the services and fees structure are immediately disseminated to the market participants through various circulars and website. Fee information provided in respect of such services is sufficient to enable comparison with the fees charged by other clearing corporations.

**KC 23.5 An FMI should complete regularly and disclose publicly responses to the CPMI-IOSCO Disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.**

INDIA ICC makes available data pertaining to transaction volumes and values on a daily basis on its website. INDIA ICC, in addition to the information pertaining to various products and services provided by it, also discloses on a periodic basis information as required by the regulatory / relevant authorities to be disclosed to market participants from time to time. INDIA ICC disclose the information through various circulars by it from time to time and also through website. India ICC publishes the PFMI disclosures on its website for public responses.

## Annexure 1

### List of products cleared

PRODUCT	SYMBOL	UNITS	CONTRACT SIZE
<b>INDEX DERIVATIVES</b>			
S&P BSE SENSEX	SENSEX	INDEX POINT	1
S&P BSE SENSEX 50	SENSEX50	INDEX POINT	1
<b>SINGLE STOCK DERIVATIVES</b>			
ACC LTD.	ACC	LOTS	6
ADANI ENTERPRISES LTD	ADANIENT	LOTS	65
ADANI PORTS & SPECIAL ECONOMIC ZONE LTD.	ADANIPTS	LOTS	32
ADANI POWER LTD	ADANIPOWER	LOTS	300
AMARA RAJA BATTERIES LTD	AMARAJABAT	LOTS	10
AMBUJA CEMENTS LTD	AMBUJACEM	LOTS	40
APOLLO HOSPITALS ENTERPRISE LTD	APOLLOHOSP	LOTS	8
APOLLO TYRES LTD	APOLLOTYRE	LOTS	46
ARVIND LTD	ARVIND	LOTS	90
ASHOK LEYLAND LTD.	ASHOKLEY	LOTS	87
ASIAN PAINTS	ASIANPAINT	LOTS	8
AUROBINDO PHARMA LTD.	AUROPHARMA	LOTS	14
AXIS BANK LTD	AXISBANK	LOTS	17
BAJAJ AUTO LTD.	BAJAJAUTO	LOTS	4
BAJAJ FINANCE LTD.	BAJFINANCE	LOTS	5
BAJAJ FINSERV LTD.	BAJAJFINSV	LOTS	2
BALKRISHNA INDUSTRIES LTD	BALKRISIND	LOTS	12
BANK OF BARODA	BANKBARODA	LOTS	104
BANK OF INDIA	BANKINDIA	LOTS	90
BATA INDIA LTD	BATAINDIA	LOTS	8
BERGER PAINTS INDIA LTD	BERGEPAIN	LOTS	34
BHARAT ELECTRONICS LTD.	BEL	LOTS	129
BHARAT FORGE LTD	BHARATFORG	LOTS	18
BHARAT HEAVY ELECTRICALS LTD.	BHEL	LOTS	120
BHARAT PETROLEUM CORP. LTD.	BPCL	LOTS	20
BHARTI AIRTEL LTD.	BHARTIARTL	LOTS	28
BHARTI INFRATEL LTD.	INFRATEL	LOTS	39
BIOCON LTD	BIOCON	LOTS	28
BIRLASOFT LTD	BSOFT	LOTS	75
BOSCH LTD.	BOSCHLTD	LOTS	1
BRITANNIA INDUSTRIES LTD.	BRITANNIA	LOTS	4
CADILA HEALTHCARE LTD.	CADILAHC	LOTS	20
CANARA BANK LTD	CANBK	LOTS	40
CASTROL INDIA LTD	CASTROLIND	LOTS	50

