



**FMDQ CLEARED NAIRA-SETTLED NON-
DELIVERABLE FORWARDS CLOSING RATE
METHODOLOGY**

FMDQ Securities Exchange Limited

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1. Introduction

The FMDQ Cleared Naira-Settled Non-Deliverable Forwards Closing Rate Methodology (the “**Methodology**”) sets out the process of computing daily closing rates for Cleared Naira-Settled Non-Deliverable Forwards (“**Cleared USD/NGN NDFs**”) contracts to ensure consistency, standardisation and provide transparency, broadly in line with the tenets and best practices of derivatives products and markets. This Methodology applies to all Cleared USD/NGN NDFs listed on FMDQ Securities Exchange Limited.

Articulated below in the ensuing sections are the computation and data input rules applicable in the computation of daily closing rates for Cleared USD/NGN NDFs contracts.

2. Daily Closing Rate Computation Rules

The Exchange shall publish a single closing rate for each Cleared USD/NGN NDF contract daily. The daily closing rate for the contracts shall be derived from either the available Executed Trades¹ and/or Firm Orders² of the contracts obtained from the FMDQ Exchange-advised System³ or modelled rates of the contracts, as follows:

2.1 Closing Rate based on Executed Trades and Firm Orders of the Cleared USD/NGN NDFs Contracts

The Exchange shall determine the daily closing rate of contracts using a combination of Executed Trades and/or Firm Orders subject to the availability of market prices. The following hierarchy rules shall apply:

2.1.1 **First Level** – The Volume Weighted Average Price (“**VWAP**”) of all Executed Trades on each Cleared USD/NGN NDF contract available on the FMDQ Exchange-advised System subject to a minimum of ten (10) Executed Trades, in line with the Data Input Rules in Section 3 of this Methodology, shall be computed as the daily closing rate for the contract.

2.1.2 **Second Level** – In the event that the available Executed Trades are not up to ten (10) data inputs as detailed in the First Level of the Daily Closing Rate Computation Rules, the VWAP of available Executed Trades and/or available Firm Orders which sum up to ten (10) data inputs shall be obtained and calculated. The relevant Executed Trades and Firm Orders shall be selected as follows:

2.1.2.1 *Executed Trade(s)*: All available Executed Trade(s) on each contract recorded at close of the market.

2.1.2.2 *Firm Order(s)*:

- a. Where the number of available Executed Trade(s) is equal to an even number, the number of available Firm Order(s) to be combined with the data determined under Section 2.1.2.1, to sum up to ten (10) data inputs, shall be an equal combination of the best bid(s) and the best offer(s) ranked by order size⁴.

For example, if the number of available Executed Trades are six (6), warranting the inclusion of four (4) available Firm Orders; then the two (2) best bids and two (2) best offers ranked by order size shall be selected and added to the six (6) Executed Trades, for the computation of the daily closing rate.

¹ This includes all trades executed and recorded on the FMDQ Exchange-advised System

² This includes all unmatched orders at close of the market

³ This means the FMDQ Exchange-designated trading System for the purpose of executing and/or reporting all Forwards transactions

⁴ Order size refers to the number of contract(s) in the Firm Order

- b. Where the number of available Executed Trade(s) is an odd number, the number of available Firm Order(s) to be combined with the data determined under Section 2.1.2.1, to sum up to ten (10) data inputs, shall be the best bid(s) and the best offer(s) ranked by order size, with more offers than bid(s).

For example, if the number of available Executed Trades are seven (7), warranting the inclusion of three (3) available Firm Orders; then the best bid and two (2) best offers ranked by order size shall be selected and added to the seven (7) available Executed Trades, for the computation of the daily closing rate.

FMDQ Exchange will have sole discretion to exclude any outliers at the time of such computation.

2.1.3 Third Level – In the absence of the availability of a minimum of ten (10) Executed Trades and/or Firm Orders in the market as required in the Second Level of the Daily Closing Rate Computation Rules, the daily closing rate will be computed as the mid-point of the previous day’s closing rate, and the VWAP of the available Executed Trades and/or Firm Orders for the current day.

