NATIONAL SECURITIES CLEARING CORPORATION LIMITED

DEPARTMENT: CURRENCY DERIVATIVES SEGMENT	
Download Ref No : NSCCL/CD/37031	Date : February 22, 2018
Circular Ref. No : 14/2018	

All Members

Sub- Clearing & Settlement – Cross Currency Derivative Contracts

This is further to Exchange Circular no. NSE/CD/37022 dated February 22, 2018 and NSE/CD/31941 dated March 10, 2016 and in partial modification to our circular no NSCCL/CD/34654 dated April 17, 2017; members are requested to please take a note of Clearing, Settlement and Risk Management for Exchange Traded Cross Currency Futures & Options contracts on EUR-USD, GBP-USD and USD-JPY currency pairs.

1. **Settlement**

   1.1 Settlement Period

   The pay-in and pay-out of daily mark to market settlements, premium settlement, final settlement of futures contracts and final exercise settlement of options contracts shall be effected in accordance with the settlement schedule issued by the Clearing Corporation periodically. The clearing members are required to have clear balance of funds in their clearing account towards their pay-in obligation by the declared pay-in time on the settlement day. The pay-out of funds shall be credited to the receiving members clearing account thereafter.

   1.2 Daily Mark to Market Settlement Of Futures Contract-

   All positions at the end of the day shall be marked to market at the daily settlement price and would be settled in cash in Indian Rupee (INR).

   To arrive at the settlement value of cross currency positions in INR for EUR-USD and GBP-USD contracts, the latest available RBI reference rate for USD-INR shall be used. For USD-JPY contracts, the settlement value in INR shall be arrived at using the latest available exchange rate published by RBI for JPY-INR. Clearing members may refer to the additional 'Daily Settlement price' file which shall be available on exchange website for the daily settlement prices of cross currency contracts in INR.

1.3 Daily Premium Settlement

Premium would be settled in INR. Premium settlement shall be netted with daily mark to mark settlement of currency futures, Cash settled Interest Rate Futures on G-Sec and futures contracts of 91 Day GOI T-bills. To arrive at the settlement value in INR for EUR-USD and GBP-USD contracts, the latest available RBI reference rate for USD-INR shall be used. For USD-JPY contracts, the settlement value in INR shall be arrived at using the latest available exchange rate published by RBI for JPY-INR.

1.4 Final Settlement Of Currency Futures Contract

All positions (brought forward, created during the day, closed out during the day) of a clearing member in currency futures contracts, at the close of trading hours on the last trading day, shall be marked to market at final settlement price (for final settlement) and settled in cash on T+2 day by debit/ credit of the clearing accounts of clearing members with the respective clearing bank.

The final settlement price of the cross-currency derivatives contracts shall be computed using the RBI reference rate for USD-INR and the corresponding exchange rate published by RBI for EUR-INR, GBP-INR and JPY-INR, as applicable, on the last trading day of the contract .

For arriving at the final settlement value in INR for EUR-USD and GBP-USD contracts, the RBI reference rate for USD-INR on the last trading day of the contract shall be used.

For USD-JPY contracts, the final settlement value in INR shall be arrived at using the exchange rate published by RBI for JPY-INR on the last trading day of the contract.

1.5 Final Exercised Settlement

On expiry date, all open long in-the-money contracts shall be automatically exercised at the final settlement price (as mentioned in 1.4 above) and assigned on random basis to the open short position of the same strike and series. Exercise settlement shall be effected on last working day (excluding Saturdays) of the contract month. The last working day shall be taken to be the same as that for Interbank Settlements in Mumbai.

All exercise positions shall be settled in INR. For arriving at the exercise settlement value in INR for EUR-USD and GBP-USD contracts, the RBI reference rate for USD-INR on the last trading day of the contract shall be used. For USD-JPY contracts, the final settlement value in INR shall be arrived at using the exchange rate published by RBI for JPY-INR on the last trading day of the contract.

Exercise settlement in respect of admitted deals in option contracts shall be cash settled by debit/ credit of the clearing accounts of the relevant clearing members with the respective clearing bank on last working day (excluding Saturdays) of the contract month. Option contracts, which have been exercised, shall be assigned and allocated to clearing members at the client level.

Open positions in an option contracts shall cease to exist after its expiration day.

