

Methodology Document: Security Level Valuation for Corporate Bonds

Background: CRISIL Funds and Fixed Income Research provides valuations for all outstanding Corporate Bonds held by subscribers on a daily basis. These prices are used by various market participants such as AMCs, Insurance Companies, and other asset managers to value their portfolio. This methodology document covers the valuation methodology for Corporate Bonds and governance mechanism followed for valuation.

Valuation Methodology

Waterfall approach to determine security yields is as follows:

VWAY Same ISIN Primary Reissuance & Secondary Trade in Same ISIN

VWAY of Primary Issuance via Book Building of same issuer, similar maturity

VWAY of secondary trades of Same Issuer similar maturity

VWAY of Primary issuances through fixed price action of same Issuer similar maturity

VWAY of Primary Issuance via Book Building of similar issuer, similar maturity

VWAY of secondary trades of similar issuer, similar maturity

VWAY of primary issuance through fixed price auction of similar issuer, similar maturity

Construction of Benchmark Matrix

Polling for security level valuation, in case of exceptional circumstances

Step 1: Same ISIN (Primary Reissuance/Secondary Trades)

- Volume Weighted Average Yield (VWAY) of the Primary reissuances of the same ISIN (whether through book building or fixed price) and secondary trades in the same ISIN.

Step 2: Primary Issuance (Book Building)

- Volume Weighted Average Yield (VWAY) of the Primary issuances (25crs or more) through book building of same issuer, similar maturity to be considered. (Refer Note 1)

Step 3: Secondary Trades

- VWAY of trades of same issuer, similar maturity reported on NSE and BSE having trade quantum of minimum Rs. 5 crores are considered. IST trades are not considered for valuation.

Step 4: Primary Issuance (Fixed Price)

- Volume Weighted Average Yield (VWAY) of the Primary issuances of same issuer, similar maturity (25crs or more) through Fixed Price to be considered.

Step 5: Primary Issuance (Book Building)

- Volume Weighted Average Yield (VWAY) of the Primary issuances (25crs or more) through book building of similar issuer, similar maturity to be considered.

Step 6: Secondary Trades

- VWAY of trades of similar issuer, similar maturity reported on NSE and BSE having trade quantum of minimum Rs. 5 crores are considered. IST trades are not considered for valuation.

Step 7: Primary Issuance (Fixed Price)

- Volume Weighted Average Yield (VWAY) of the Primary issuances of similar issuer, similar maturity (25crs or more) through Fixed Price to be considered.

Step 8: Construction of Matrices & Spread over matrices

- Construction of benchmark matrices is done using the above waterfall method. In case primary issuance/secondary data of benchmark issuers are not available polls can be considered from market participants for matrix construction.
- If traded information, primary issuance data, same issuer with similar maturity and similar issuer with similar maturity are not available at ISIN/Issuer/Group level, relevant matrix movement is given to the security for the purpose of valuation and the historical spread is maintained on such securities.

Step 9: Polling of Security Level Valuation

- Trades reported on NSE and BSE which are outliers (Refer Note 3) are polled from Market participants.
- In case of exceptional circumstances polling may be conducted where the median of polls received from Market participants are used for valuation purpose. (Refer Note 4 and 5)

Quality Check

- Review of valuations is done by secondary analyst.
- All changes over previous day are reviewed and significant movement if any, is discussed with internal valuations committee for approval.

Notes:

1. Polling can be carried out on each step in waterfall, excluding for primary issuances via book building mechanism of quantum Rs 100 crores and above in case the trade is classified as outlier.
2. Outliers are identified based on the liquidity criteria prescribed by AMFI.

Outlier Criteria (Bonds/CPCDs)	Bps Criteria (Yield Movement over previous day yield after accounting for yield movement Matrix)		
	Upto 15 days	15-30 Days	Greater than 30 days
Liquidity Classification			
Liquid	30	20	10
Semi-Liquid	45	35	20
Illiquid	70	50	35

3. Buckets based on residual tenor are as below:

When a trade in same ISIN has not taken place, reference should be taken to trades of either the same issuer or a similar issuer, where the residual tenor matches the tenor of security to be priced. However, as it may not be possible to match the exact tenure, it is proposed that tenure buckets are created and trades falling within such similar maturity be used as per table below.

Residual Tenure of Bonds to be priced	Criteria for Similar Maturity
Upto 1 month	Calendar Weekly Bucket
Greater than 1 month to 3 months	Calendar Fortnightly Bucket
Greater than 3 months to 1 year	Calendar Monthly Bucket
Greater than 1 Year to 3 years	Calendar Quarterly Bucket
Greater than 3 Years	Calendar Half Yearly or Greater Bucket

In addition to the above:

- a. In case of market events, or to account for specific market nuances, we can vary the bucket in which the trade is matched or to split buckets to finer time periods as necessary.
 - b. In case of illiquid/ semi-liquid securities, that traded spreads may be used for longer maturity buckets. However, the yield should be adjusted on account for steepness of the yield curve across maturities.
4. Exceptional circumstance would be stale spreads, any event/news in particular sector/issuer, rating changes, high volatility, corporate action or such other event as may be considered by valuation agencies. (Stale spreads are defined as spreads of issuers which were not reviewed/updated as per the waterfall approach in the last 6 months).
5. Similar issuer do not always refer to issuers which trade at similar yields, but many carry spreads amongst themselves & move in tandem or they are sensitive to specific market factor/s hence warrant review of spreads when such factors are triggered.

Criteria for Similar Issuers: Similar issuers can be determined using one or more of the below parameters:

- a. Issuers within same sector / industry;
- b. Issuers within same rating band;
- c. Issuers with same parent or within same group;
- d. Issuers with debt securities having same guarantors ;

Similar issuers which trade at same level or replicate each other's movements are used in waterfall approach for valuations. However, similar issuer may also be used to trigger the review of spreads for other securities in the similar issuer category basis the trades/news/action in any security/ies within the similar issuer group.

6. As per SEBI guidelines following events also may be considered exceptional events :
- i. Monetary Credit Policy
 - ii. Union Budget
 - iii. Government borrowing / Auction days
 - iv. Material Statements on Sovereign rating
 - v. Issuer or Sector specific events which have a material impact on yields
 - vi. Central Government election days
 - vii. Quarter end days

Note: In addition to the above, valuation agencies may determine any other event as an exceptional event. All exceptional events along with valuation carried out on such dates shall be documented with adequate justification.

7. Corporate Bonds Repo: These are treated as fixed coupon bonds and in case of a trade, traded yield is compared to similar tenor CP/CD of the counterparty to determine the new spread. CRISIL only values those repo securities having residual maturity more than 30 days.

Governance mechanism

CRISIL has an internal committee comprising of President, Senior Director/s, Director/s and Associate Director/s which has following role as provided below.

- **Criteria Committee:** Valuation policy and any changes to such policies are discussed with the committee and are incorporated post approval by the committee.
- **Valuation Committee:** Matters pertaining to exceptions, mentioned above, are discussed with valuation committee and acted upon based on its feedback.

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