2.1.4 Fourth Level – Where there are no available Executed Trades and/or Firm Orders in the market, either due to a *Force Majeure Event*⁵ in the Cleared USD/NGN NDFs market or under any market condition, the previous day’s closing rate shall be maintained as the current day’s daily closing rate, up to a maximum period of five (5) consecutive business days following which closing rates shall be determined as provided under Section 2.2.

The computation of the daily closing rate based on available Executed Trade(s) and/or Firm Order(s) as detailed in Section 2.1 shall be subject to the Exchange’s expert judgment and reasonableness assessment under the prevailing market conditions.

2.2 Closing Rate based on Modelled Cleared USD/NGN NDF Contracts Rates

The Exchange shall determine the daily closing rate of Cleared USD/NGN NDF contracts by computing the modelled fair value of the contract at the launch of the product or where the previous day’s closing rate has been published as the daily closing rate of a Cleared USD/NGN NDF contract for five (5) consecutive business days, using the following formula:

$$FP = SP + (CC - CR)^{t/T}$$

Where:

FP = Modelled Cleared USD/NGN NDF rate (i.e., the daily closing rate of the contract)

SP = Current rate/level of the underlying asset/market risk factor/benchmark⁶

CC = Cost of Carry⁷

CR = Carry Return⁸

t = Time to maturity (i.e., the period between current day and expiry day)

⁵ This includes any act of God, war (whether war be declared or not), emergency, strike, industrial dispute, accident, fire, earthquake, flood, storm, pandemic epidemic, tempest, terrorism, or other cause beyond the control of FMDQ Exchange

⁶ Based on the closing price of the underlying asset/market risk factor/benchmark as published by FMDQ Exchange in its Daily Quotations List or where applicable, as available from the relevant data sources.

⁷ This refers to the cost of financing the purchase and holding a position in the underlying asset/market risk factor/benchmark, estimated using the benchmark inter-bank lending rate or any other relevant reference rate published by the Exchange, and associated storage cost (where applicable).

⁸ This refers to any income derived from holding a position in the underlying asset/market risk factor/benchmark, estimated using the coupon rate, discount/benchmark interest rate, foreign benchmark interest rate and historical dividend yield for Bond, Short-term Interest Rate, Currency and Equity Forwards respectively.

T = Actual numbers of days in a year

However, in the event that the Exchange is unable to reasonably determine the current price/level of the underlying asset/market risk factor/benchmark as required in Section 2.2 due to a *Force Majeure Event* or any market condition, the relevant committee of the Exchange responsible for methodologies shall consider and propose an appropriate methodology for determining the daily closing rate of the Cleared USD/NGN NDF contract.

3. Data Input Rules

The order of selection of data input for derivatives contracts obtained from the FMDQ Exchange-advised System is determined by the level of market liquidity and data sufficiency as follows:

Rule 1	<i>The available Executed Trades on each contract during a one (1)-hour interval up to the market closing time (e.g., 3:00 PM – 4:00 PM if market closing time is 4:00 PM) shall be obtained and calculated as the daily closing rate. However, if there are less than ten (10) available Executed Trades by the end of the interval, then Rule 2 shall apply</i>
Rule 2	<i>The available Executed Trades on each contract during a two (2)-hour interval up to market closing time (e.g., 2:00 PM – 4:00 PM if market closing time is 4:00 PM) shall be obtained and calculated as the daily closing rate. However, if there are less than ten (10) available Executed Trades by the end of the interval, then Rule 3 shall apply</i>
Rule 3	<i>The last ten (10) available Executed Trades on each contract up to the market closing time, regardless of the transaction time shall be obtained and calculated as the daily closing rate. In the event that all available Executed Trades up to the market closing time are less than ten (10), FMDQ Exchange shall revert to the second level as captured in Section 2.1.2 of the Methodology</i>