PRODUCT	SYMBOL	UNITS	CONTRACT SIZE
CENTURY TEXTILES AND IND	CENTURYTEX	LOTS	9
CESC LTD	CESC	LOTS	12
CHOLAMANDALAM INVESTMENT AND F	CHOLAFIN	LOTS	35
CIPLA LTD.	CIPLA	LOTS	15
COAL INDIA LTD.	COALINDIA	LOTS	39
COLGATE PALMOLIVE (INDIA) LTD.	COLPAL	LOTS	9
CONTAINER CORPORATION OF INDIA LTD.	CONCOR	LOTS	22
CUMMINS INDIA LTD.	CUMMINSIND	LOTS	15
DABUR INDIA LTD.	DABUR	LOTS	25
DEWAN HOUSING FINANCE CORP LTD	DHFL	LOTS	60
DISH TV INDIA LTD	DISHTV	LOTS	210
DIVI'S LABORATORIES LTD.	DIVISLAB	LOTS	8
DLF LTD.	DLF	LOTS	64
DR REDDYS LABORATORIES LTD.	DRREDDY	LOTS	4
EICHER MOTORS LTD.	EICHERMOT	LOTS	1
ENGINEERS INDIA LTD	ENGINERSIN	LOTS	70
EQUITAS HOLDINGS LTD	EQUITAS	LOTS	65
ESCORTS LTD	ESCORTS	LOTS	16
EXIDE INDUSTRIES LTD	EXIDEIND	LOTS	39
FEDERAL BANK LTD	FEDERALBNK	LOTS	100
GAIL (INDIA) LTD.	GAIL	LOTS	56
GLENMARK PHARMACEUTICALS LTD.	GLENMARK	LOTS	15
GMR INFRASTRUCTURE LTD	GMRINFRA	LOTS	675
GODREJ CONSUMER PRODUCTS LTD	GODREJCP	LOTS	14
GRASIM INDUSTRIES LTD	GRASIM	LOTS	10
HAVELLS INDIA LTD.	HAVELLS	LOTS	18
HCL TECHNOLOGIES	HCLTECH	LOTS	9
HDFC BANK LTD	HDFCBANK	LOTS	6
HERO MOTOCORP LTD	HEROMOTOCO	LOTS	3
HEXAWARE TECHNOLOGIES LTD	HEXAWARE	LOTS	24
HINDALCO INDUSTRIES LTD.	HINDALCO	LOTS	46
HINDUSTAN PETROLEUM CORPORATION LTD.	HINDPETRO	LOTS	41
HINDUSTAN UNILEVER	HINDUNILVR	LOTS	7
HINDUSTAN ZINC LTD.	HINDZINC	LOTS	36
HOUSING DEVELOPMENT FINANCE CORPORATION	HDFC	LOTS	6
ICICI BANK LTD	ICICIBANK	LOTS	34
ICICI PRUDENTIAL LIFE INSURANC	ICICIPRULI	LOTS	20
IDBI BANK LTD	IDBI	LOTS	180
IDEA CELLULAR LTD.	IDEA	LOTS	450
IDFC BANK LTD	IDFCBANK	LOTS	285
INDIABULLS HOUSING FINANCE LTD	IBULHSGFIN	LOTS	13

PRODUCT	SYMBOL	UNITS	CONTRACT SIZE
INDIAN OIL CORP LTD	IOC	LOTS	68
INDRAPRASTHA GAS LTD	IGL	LOTS	42
INDUSIND BANK	INDUSINDBK	LOTS	7
INFOSYS LTD.	INFY	LOTS	15
INTERGLOBE AVIATION LTD.	INDIGO	LOTS	10
ITC	ITC	LOTS	35
JINDAL STEEL AND POWER LTD	JINDALSTEL	LOTS	46
JSW STEEL LTD.	JSWSTEEL	LOTS	28
JUBILANT FOODWORKS LTD	JUBLFOOD	LOTS	7
JUST DIAL LTD	JUSTDIAL	LOTS	20
KAJARIA CERAMICS LTD	KAJARIACER	LOTS	20
KOTAK MAHINDRA BANK	KOTAKBANK	LOTS	10
L&T FINANCE HOLDINGS LTD	L&TFH	LOTS	70
LARSEN & TOUBRO	LT	LOTS	9
LIC HOUSING FINANCE LTD.	LICHSGFIN	LOTS	25
LUPIN LTD	LUPIN	LOTS	10
MAHANAGAR GAS LTD	MGL	LOTS	9
MAHINDRA & MAHINDRA	M&M	LOTS	13
MAHINDRA & MAHINDRA FINANCIAL SERVICES LTD	M&MFIN	LOTS	26
MANAPPURAM FINANCE LTD	MANAPPURAM	LOTS	95
MARICO LTD.	MARICO	LOTS	32
MARUTI SUZUKI LTD.	MARUTI	LOTS	2
MAX FINANCIAL SERVICES LTD	MFSL	LOTS	18
MINDTREE LTD	MINDTREE	LOTS	9
MOTHERSON SUMI SYSTEMS LTD.	MOTHERSUMI	LOTS	45
MRF LTD	MRF	LOTS	1
MULTI COMMODITY EXCHANGE OF IN	MCX	LOTS	10
MUTHOOT FINANCE LTD	MUTHOOTFIN	LOTS	24
NAGARJUNA CONSTRUCTION CO LTD	NCC	LOTS	120
NATIONAL ALUMINIUM CO LTD	NATIONALUM	LOTS	150
NBCC INDIA LTD	NBCC	LOTS	130
NESTLE INDIA LTD	NESTLEIND	LOTS	1
NIIT TECHNOLOGIES LTD	NIITTECH	LOTS	12
NMDC LTD.	NMDC	LOTS	92
NTPC LTD	NTPC	LOTS	72
OIL & NATURAL GAS CORPORATION	ONGC	LOTS	59
OIL INDIA LTD.	OIL	LOTS	48
ORACLE FINANCIAL SERVICES SOFTWARE LTD.	OFSS	LOTS	3
PAGE INDUSTRIES LTD	PAGEIND	LOTS	1
PETRONET LNG LTD.	PETRONET	LOTS	46
PIDILITE INDUSTRIES LTD.	PIDILITIND	LOTS	10

