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Circular Name: Risk Management

1. Overview

Risk management is the primary function of NCEL's financial safeguard system. The system is designed to provide the highest level of safety and the early detection of unsound financial practices on the part of any Broker. Its purpose is to protect all Brokers and their Clients from the consequences of a default by a participant in the clearing process. The system will be constantly updated to reflect the most advanced risk management techniques.

2. Exchange Guarantee

The primary function of NCEL's Clearinghouse is to ensure that the financial obligations of futures contracts entered into on the Exchange are performed in a timely manner. It carries out this function by becoming the counterparty to each of these contracts, assuming the credit risk of its Brokers and managing it centrally, whilst at the same time guaranteeing post-trade anonymity from trading to settlement.

All trades executed on the Exchange are assured of financial performance and this performance guarantee only extends to the Brokers and not to their Clients.

In order, to fulfill its financial guarantee commitment, the Exchange has put in place comprehensive risk management measures which will ensure integrity of the market place and protection to all market participants, NCEL Brokers and their Clients, at each and every step, from order entry till final settlement.

The NCEL Clearinghouse is an operating division of the Exchange, and all rights, obligations and/or liabilities of the Clearinghouse are rights, obligations and/or liabilities of NCEL.

3. Continued Obligation of NCEL Brokers

All NCEL Brokers will be required to adhere to the provisions of the NCEL Regulations, governing Clearing and Settlement at NCEL.

Further, every Broker shall be fully responsible for all his commitments to the Exchange and his Clients irrespective of whether one or more Clients with whom he has dealings have defaulted. Default of any one or more Clients shall not affect the financial rights of other Clients, with whom the Broker, has dealings but who are not in default.

However, the Exchange shall not be responsible for the commitments of a defaulting Broker to his/its Clients.

4. The Safeguards

The risk management techniques employed by NCEL are comprehensive and specifically designed to:

a. Prevent the accumulation of losses
b. Ensure that sufficient resources are available to cover future obligations
c. Result in the prompt detection of financial weaknesses
d. Allow swift and appropriate action to be taken to rectify any financial problems and protect the integrity of the clearing system

These techniques are consistent with risk management recommendations made by various other international authoritative organizations and have been approved by the Security and Exchange Commission of Pakistan.

5. Risk Management Framework

NCEL's risk management framework is designed using the Value-at-Risk (VaR) methodology and its six key components are:

a. Margins and Variation Margin
b. Clearing Deposit
c. Position Limits
d. Price Limits
e. Daily Settlement
f. Final Settlement
g. Settlement Guarantee Fund

All of the above measures, which are explained in detail hereunder, are set in tandem to ensure that the viability of each open position is dealt with on a daily basis and that very few trades are allowed to progress to the stage of default.

a. Margins

NCEL will follow the gross margining system and will recognize Brokers as well as their individual Clients and their margins will be held in completely segregated accounts maintained by the Clearinghouse.

Margins shall be applicable on all open positions and will be payable by both Buyers and Sellers. The minimum amount of margin payable in respect of outstanding futures contracts shall vary from commodity to commodity and will be solely determined by the Exchange with the right to amend the required minimum margin if the situation so warrants.

All market participants will be required to pay following types of margins on all open positions:

Initial Margin
Initial margin is payable on a pre-trade basis prior to input of an order in the Exchanges' Electronic Trading System (ETS). Initial Margin will be based on the maximum result of 5 different VaR calculation methodologies at 99% Confidence Interval over a 1-day Time Horizon, rounded up to the nearest 0.25%.

Initial Margin will be set in Rupees per Lot rounded up to the nearest hundreds. It will be calculated and updated daily using the previous day's daily settlement price.

Mark-to-Market Margin (Variation Margin)
All open positions shall be marked to market at the end of each trading day. All mark to market losses shall be paid on T+0 basis i.e. same day before the cutoff time determined by the Exchange for settlement of daily margin calls.

Add-on Spot Month Margin
Exchange reserves the right to impose additional margins during the last month of the contract. Additional margins will be calculated by increasing the look-ahead period deemed appropriate by the Exchange.

Special Margin
Exchange reserves the right to impose special margins for short duration of time during periods of increased volatility. Special margins will be computed by increasing look-ahead period, reducing sample size, or by changing any other parameters used in VaR methodology.

Delivery Margin
Delivery margin will be applicable during the last 5 trading days of the contract prior to the expiration. Delivery Margin shall replace all other Margins.

