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CLO Insights Series

CLO Collateral Quality Tests and Matrices

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Introduction

Fundamentally, the Collateral Quality Tests determine how risk and return are defined and measured at a portfolio level. They also incorporate portfolio concepts such as recovery, diversity and maturity. The interrelationship between these metrics is expressed in a grid or matrix which allows CLO Managers scope to pursue a range of investment strategies whilst staying true to the underlying CLO investment treatise.

This article explores how these theoretical concepts are used in practice.

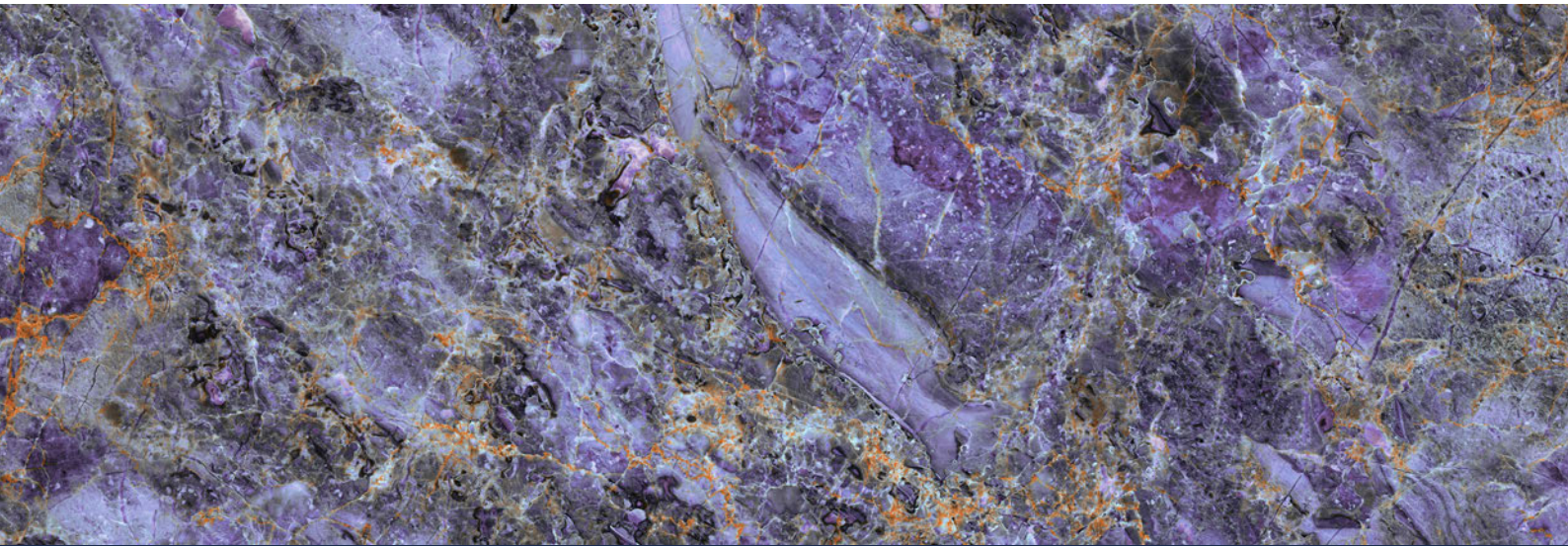
Collateral Quality Tests

The Collateral Quality Tests measure the quality of a CLO's collateral in different ways. They comprise the following:

- Weighted Average Rating Factor (WARF) test, measures the quality of the CLO's portfolio in ratings terms by converting the rating of each asset into a numerical score[1].
- Weighted Average Recovery Rate (WARR) test, ensures the CLO is not over exposed to loans with low recovery prospects.
- Diversity Test, measures the industry diversity of the CLO portfolio.
- Weighted Average Spread (WAS) test, designed to ensure the CLO does not invest in too many low-yielding assets.
- Weighted Average Life (WAL) test, designed to ensure the average life of the CLO's portfolio is not significantly longer than that of the CLO's liabilities.

The CLO Manager navigates the portfolio to manage these tests via a matrix which provides flexibility for different managers to adopt different investment styles. For example, a more aggressive manager can build a higher risk portfolio but will need to make sure that there is a commensurately higher spread. A more prudent manager can adopt a lower risk strategy with lower returns.

[1]A Moody's B1 Rated asset has a 2220 Rating Factor, A B2 rated asset has a 2720 rating factor.



Moody's Matrix

The Moody's Test Matrix comprises a table of maximum Weighted Average Rating Factors (WARF) based upon the axes of Minimum Diversity Score and Weighted Average Spread (WAS).

Some examples highlight the range of combinations:

- If the Diversity Score is 56 and the Weighted Average Spread is 5% then the WARF can be as high as 3568.
- If the Diversity Score is 50 and the Weighted Average Spread is 4% the maximum WARF is 3231.
- With the same Diversity Score and a Spread of 3.6%, the maximum WARF is lower at 3126.

Fitch Matrix

Fitch has two matrix cases depending on the Weighted Average Life (WAL) of the portfolio. These set minimum Recovery Rates based upon the co-ordinates of Weighted Average Spread (WAS) and Weighted Average Rating Factor (WARF).

These examples provide an illustration:

- If the WARF is 20 and the Spread is 5% then the Recovery Rate must be more than 42%.
- If the WARF is 31 and the Spread is 5% then the minimum Recovery Rate is 61.2%.
- If the WARF is 25 and the Spread is 3.6% then the Recovery Rate must be greater than 64.1%.

It's important to remember that the matrix values are weighted averages. This means that it is not necessary to fit every asset exactly into a box in the matrix. This means assets with different characteristics can be added to the portfolio. Better rated assets with lower spreads can sit alongside lower rated assets with higher spreads.

The Moody's and Fitch matrices are fundamentally similar in that they both focus on risk and return. The Moody's Test Matrix encourages the CLO Manager to construct diverse portfolios (i.e. with borrowers in different sectors) whilst the Fitch Test Matrix determines minimum recovery levels to minimise losses.

Using the Matrix in Practice

The CLO manager can move around the matrix depending on the evolution of the portfolio.

The calculations don't have to exactly match the numbers in the grid but can be interpolated between squares.

So, the matrix approach is flexible as well as serving to provide a blueprint for the management of the portfolio.

Maintain or Improve

The CLO applies the Collateral Quality Tests whenever the CLO Manager wants to perform a trade with a view to measuring the impact of that trade.

The CLO Manager manages the portfolio during the Reinvestment Period by buying and selling assets and is also permitted to make limited investments following the Reinvestment Period.

However, there may be factors outside the control of the CLO Manager (e.g. ratings changes or secondary liquidity) that can cause a breach of a Collateral Quality Test. If this happens then the CLO Manager needs make sure that its proposed reinvestment does not make the breach any worse (so called "maintain or improve" standard).

Conclusion

The Collateral Quality Tests are at the heart of the CLO model guiding the investment process and helping to protect the interest of Noteholders.

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