

TPEX Corporate Bond and Financial Debenture Fair Value

Calculation Methodology

I. Corporate Bond Reference Yield Curve

In addition to the four rating curves of twAAA, twAA, twA and twBBB originally published by the TPEX, other ratings such as twAA-, twAA+, twA-, twA+ and twBBB+ use the straight-line cutting method between the two ratings.

e.g. $twBBB+ = twBBB - (twBBB - twA) / 3$

$$twA- = (twBBB - twA) / 3 + twA$$

$$twA+ = twA - (twA - twAA) / 3$$

$$twAA- = (twA - twAA) / 3 + twAA$$

$$twAA+ = (twAA - twAAA) / 2 + twAAA$$

II. Bond Scope of Calculation

1. Bond Type: Straight corporate bonds, financial debentures, NTD-denominated foreign bonds and municipal bonds.
2. Currency: NTD-denominated.
3. Interest Basis : Fixed rate.
4. Maturity: Fixed maturity with remaining term of 10 years or less.
5. Credit Rating:
 - (1) For unsecured bonds, national credit ratings for bonds or issuers must be higher than twBBB.
 - (2) For secured bonds, national credit ratings for bonds or the guarantors (only bonds with a single guarantee are included) must be higher than twBBB.
6. Others: Not puttable or callable and able to be calculated by the formula for yield-to-maturity/price-per-hundred conversion publicly announced by the TPEX.

III. Credit Rating Sources

The credit rating information is obtained from bond basic

information reported by the issuer on the MOPS at 4:00pm on the previous day. The fair value valuation is based on national ratings rated by rating agencies such as TRC or Fitch. (Please note that the TPEx is not responsible for credit ratings that may differ from the actual situation due to the time lag in updates from issuers or the MOPS.)

IV. Use for Credit Ratings

1. Senior Unsecured Bonds: The bond rating takes precedence, while the issuer rating is used if the bond rating is not available.
2. Subordinated Unsecured Bonds: The bond rating takes precedence, while the issuer rating of one notch lower is used if the bond rating is not available.
3. Senior Secured Bond: The bond rating takes precedence, while the guarantor rating is used if the bond rating is not available.
4. Subordinated Secured Bond: The bond rating takes precedence, while the guarantor rating of one notch lower is used if the bond rating is not available.
5. The fair value is not provided for the bonds with a corresponding credit rating below twBBB.
6. The fair value of municipal bonds is calculated based on the twAAA curve.

V. Credit Rating Correspondence Table

Rating Agencies	TRC	Fitch	Corresponding Corporate Bond Reference Yield Curves
National Ratings	tw	(twn)	
	twAAA	AAA(twn)	twAAA
	twAA+	AA+(twn)	twAA+
	twAA	AA(twn)	twAA
	twAA-	AA-(twn)	twAA-
	twA+	A+ (twn)	twA+
	twA	A(twn)	twA

	twA-	A-(twn)	twA-
	twBBB+	BBB+ (twn)	twBBB+
	twBBB	BBB(twn)	twBBB