Brokers' Obligation to Pay Margins
Every Broker shall pay the appropriate margin amount to the Clearinghouse against the aggregate open positions cleared by the Broker:

(i) for the Brokers' own account; and
(ii) for each of his Clients

Every Broker executing transactions on behalf of Clients shall collect from the Clients not less than the margins specified by the Exchange, from time to time, against their open positions within such time as may be specified by the Exchange;

A Broker must close out an open position of a Client **within 72 hours of** a margin call or any other payment due in case of non-compliance by the Client. However, every Broker shall at all times be fully responsible for all his and his Clients commitments to the Exchange irrespective of whether one or more Clients with whom he has dealings have defaulted.

b. Clearing Deposit & Exposure

All Brokers must maintain a Clearing Deposit with the Exchange prior to being eligible to trade for their own account as well as on behalf of their Clients.

Minimum Clearing Deposit

The Clearing Deposit maintained by the Brokers at any point in time shall not be less than Rs. 500,000 (referred to as Minimum Clearing Deposit) or such other amount, as may be specified by the Exchange from time to time. Clearing Deposit shall be payable by the Broker before the activation of the Broker Administration Account and trading accounts of their Clients.

The Minimum Clearing Deposit of **Rs. 500,000** must be transferred using the Online banking facility provided by the Exchange designated Clearing Banks to the NCEL's **"Clearing Deposit Account"** maintained with Clearing Banks. Brokers can increase their Exposure with additional Clearing Deposits, **but it should not exceed their declared segregated Net Capital Balance with the Exchange.**

Computation of Outstanding Exposure

Clearing Deposit will determine the maximum value of open positions or Exposure that a Broker can take across all his Clients and across all contracts in all commodities. The Outstanding Exposure will be calculated on the basis of the multiple of the Worst Case Margin for each commodity futures contract as determined by the Exchange. The Worst Case Margin and the associated multiple will vary from commodity to commodity listed on the Exchange.

For example in the case of Gold the Worst Case Margin is 2.5% which gives a multiple of 40 times (100/2.5).

For the purposes of calculating the Outstanding Exposure, a Broker's gross open position includes both the Brokers own open positions and Clients' open positions. Open positions, at the Broker level, are calculated on the basis of all open, own and Clients, positions across all contracts in all commodities as shown in the following example;

Outstanding Exposure (For Illustration purposes Only)				
Contract	Proprietary	Client X	Client Y	Position Commodity wise
	Qty	Qty	Qty	Qty
Gold Oct	200	200	200	Long 600
Gold Nov	200	(100)	100	Long 300 Short 100
Rice Oct	(100)	100	(200)	Long 100 Short 300

Commodity	Value (In Rupees)	Long Position	Short Position	Total Position
Gold	150,000	900	100	1,000
Rice	200,000	100	300	400

Commodity	Total Position	Value (In Rupees)
Gold	1,000	150,000,000
Rice	400	80,000,000
Total Outstanding Exposure		230,000,000

In the above example, after multiplying the Daily Settlement Prices of Gold and Rice contracts with the corresponding open positions in these contracts will give the Outstanding Exposure.

Additional Deposit

When the monetary value of a Brokers gross open position or the outstanding Exposure is about to reach the maximum Allowable Exposure against the Clearing Deposit held by the Exchange, the Exchange shall notify the Broker immediately. After receipt of notification the Broker and its Clients shall not enter any further transactions in the Exchange Trading System (ETS) that would increase the aggregate monetary value of gross open positions until additional deposits have been transferred to the Clearinghouse.

Brokers will only be allowed to take additional positions or exposure only on the next business day from receipt of an additional deposit by the Exchange.

Additional deposits for an increase in the Exposure will only be accepted in NCEL's "**Clearing Deposit Account"** through online fund transfer facility provided by the

Exchanges designated Clearing Banks. Brokers are required to deposit funds before 2:00 pm on any business day. Any amount deposited after 2:00 pm will not be available for next business day.

c. Position Limits

At any point in time a Broker shall not have outstanding positions of more than the Exchange specified number of market lots, collectively on his own account and on account of all his Clients.

If such a position is acquired in different maturity contracts of the same commodity, his outstanding position in different maturity contracts shall be added together, ***and not netted off***, for the purpose of calculating the outstanding position. All violations of Position Limits will attract Administrative Fines, as determined by the Exchange.

