

North America CMBS Multi-Borrower Criteria Model

Model Summary Document (MSD)

1. Model Purpose and Description

The base model comprises four components:

1. The model first generates loan-level term PD estimate on given observation date that measures the default rate for the remaining term period of the loan.
2. The model then produces loan-level maturity PD estimate to assess the refinancing/balloon payment risk when the loan reaches maturity.
3. A loan-level loss given default model was developed to measure the loss severity at the time the loan is term or maturity defaulted.
4. With some assumptions on defaulting timing, the model finally aggregates PDs and LGDs to estimate loan-level expected losses of non-defaulted loans

2. Model Assumptions

The model applies the assumptions in the US CMBS rating criteria. The model also tests the assumptions for linear regression such as multicollinearity and linearity relationship between variables and outcome.

3. Model Inputs

1. Term PD:
DSCR, LTV, Current DQ status, Past DQ status, Past Modification, country, Canada
Recourse, Property type, Remaining term, Value Resiliency Score
2. Maturity PD:
Projected LTV, DSCR at Maturity, Current DQ status, Past DQ status, Past Modification, DQ status adjustment, Value Resiliency Score, Credit Supply and Demand ratio
3. LGD:
Term Reciprocal of LTV, Maturity Reciprocal of LTV, Default Type, Value Resiliency Score, Past Mod, Special Servicing Timeline, Property Condition, Single Tenant

4. Model Development Data

The development sample consists of loan-level information of conduit loans originated during the period of January 1995 to March 2018 provided by Trepp. The performance window of these conduit loans is tracked until January 2021. Each loan has one observation for every year from origination to the last observable year.

5. Model Limitations

The model is only intended to be used to evaluate US CMBS transactions.

6. Material Changes

This is the v1.0.0, any future changes will be reflected here.

Contact Information

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