

Corporate bond valuation Methodology document September 2024

Valuation Methodology to determine security level valuation:

Step 1: Same security – Trade (Ex-Outliers)

· We consider the trades (in marketable lots) reported on NSE whose traded volume should be of minimum INR 5 crores. VWAY is considered

Step 2: Same security – Quotes (Ex-Outliers)

· Two-way quotes/dealt levels are collected from market participants and considered for securities that are not traded or for trades that are considered as an outlier

Step 3: Same Issuer Similar Maturity – Trade (Ex-Outliers)

· In case of no trade/quote/dealt level, the trades of same issuer with similar maturity are considered

Step 4: Same Issuer Similar Maturity – Quotes (Ex-Outliers)

· Mid-value of the two-way quotes of same issuer with similar maturity is considered

Step 5: Same Issuer Similar Maturity – Primary issuance (Ex-Outliers)

· In case of no information on trade and two-way quotes, primary issuance yields by the same issuer of similar maturity are used for valuation. Reporting platform – NSE EBP is used to collect primary issuance data

Step 6: Similar Issuer Similar Maturity (Ex-Outliers)

· If there are multiple trades/quotes/primary issuance reported for similar issuer and similar maturity, average of all traded/quoted/issued securities (as the case may be) of similar issuer and maturity is considered. The priority is given to the trade, then to two-way quote and finally to the Primary Issuance

Step 7: Issuer /sector/market specific changes or information

· Any issuer/sector/market specific changes like credit rating changes are considered.

Step 8: Matrix Movement

· If there is no availability of trade data, two-way quotes, primary issuance data, same issuer with similar maturity data points and similar issuer with similar maturity data points, then matrix movement for specific sector with same bucket is used for yield estimation.

For matrix computation, benchmark issuers are identified for each sector. Movement in these benchmark issuers according to the trade/quotes/primary issuance is considered for computing the matrix.

Step 9: Quality Check

· Valuation is reviewed by a secondary analyst

Step 10: Price Computation

· After performing estimation of yield, security level clean price, accrued interest, dirty price, modified duration, Macaulay's duration and convexity are calculated using the tool.

Additionally, with effect from September 30, 2024, valuation of Additional Tier 1 Bonds (AT-1 Bonds) is done based on the Yield to Call (YTC) as per **SEBI/HO/IMD/PoD1/CIR/P/2024/106** circular dated August 05, 2024.

Prior to this, valuation of such bonds was done based on the deemed residual maturity as mentioned in the table below as per **SEBI/HO/IMD/DF4/CIR/P/2021/034** circular dated March 22, 2021:

Time Period	Deemed Residual Maturity of Basel III AT - 1 Bonds (Years)
Till March 31, 2022	10
April 01, 2022 - September 30, 2022	20
October 01, 2022 - March 31, 2023	30
April 01, 2023 onwards	100*

*100 years from the date of issuance of the bond.

The valuation of Basel III Tier II bonds is done as per **SEBI/HO/IMD/DF4/CIR/P/2021/034** circular dated March 22, 2021 which is based on deemed residual maturity as mentioned in the table below:

Time Period	Deemed Residual Maturity of Basel III Tier II Bonds (Years)
Till March 31, 2022	10 Years or Contractual Maturity whichever is earlier
April 01, 2022 - September 30, 2022	Contractual Maturity
October 01, 2022 - March 31, 2023	Contractual Maturity
April 01, 2023 onwards	Contractual Maturity

Exceptions Policy

Following are the acceptable deviations in the valuation approach:

- Giving priority to two-way quotes over trades
- Giving priority to LTY over WAY
- Giving priority to market feedback over the traded yield
- Considering odd lots for yield estimation
- Giving priority to one trade/quote/primary issuance over others
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These deviations are typical, but not restricted to below days:

- Quarter/year ends
- Macro-economic data release dates
- Budgetary announcement dates
- Days with high volatility in the market
- Policy announcement dates like monetary policy by RBI

Committee Policy

NSE Data & Analytics has constituted two committees as mentioned below:

- Bond valuation Advisory Committee: To provide guidance on macro issues pertaining to fixed income valuations.
- Bond Valuation Oversight Committee: To oversee the operational guidelines for bond valuation, approve changes to the valuation criteria and approve any exceptions.
- Details of the committee members of these two committees are available on the NSE website on the following link. <https://www.nseindia.com/nse-data-and-analytics/committees>

Disclosure of Changes to the Methodology

NSE Data & Analytics Limited shall endeavor to give a notice of at least 15 days, prior to any amendment to the above methodology. Where giving such notice is not practical, the same shall be done on shorter notice with the committee's approval.

Error Handling

In principle the valuations are recalculated whenever errors occur. However, where the correction of a historical error would lead to difficulties for users or investors, the committee retains the right to override the correction. Users of the valuations are notified through appropriate channel of communication of both corrections and decisions to protect investors by not correcting an error.

Illustrative Example

Consider for a 2034 maturity corporate bond ISIN, 7.87% is the VWAY of trades (in marketable lots) reported on NSE whose traded volume is 5 crores or more. Now, if for the same ISIN, a two-way quote with mid-point of 7.85% was received, then as per the methodology, the trade will get preference over the quote, unless the trade is considered as an outlier.

Once the yield is estimated, in the above example, 7.87% being the VWAY, security level clean price, accrued interest, dirty price, modified duration, Macaulay's duration and convexity are calculated using the tool.

If in another scenario, there is no availability of trade data, two-way quotes, primary issuance data, same issuer with similar maturity data points and similar issuer with similar maturity data points, then matrix movement for specific sector with same bucket is used for yield estimation. Let's say yesterday's yield level for the ISIN was 7.84% and the movement is 0.02 in 2034 bucket in same sector, accordingly today's yield of the ISIN will be 7.86%.