



Financial Benchmarks India Pvt. Ltd.

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FBIL Reference Rate – Methodology Document

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Version 1	June 11, 2018
Version 2	January 15, 2019

FBIL Reference Rate Methodology

January 15, 2019

Version 2

1. Reserve Bank of India, vide their letter No. FMOD.MAOG. No. 570/01.06.022/2017/18 dated December 26, 2017 advised that FBIL may take necessary steps to take over the computation and publication of USD/INR, EURO/INR, GBP/INR and JPY/INR Reference Rates hitherto published by RBI.
2. RBI, vide its Press Release dated April 21, 2016 revised the methodology of computation and dissemination of RBI Reference Rate to be effective from May 02, 2016. Prior to this, the USD/INR Reference Rate was computed based on quotes received from select major banks through a polling process. The Revised Methodology for computation of RBI Reference Rates was based on actual transactions data.
3. Subsequent to the receipt of the letter from RBI, as referred to above, FBIL held discussions with various stakeholders and thereafter formulated the following methodology which will be followed for the computation and publication of USD/INR, EURO/INR, GBP/INR and JPY/INR Reference Rates. These will be named as FBIL Reference Rates.

4. Computation Methodology:

- 4.1 The USD/INR Reference Rate (USD/INR) will be computed based on the data in respect of the actual spot US dollar/Indian rupee transactions taking place on electronic platforms during the one-hour time window from 11.30 Hours to 12.30 Hours on each business day in Mumbai. Normally, the data will be sourced from Refinitiv (formerly Thomson Reuters) and CCIL platforms. If the transaction data is not available on one of the two platforms due to network failure or for any other reason, the rate will be calculated on the basis of transactions data obtained from the other platform.

4.2 The transactions data for a '15 minutes' time-period within the one-hour time window from 11.30 Hours to 12.30 Hours and selected randomly will be used for computation of the USD/INR Reference Rate. The threshold criteria of ten transactions with aggregate amount of USD 25 million will be required to be met for calculating the reference rate.

4.3 A +/- 3SD rule will be applied to the transaction data, as above, to remove the outliers. The Reference Rate will be set equal to the volume-weighted average of the surviving transactions, after the removal of the outliers.

5. Fall-Back Mechanism:

For calculation of USD/INR:

5.1 If the first randomly selected time-period of 15 minutes does not contain adequate number of transactions satisfying the threshold criteria, a second random time-period of 15 minutes will be generated. This process will be repeated up to a maximum of 5 times to obtain adequate number of transactions that satisfy the threshold criterion.

5.2 If all the 5 randomly selected time-periods fail to produce sufficient number of transactions that satisfy the threshold criterion, the transactions data pertaining to the whole one-hour window from 11.30 Hours to 12.30 Hours will be taken into account for calculating the Reference Rate, provided they meet the threshold criterion.

6. Polled Submissions: In case of systems/network failures, if adequate transactions data is still not available, the Reference Rate will be computed using the polled submissions as under:

- I. A panel of Category -I authorised dealer banks selected on the basis of their USD/INR inter-bank market turnover will be maintained for the purpose of polled submission.
- II. The submission can be made over a 15-minute time window around 13.00 Hours. The quotes will be collected from the empanelled AD Banks over the designated e-mail id.
- III. The banks in the panel, as above, will submit the bid and offer quotes for spot USD/INR rate up to four decimal places.
- IV. A minimum of five quotes will be required for calculation of the Reference Rate.

- V.** A +/- 3SD rule will be applied to the submitted rates for removing the outliers. The mean of the surviving polled rates, after the removal of the outliers, will be the reference rate.

- 7.** The USD/INR Reference Rate will be published upto 4 decimal places.

- 8.** For calculation of EURO/INR, GBP/INR and JPY/INR Reference Rates, the ruling spot cross-currency rates for EURO/USD, GBP/USD and USD/JPY will be obtained from any electronic platform.

