

CREDIT VALUATION RISK ASSESSMENT & YIELD CALIBRATION

Marshall & Stevens is recognized by clients and auditors alike for providing supportable, insightful, and reliable valuation analyses that put the unique details of every engagement front and center while meeting financial reporting and other requirements.

Marshall & Stevens' Debt Valuation specialists provide analyses of:

- Debt Securities (plain-vanilla)
- Convertible Debt Securities
- Callable and Puttable Bonds
- Incremental Borrowing Rates
- Credit Risk Assessment and Yield Calibration

There are two important aspects of the debt valuation process:

1. Credit Risk Assessment

When valuing debt securities, consideration should be given to the value of the debt instrument:

- In light of the credit quality of the underlying business.
- In relation to other existing debt tranches.
- In relation to current market conditions.

First, we look to credit ratings from the big three rating agencies (S&P, Moody's, or Fitch), but such ratings are not typically available for securities in private companies.

As a secondary approach, we perform an independent assessment of the subject company's baseline credit risk to fill the gap a public rating would have otherwise provided. We then leverage

this assessment to inform us of the relative credit risk of the specific debt instrument(s) in question, whether they be senior, subordinated, or equivalent to the identified baseline risk.

To best reflect the unique operations of the subject company at every stage of development, we utilize two parallel and independent approaches to estimate the credit risk for the debt securities which are not publicly rated:

- Employing large datasets of all publicly rated company financials, we consider how a large suite of client-specific metrics compares to those of their publicly traded peers, giving a clear, quantifiable, and supportable indication of likely credit risk based on current market conditions.
- As further support, we employ a widely accepted machine-learning approach trained to accurately predict credit worthiness from an independent set of input metrics, allowing each method to corroborate the conclusions of the other.

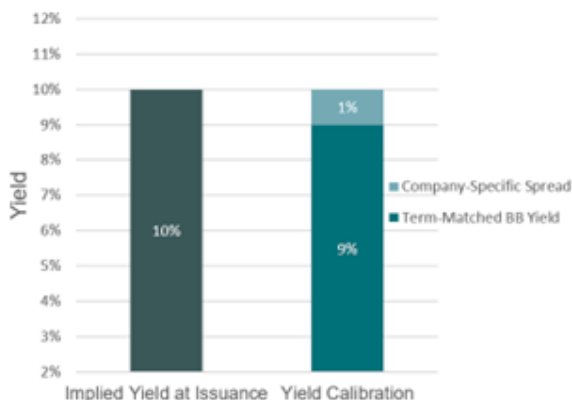
Considering these two approaches in combination with the professional judgement of our debt valuation specialists ensures our risk assessments best reflects the unique positions of each client's securities, resulting in valuation analyses that hold up to auditor and stakeholder scrutiny.

2. Yield Calibration

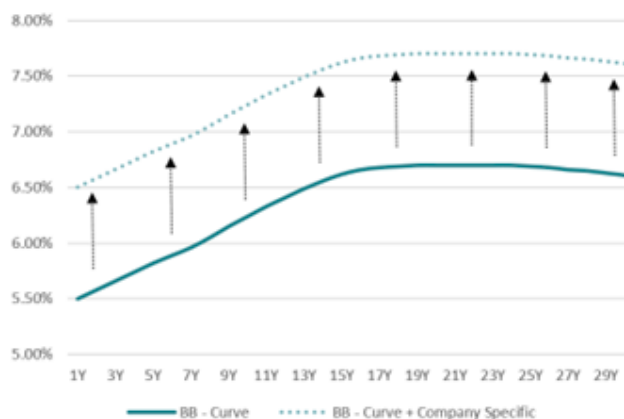
Rather than relying on a benchmark curve outright, Marshall & Steven's capacity for independent credit risk assessment allows our valuation professionals to develop client-specific yield curves at varying levels of seniority or subordination. By determining the underlying credit curve best reflecting an instrument's credit worthiness and calibrating yield

to an arms-length transaction price, we develop a company-specific spread that encapsulates the unique, incremental risk applicable to each client. This calibrated spread is then applied to subsequent or parallel valuations to ensure our conclusions remain consistent and supportable across any review period.

Sample Yield Calibration For BB Rated Debt



Sample Yield Curve for BB Rated Debt + Company Specific Spread



In Conclusion

By leveraging widely accepted approaches to estimate the credit risk of unrated debt and calibrating client-specific yield curves to their issuances, Marshall & Stevens excels at providing accurate, timely, and supportable valuations for a wide range of debt instruments.

OUR CREDIT VALUATION SPECIALISTS



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