PRODUCT	SYMBOL	UNITS	CONTRACT SIZE
PIRAMAL ENTERPRISES LTD.	PEL	LOTS	5
POWER FINANCE CORPORATION LTD.	PFC	LOTS	136
POWER GRID CORP OF INDIA LTD	POWERGRID	LOTS	55
PUNJAB NATIONAL BANK	PNB	LOTS	173
PVR LTD	PVR	LOTS	6
RAYMOND LTD	RAYMOND	LOTS	12
RBL BANK LTD	RBLBANK	LOTS	18
RELIANCE CAPITAL LTD	RELCAPITAL	LOTS	44
RELIANCE INDUSTRIES LTD.	RELIANCE	LOTS	9
RELIANCE INFRASTRUCTURE LTD	RELINFRA	LOTS	35
RURAL ELECTRIFICATION CORPORATION LTD.	RECLTD	LOTS	75
SHREE CEMENT LTD.	SHREECEM	LOTS	1
SHRIRAM TRANSPORT FINANCE CO. LTD.	SRTRANSFIN	LOTS	9
SIEMENS LTD.	SIEMENS	LOTS	10
SRF LTD	SRF	LOTS	4
STATE BANK OF INDIA	SBIN	LOTS	39
STEEL AUTHORITY OF INDIA LTD.	SAIL	LOTS	152
STRIDES PHARMA SCIENCE LTD	STAR	LOTS	18
SUN PHARMACEUTICALS	SUNPHARMA	LOTS	17
SUN TV NETWORK LTD.	SUNTV	LOTS	15
TATA CHEMICALS LTD	TATACHEM	LOTS	15
TATA CONSULTANCY SERVICES LTD.	TCS	LOTS	5
TATA ELXSI LTD	TATAELXSI	LOTS	9
TATA GLOBAL BEVERAGES LTD	TATAGLOBAL	LOTS	45
TATA MOTORS LTD DVR	TATAMTRDVR	LOTS	89
TATA MOTORS LTD.	TATAMOTORS	LOTS	46
TATA POWER CO. LTD.	TATAPOWER	LOTS	140
TATA STEEL LTD	TATASTEEL	LOTS	18
TECH MAHINDRA LTD	TECHM	LOTS	14
THE RAMCO CEMENTS LTD	RAMCOCEM	LOTS	12
TITAN CO LTD	TITAN	LOTS	13
TORRENT PHARMACEUTICALS LTD.	TORNTPHARM	LOTS	7
TORRENT POWER LTD	TORNTPOWER	LOTS	46
TVS MOTOR CO LTD	TVSMOTOR	LOTS	16
UJJIVAN FINANCIAL SERVICES LTD	UJJIVAN	LOTS	26
ULTRATECH CEMENT LTD	ULTRACEMCO	LOTS	3
UNION BANK OF INDIA	UNIONBANK	LOTS	110
UNITED BREWERIES LTD.	UBL	LOTS	8
UNITED SPIRITS LTD.	UNITDSPR	LOTS	21
UPL LTD.	UPL	LOTS	26
VEDANTA LTD.	VEDL	LOTS	45



<b>PRODUCT</b>	<b>SYMBOL</b>	<b>UNITS</b>	<b>CONTRACT SIZE</b>
VOLTAS LTD	VOLTAS	LOTS	14
WIPRO LTD	WIPRO	LOTS	43
YES BANK	YESBANK	LOTS	50
ZEE ENTERTAINMENT ENTERPRISES LTD	ZEEL	LOTS	20
<b>COMMODITY DERIVATIVES</b>			
BRENTCRUDE OIL	BRENTCRUDE	BARRELS	100
COPPER	COPPER	METRIC TONES	1
GOLD	GOLD	TROY OUNCES	32
GOLD KG	GOLDKG	KILOGRAMMS	100
SILVER	SILVER	TROY OUNCES	1,000
<b>CURRENCY DERIVATIVES</b>			
EURUSD	EURUSD	EURO	12,500
GBPUSD	GBPUSD	GBP	6,250
JPYUSD	JPYUSD	JPY	10,00,000

**List of publicly available resources / relevant websites:**

- ❖ India International Clearing Corporation (IFSC) Ltd.  
[www.indiaicc.com](http://www.indiaicc.com)
- ❖ Board of Directors and their profiles  
<http://www.indiaicc.com/static/boardofdirectors.aspx>
- ❖ Byelaws, Rules and Regulations  
[http://www.indiaicc.com/download/India ICC Byelaws.pdf](http://www.indiaicc.com/download/India%20ICC%20Byelaws.pdf)  
[http://www.indiaicc.com/download/India ICC Rules.pdf](http://www.indiaicc.com/download/India%20ICC%20Rules.pdf)  
[http://www.indiaicc.com/download/India ICC Regulations.pdf](http://www.indiaicc.com/download/India%20ICC%20Regulations.pdf)
- ❖ IFSC Authority  
[www.ifsc.gov.in](http://www.ifsc.gov.in)
- ❖ Securities and Exchange Board of India  
[www.sebi.gov.in](http://www.sebi.gov.in)
- ❖ Reserve Bank of India  
[www.rbi.org.in](http://www.rbi.org.in)
- ❖ BSE  
[www.bseindia.com](http://www.bseindia.com)
- ❖ India INX  
[www.indiainx.com](http://www.indiainx.com)

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