- 9.** All the cross-currency rates will be taken from the same randomly selected time-period of 15 minutes between 11.30 Hours to 12.30 Hours that will be used for the calculation of USD/INR Reference rate. This will be done by obtaining from any electronic platform the closing prices of each cross-currency pair as depicted in the one-minute charts over the 15-minute time-period. The mean of the closing prices, so obtained, will be crossed with the USD/INR Reference Rate to calculate the EURO/INR, GBP/INR and JPY/INR Reference Rates.

 - 9.1** In case of non-availability of cross currency quotes in the above mentioned window, for each currency pair, the average of the last 15 minutes' quotes from the 1-minute chart of the previous day New York close (16.46 -17.00 New York Time) may be considered.

- 10.** The Reference Rates in respect of EURO and GBP will be published for 1 unit of Euro and GBP and the Reference Rate in respect of JPY will be for 100 units of JPY. EURO/INR and GBP/INR Reference Rates will be published up to 4 decimal places and JPY/INR Reference Rate will be published up to 2 decimal places.

- 11.** The FBIL Reference Rates will be published at around 13.30 Hours on all business days, i.e., excluding Saturday, Sunday and bank holidays in Mumbai.

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Annexure I

Modifications in the FBIL Reference Rate Methodology Document

Original	Modified
<p>6. Polled Submissions: In case of systems/network failures, if adequate transactions data is still not available, the Reference Rate will be computed using the polled submissions as under:</p> <p>I. A panel of Category -I authorised dealer banks selected on the basis of their USD/INR inter-bank market turnover will be maintained for the purpose of polled submission.</p> <p>II. The submission can be made over a 5-minute time window around 13.00 Hours. For this purpose, the Reuters EIKON messaging platform will be used. Going forward, an independent system of polling may be put in place by FBIL.</p> <p>III. The banks in the panel, as above, will submit the bid and offer quotes for spot USD/INR rate up to four decimal places.</p>	<p>6. Polled Submissions: In case of systems/network failures, if adequate transactions data is still not available, the Reference Rate will be computed using the polled submissions as under:</p> <p>I. A panel of Category -I authorised dealer banks selected on the basis of their USD/INR inter-bank market turnover will be maintained for the purpose of polled submission.</p> <p>II. The submission can be made over a 15-minute time window around 13.00 Hours. The quotes will be collected from the empanelled AD Banks over the designated e-mail id.</p> <p>III. The banks in the panel, as above, will submit the bid and offer quotes for spot USD/INR rate up to four decimal places.</p> <p>IV. A minimum of five quotes will be required for calculation of the Reference Rate.</p> <p>V. A +/- 3SD rule will be applied to the submitted rates for removing the outliers. The mean of the surviving polled rates, after the removal of the outliers, will be the reference rate.</p>

<p>IV. A minimum of eight quotes will be required for calculation of the Reference Rate.</p> <p>V. A +/- 3SD rule will be applied to the submitted rates for removing the outliers. The mean of the surviving polled rates, after the removal of the outliers, will be the reference rate.</p>	
<p>9. All the cross-currency rates will be taken from the same randomly selected time-period of 15 minutes between 11.30 Hours to 12.30 Hours that will be used for the calculation of USD/INR Reference rate. This will be done by obtaining from any electronic platform the closing prices of each cross-currency pair as depicted in the one-minute charts over the 15-minute time-period. The mean of the closing prices, so obtained, will be crossed with the USD/INR Reference Rate to calculate the EURO/INR, GBP/INR and JPY/INR Reference Rates.</p>	<p>9. All the cross-currency rates will be taken from the same randomly selected time-period of 15 minutes between 11.30 Hours to 12.30 Hours that will be used for the calculation of USD/INR Reference rate. This will be done by obtaining from any electronic platform the closing prices of each cross-currency pair as depicted in the one-minute charts over the 15-minute time-period. The mean of the closing prices, so obtained, will be crossed with the USD/INR Reference Rate to calculate the EURO/INR, GBP/INR and JPY/INR Reference Rates.</p> <p>9.1 In case of non-availability of cross currency quotes in the above mentioned window, for each currency pair, the average of the last 15 minutes' quotes from the 1-minute chart of the previous day New York close (16.46 -17.00 New York Time) may be considered.</p>