2 MARGINS

2.1 Initial Margins

Initial margin shall be payable on all open positions of Clearing Members, upto client level, and shall be payable upfront by Clearing Members in accordance with the margin computation mechanism and/ or system as may be adopted by the Clearing Corporation from time to time.

Initial Margin shall include Standard Portfolio Analysis of Risk (SPAN®) margins, premium margin, assignment margin, futures final settlement margin and such other additional margins, that may be specified by the Clearing Corporation from time to time.

2.2 Price Scan Range and Volatility Scan Range

- The Price Scan Range shall be taken as three and half standard deviations (3.5 sigma) or such other price scan range as may be specified by the relevant authority from time to time.
- For first two days of trading, the initial margin shall be computed using a sigma of 1.15% for EUR-USD contracts, 0.95% for GBP-USD contracts and 0.60% for USD-JPY contracts. Subsequently, .the standard deviation (volatility estimate) shall be computed using the Exponentially Weighted Moving Average method (EWMA) as currently done for other currency pairs.

- The initial margins for cross currency derivatives shall be collected in INR. For this purpose, RBI reference rate of previous day for USD-INR or JPY-INR, as applicable, shall be used till 02:00 p.m. The latest available RBI reference rate for USD-INR and the corresponding exchange rate published by RBI for JPY-INR, as applicable, shall be used post 02:00 p.m. Since the margins shall be collected in INR, the price scanning range shall be scaled up by the total futures margin rate of the contract involving the quoted currency in cross-currency pair and INR.

- For the purpose of calculation of option values, the Black-Scholes option pricing model would be used.

- The volatility scan range for generating the scenarios for SPAN margins would be 3% or such other percentage as may be specified by the Clearing Corporation from time to time.

2.3 Net Option Value

Net Option Value is computed as the difference between the long option positions and the short option positions, valued at the last available closing price and shall be updated intraday at the current market value of the relevant option contracts at the time of generation of risk parameters The Net Option Value shall be added to the Liquid Net Worth of the clearing member. Thus, mark to market gains and losses shall not be settled in cash for currency options positions.

2.4 Premium Margins

Premium Margin shall mean and include net premium amount due to be paid to the Clearing Corporation towards premium settlement, at the client level. For option positions, the premium shall be paid in by the buyers in cash and paid out to the sellers in cash on T+1 day. Until the buyer pays in the premium, 100% of net premium due shall be levied as premium margins on an upfront basis. Premium margin shall be levied till the completion of pay-in towards the premium settlement.

2.5 Calendar Spread Margins

A currency futures position in one expiry month which is hedged by an offsetting position in a different expiry month would be treated as a calendar spread. The following calendar spread margins shall be levied:

Contract	**EURUSD**	**GBPUSD**	**USDJPY**
Applicable calendar spread margins shall be	Rs.1500 for a spread of 1 month; Rs.1800 for a spread of 2 months, Rs.2000 for a spread of 3 months and Rs.2100 for a spread of 4 months or more	Rs.1500 for a spread of 1 month; Rs.1800 for a spread of 2 months, Rs.2000 for a spread of 3 months and Rs.2100 for a spread of 4 months or more	Rs.1500 for a spread of 1 month; Rs.1800 for a spread of 2 months, Rs.2000 for a spread of 3 months and Rs.2100 for a spread of 4 months or more

A long currency option position at one maturity and a short option position at a different maturity in the same underlying would be treated as a calendar spread.

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

The benefit for a calendar spread would continue till expiry of the near month contract.

2.5 Extreme Loss margins

Clearing members shall be subject to extreme loss margins in addition to initial margins. The Extreme loss margin % shall be as follows:

Contract	**EURUSD**	**GBPUSD**	**USDJPY**
For Futures	1.00%	1.00%	1.00%
For Options	1.00%	1.00%	1.00%

The applicable extreme loss margin for futures shall be calculated on the mark to market value of the gross open positions or as may be specified by the relevant authority from time to time. In case of options, extreme loss margin shall be calculated on the Notional Value of the open short option position. Notional Value for this purpose shall be calculated on the basis of the latest available Reserve Bank Reference Rate for respective pair. For EURUSD and GBPUSD the latest available USDINR Reserve Bank Reference Rate shall be used. For USDJPY the latest available JPYINR Reserve Bank Reference Rate

The extreme loss margins for cross currency derivatives shall be collected in INR. For this purpose, RBI reference rate of previous day for USD-INR and the corresponding exchange rate published by RBI for JPY-INR, as applicable, shall be used till 02:00 p.m. The latest available RBI reference rate for USD-INR and the corresponding exchange rate published by RBI for JPY-INR, as applicable, shall be used post 02:00 p.m.