Exchange reserves the right, as a risk containment measure, to ask its Brokers to close-out or reduce their open positions and/or its Clients within the time specified by the Exchange. If such positions have not been closed or reduced within the specified time, Exchange will impose Administrative Fines and initiate disciplinary action.

Exchange also reserves the right to close out or reduce forthwith or any time thereafter at the discretion of the Exchange, the outstanding positions of such Brokers and/ or its Clients, by placing counter orders in respect of the outstanding position of Brokers without any notice to the Broker and/ or its Clients, and such action shall be final and binding on the Brokers and/ or its Clients. The Exchange may also initiate such other risk containment measures as it deems fit with respect to the open positions of the Brokers and / or its Clients.

d. Price Limits

Price movement on any given day will have an upper and lower limit, based on the previous day's settlement price, as determined by the Exchange.

e. Daily Settlement

All open positions in commodity futures contracts shall be marked to market daily at the Daily Settlement Price with losses to be settled daily by the Exchange determined cutoff time.

Daily Settlement Price

Daily Settlement Price will be determined by the Exchange at the end of every trading day and would be based on the following criteria:

- Consensus Price, if the number of contracts traded at the end of pre-close session is greater than or equal to 15, and the number of market participants is greater than or equal to 5; else

- Last 0.5 hour of Futures Volume Weighted Average Price (VWAP), if the number of contracts traded during last 0.5 hour is greater than 25 and the number of market participants greater than 5; else
- Theoretical futures price

Theoretical futures price will be calculated using the following formula:

Theoretical Futures Price = Spot Price*{e^(r*t)} where r = linear interpolation of 1, 2 and 3 -month Karachi inter bank offer rate (KIBOR) as disseminated by Reuters, and t = time remaining till maturity.

Spot prices will be disseminated by the Exchange at regular intervals during the course of the day based on local spot market practices and will be detailed in the Exchange Circulars and the relevant Product Notes.

f. Final settlement

Delivery against open positions at expiration of commodity futures contracts is compulsory.

Brokers are required to close out any Odd lot open positions for their own and Client accounts before the expiry of the contract. On expiry of the contract, all open positions not conforming to deliverable units (Odd lots) would be cash settled, and 5% fine of the value of Odd lots would be charged to the Brokers for not closing out odd lot positions. Value of Odd lots is calculated as final settlement price times the number of Odd lots. The party responsible for Odd lots will be fined by the Exchange and 90% of the fine amount will be paid to the party holding deliverable lots position.

Final cash settlement would be on the same day upon expiration of the contract. Open positions in multiples of deliverable lots that have been matched by the Exchange would result in physical delivery.

Final Settlement Price
Final Settlement Price will be determined by the Exchange at the maturity of the Contract and will be outlined in the relevant Product Notes.

Final Settlement Price shall be binding on all market participants. The Exchange at its sole discretion can change the method of computation of the final Settlement prices via Notice/Circular to the market participants.

g. Settlement Guarantee Fund

To maintain the integrity of the Clearing and Settlement system, the Exchange has established a Settlement Guarantee Fund. All Margins and Clearing Deposits will be held in a completely segregated manner and accounted for as part of the Settlement Guarantee Fund.

NCEL has provided an initial seed capital of Rs100 million towards the Settlement Guarantee Fund.

Whenever a Broker fails to meet his settlement obligations to the Exchange arising out of the transactions, or whenever a Broker is declared a defaulter, the Exchange will utilize the Settlement Guarantee Fund and other monies of the Broker to the extent necessary to fulfill his obligations. Detailed processes and procedures for payouts and topping up are outlined in the Exchange Regulations.

Release of Cash

For release of own or Clients Margins, Brokers must send a release request, through the facility provided in the NCEL CSR System, to the Exchange between 9:00 am to 2:00 pm on any business day.

Withdrawal Request facility will be available for 30 minutes during the Exchange End of Day Process to withdraw own or Clients Margins and Clearing Deposits. The Exchange will transfer funds directly to the Broker's "House Account" or "Client Group Account", as the case may be, maintained with any of the Exchange designated Clearing Banks after ensuring that the Broker's margins and Outstanding Exposure on outstanding positions are fully covered.

Funds will only be released on the next business day after the receipt of 'Release of Cash' request.

Closing Out

The Exchange shall at its full discretion close-out the positions of a Broker and its Clients if a Broker fails to comply with the provisions of this Circular and the Exchange reserves the right impose fines in case of any violations.

Default

Detail default provisions and events of default are outlined in the NCEL Regulations.