In case of calendar spread positions in currency futures contracts, extreme loss margin shall be levied on one third of the mark to market value of the open position of the far month contract.

2.6 Minimum Margins:

The following minimum futures margins shall be levied:

Contract	EURUSD	GBPUSD	USDJPY
Minimum Future Margin %	2.00%	2.00%	2.00%

The minimum margin percentage shall be scaled up by look-ahead period as may be specified by the Clearing Corporation from time to time. The initial margin shall be deducted from the liquid net worth of the clearing member on an online, real time basis.

2.7 Updation of risk parameters

The parameters for computation of span margin shall be updated as specified by the relevant authority from time to time. The parameters of cross currency derivatives shall be updated 9 times in the day at 11:00 a.m., 12:30 p.m., 2:00 p.m., 3:30 p.m, 5:00pm, 6:30 pm end of the day and begin of the day. Additionally a provisional end of day parameter file based on daily settlement prices of currency contracts based on FCY-INR pairs and Interest Rate Future contracts shall be provided,

The Risk parameters generated based on the updated parameters shall be provided on the exchange website at www.nseindia.com and on extranet. The naming convention of the parameter file shall be as below:

SPAN Files	Currency	IRF and Currency
BOD	nsccl_x.20160203.i1.zip	nsccl_ix.20160203.i1.zip
1st Intraday (11:00)	nsccl_x.20160203.i2.zip	nsccl_ix.20160203.i2.zip
2nd Intraday (12:30)	nsccl_x.20160203.i3.zip	nsccl_ix.20160203.i3.zip
3rd Intraday (14:00)	nsccl_x.20160203.i4.zip	nsccl_ix.20160203.i4.zip
4th Intraday (15:30)	nsccl_x.20160203.i5.zip	nsccl_ix.20160203.i5.zip
5th Intraday (17:00)	nsccl_x.20160203.i6.zip	nsccl_ix.20160203.i6.zip
Provisional EOD	nsccl_x.20160203.ps.zip	nsccl_ix.20160203.ps.zip
6th Intraday (18:30)	nsccl_x.20160203.i7.zip	nsccl_ix.20160203.i7.zip
Final (After Market Close)	nsccl_x.20160203.s.zip	nsccl_ix.20160203.s.zip

2.8 Futures Final Settlement Margin

Futures Final Settlement Margin shall be levied at the clearing member level in respect of the final settlement amount due. The final settlement margins shall be levied from the last trading day of the contract till the completion of pay-in towards the Final Settlement.

2.9 Assignment Margins

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 of the options shall be levied assignment margins which shall be 100% of the net exercise settlement value payable by a clearing member towards exercise settlement. Assignment margin shall be levied till the completion of pay-in towards the exercise settlement. Assignment margins shall be computed as net of assignment settlement and futures final settlement

Additional reports and changes in existing file formats

Additional reports and changes in existing file formats for cross currency derivatives were specified vide our circular no. NSE/CD/32008 dated March 17, 2016. List of additional reports is provided as Annexure 1 and file structure is provided as Annexure 2 for ready reference.

All other rules, procedures and actions currently applicable in Currency Derivatives Segment shall also be applicable mutatis mutandis to Cross Currency Futures & Options.

For and on behalf of
National Securities Clearing Corporation Ltd.

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Manager

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Annexure 1

Additional Reports

1. Additional Reports to be downloaded on all days
   - Cross Currency Derivatives Trades Report for Trading Member (CCR_TR01)
   - Cross Currency Derivatives Trades Report for Clearing Member (CCR_TR02)
   - Cross Currency Derivatives Position file for Trading Member (CCR_PS03)
   - Cross Currency Derivatives Position file for Clearing Member (CCR_PS04)

2. Additional Reports to be downloaded on the day of expiry of Cross Currency derivatives (in addition to the above reports)
   - Provisional Cross Currency Position file for Trading Member on expiry (CCR_PS03_P)
   - Provisional Cross Currency Position file for Clearing Member on expiry (CCR_PS04_P)

3. Cross Currency Daily Settlement Price
   - A new file for daily settlement prices of Cross Currency Derivatives shall be provided on the website. This file shall provide the daily settlement prices of cross currency derivatives in terms of INR.
   - Members should take note that the existing Daily Settlement price file shall contain prices for cross currency derivatives in terms of quoted currency.

Annexure 2

1. **Detailed Trade Report for trading members (TR01) and detailed Trade Report for clearing members (TR02)**

   i. Cross Currency Futures Trades Report for Trading Member (CCR_TR01)
   ii. Cross Currency Futures Trades Report for Clearing Member (CCR_TR02)

Naming Convention	CCR_TR01_<MEMBER CODE>_DDMMYYYY.CSV.gz CCR_TR02_<MEMBER CODE>_DDMMYYYY.CSV.gz
File Path	directory /CDSFTP/X<MEMBER CODE>/REPORTS
File Format	comma separated file format (CSV)

Column No	**Headers**	**Field Characteristics**	**Details**
1	Trade Number	NUMBER	Trade Number
2	Trade Date	DATE	Format DD-MMM-YY
3	Activity Type	NUMBER	Default Value - 2
4	Market Type	VARCHAR2	N - Normal Market Type
5	Instrument Type	VARCHAR2	FUTCUR - Currency Futures OPTCUR - Currency Options
6	Symbol	VARCHAR2	EURUSD – EUR-USD Contract GBPUSD – GBP-USD Contract USDJPY – USD –JPY Contract
7	Last Trading Date	DATE	Format DD-MMM-YY
8	Strike Price	NUMBER	Strike Price of Options Default Value is '0' (Zero) for Futures Contracts
9	Option Type	VARCHAR2	CE - Call Option PE - Put Option FF - Futures Contracts
10	Corporate Action level	NUMBER	Default value is '0' (Zero). No corporate action in currency derivatives

11	Buy Broker	VARCHAR2	Buy TM Code
12	Sell Broker	VARCHAR2	Sell TM Code
13	Trade Price	NUMBER	Traded Price of the contract
14	Trade Date Time	DATE	Format mm/dd/yyyy hh:mm:ss PM
15	Trade Volume	NUMBER	Number of Contracts traded today
16	Trade Token No	NUMBER	Token no of Contract
17	Trade Buy Branch	NUMBER	Branch no of user
18	Buy CM Code	VARCHAR2	Clearing Member Code
19	Sell CM Code	VARCHAR2	Clearing Member Code
20	Trade Sell Branch	VARCHAR2	Branch no of user
21	Buy Custodial Participant	VARCHAR2	CP Code
22	Buy Side Confirmation	VARCHAR2	Confirmation Flag of CP Trades
23	Sell Custodial Participant	VARCHAR2	CP Code
24	Sell Side Confirmation	VARCHAR2	Confirmation Flag of CP Trades
25	Buy Covered Uncovered Flag	VARCHAR2	Default Value - 'U'
26	Sell Covered Uncovered Flag	VARCHAR2	Default Value - 'U'
27	Buy Old Custodial Participant	VARCHAR2	No Data
28	Buy Old CM Code	VARCHAR2	No Data
29	Sell Old Custodial Participant	VARCHAR2	No Data
30	Sell Old CM Code	VARCHAR2	No Data
31	Trade Buyer	NUMBER	User ID
32	Trade Seller	NUMBER	User ID
33	Buy Order No	NUMBER	Trade Number

34	Sell Order No	NUMBER	Trade Number
35	Buy Account No	VARCHAR2	Client Code
36	Sell Account No	VARCHAR2	Client Code
37	Buy Remarks	VARCHAR2	No Data
38	Sell Remarks	VARCHAR2	No Data
39	Buy Position	VARCHAR2	Default Value - 'O'
40	Sell Position	VARCHAR2	Default Value - 'O'
41	Buy Proprietor Client Flag	VARCHAR2	C - Client P - Proprietary
42	Sell Proprietor Client Flag	VARCHAR2	C – Client P - Proprietary
43	Control Flag	VARCHAR2	Default Value - N
44	Trade Execution Date Time	DATE	Format mm/dd/yyyy hh:mm:ss PM

2. **Detailed Position file for trading members (PS03) and detailed Position file for clearing members (PS04)**

All Days:

iii. Cross Currency Futures Position file for Trading Member CCR_PS03
iv. Cross Currency Futures Position file for Clearing Member CCR_PS04

Expiry Day:

v. Provisional Cross Currency Position file for Trading Member on expiry (CCR_PS03_P)
vi. Provisional Cross Currency Position file for Clearing Member on expiry (CCR_PS04_P)

Naming Convention	CCR_PS03_<MEMBER CODE>_DDMMYYYY.CSV.gz CCR_PS04_<MEMBER CODE>_DDMMYYYY.CSV.gz CCR_PS03_P_<MEMBER CODE>_DDMMYYYY.CSV CCR_PS04_P_<MEMBER CODE>_DDMMYYYY.CSV
File Path	directory /CDSFTP/X<MEMBER CODE>/REPORTS
File Format	comma separated file format (CSV)

Column	Headers	Field	Details

No		Characteristics	
1	Position Date	DATE	Format DD-MMM-YY
2	Segment Indicator	VARCHAR2	X - Currency Segment
3	Settlement Type	VARCHAR2	E – Futures C – Options
4	Clearing Member Code	VARCHAR2	Clearing Member Code
5	Member Type	VARCHAR2	M for Trading Member
6	Trading Member Code	VARCHAR2	Trading Member Code
7	Account Type	VARCHAR2	P – proprietary C – Client
8	Client Account / Code	VARCHAR2	Default value is '0' (Zero)
9	Instrument Type	VARCHAR2	FUTCUR - Currency Futures OPTCUR - Currency Options
10	Symbol	VARCHAR2	EURUSD – EUR-USD Contract GBPUSD – GBP-USD Contract USDJPY – USD –JPY Contract
11	Last Trading Date	DATE	Format DD-MMM-YY
12	Strike Price	NUMBER	Strike Price for options 0' (Zero) for Futures Contracts
13	Option Type	VARCHAR2	CE - Call Option PE - Put Option FF - Futures Contracts
14	CA Level	NUMBER	Default value is '0' (Zero). No corporate action in currency derivatives
15	Brought Forward Long Quantity	NUMBER	Brought Forward Number of contracts – Long
16	Brought Forward Long Value	NUMBER	Brought Forward Long Value in INR

17	Brought Forward Short Quantity	NUMBER	Brought Forward Number of contracts – Short
18	Brought Forward Short Value	NUMBER	Brought Forward Short Value in INR
19	Day Buy Open Quantity	NUMBER	Number of contracts purchased today
20	Day Buy Open Value	NUMBER	Value of the purchased quantity in INR
21	Day Sell Open Quantity	NUMBER	Number of contracts sold today
22	Day Sell Open Value	NUMBER	Value of the sold quantity in INR
23	Pre Ex / Assgn Long Quantity	NUMBER	Number of contracts
24	Pre Ex / Assgn Long Value	NUMBER	Amount in INR (Negative)
25	Pre Ex / Assgn Short Quantity	NUMBER	Number of contracts
26	Pre Ex / Assgn Short Value	NUMBER	Amount in INR
27	Exercised Quantity	NUMBER	Number of options contracts exercised
28	Assigned Quantity	NUMBER	Number of options contracts assigned
29	Post Ex / Assgn Long Quantity	NUMBER	Number of contracts
30	Post Ex / Assgn Long Value	NUMBER	Amount in INR (Negative)
31	Post Ex / Assgn Short Quantity	NUMBER	Number of contracts
32	Post Ex / Assgn Short Value	NUMBER	Amount in INR (Positive)
33	Settlement Price	NUMBER	Value 1 in INR
34	Net Premium	NUMBER	Amount in INR
35	Daily MTM Settlement Value	NUMBER	Value 2 in INR

36	Futures Final Settlement Value	NUMBER	Value 3 in INR
37	Exercised / Assigned Value	NUMBER	Value 4 in INR

3. Cross Currency Daily Settlement Prices

Naming Convention	CCRSett_prce_DDMMYYYY.csv
File Path	Website Products → Currency Derivatives → Current Market Reports → View all daily reports
File Format	comma separated file format (CSV)

Column No	Headers	Comments
1	Date	Format DD-MMM-YYYY
2	Instrument	FUTCUR/OPTCUR
3	Underlying	
4	Expiry Date	Format DD-MMM-YYYY
5	Cross Currency Price	Cross currency rate (in quoted currency)
6	RBI Reference Rate	Relevant RBI reference rate used for conversion in INR
7	MTM Settlement Price	Daily settlement price in INR