

European RMBS FF Logistic Regression Model

Model Summary Document (MSD)

1. Model Purpose and Description

The European RMBS FF logistic regression model is a criteria model that quantifies the relationship between a binary response variable (i.e. the default risk indicator) and a set of explanatory variables (i.e. risk driven factors), using logistic regression. Using loan-by-loan data (where feasible), for Belgium, the Netherlands, Spain, Portugal, Italy, Ireland, France and Germany, estimated coefficients of the explanatory variables in the model output quantifies the risk relativity of the risk driven factors, providing an empirical basis for informing and determining the base foreclosure frequency FF assumptions and FF adjustments in the European RMBS Rating Criteria.

2. Model Assumptions

Due to the data availability, the risk (event) indicators used in the model vary across countries:

- For Spain and Italy, 'default' is used as the risk indicator, where there are enough data available.
- For the other countries, 'default or arrears > 3 months' is used as the risk indicator, to get more pseudo defaults.

3. Model Inputs

In total, 13 potential risk factors below are investigated, with DTI being the offset:

- Fitch CLTV
- Loan Purpose
- Occupancy Type
- Payment Frequency
- Origination Channel
- Interest Rate Type
- Principal Payment Type
- Employment Status
- Income Verification
- Foreign National (for Spain and Portugal only)
- OTM over 30.5 Years (Y/N)
- Restructured (Y/N)
- Government Guaranteed

Risk variable selection for each country model is based on both data availability and analytical judgement. For example, Foreign National is modelled for Spain and Portugal only.

4. Model Development Data

The model uses European RMBS loan-by-loan datatapes available in the European Data Warehouse (EDW) in ECB format. For each country, a representative selection of transactions is made.

- Two pool cuts for each transaction are used to observe the evolution of each loan performing status.

A modelling period of around 4 years is used. For each transaction, the latest EDW poolcut is used as pool-cut 2, and its pool-cut back to around 4 years before (up to data availability) is used as poolcut 1.

In the ECB data template, a lot of data fields are optional. For the model development, the following information is required and acts as filters for the data used in the model:

- Identifiers for transaction, borrower, property and loan
- Loan account status (current, default, arrear & months in arrear)
- Information for calculating CLTV and DTI, two key risk factors

For Germany, due to limited data availability in the EDW, an alternative dataset made of loans included in Fitch's rated cover pools was used instead.

5. Model Limitations

The model quantifies the risk relativities of the selected risk factors with loan-by-loan data.

However, due to loan-by-loan data limitations, the base PD for each country was projected with market aggregate data separately.

6. Material Changes

The current model version is 1.3.0. Any future material changes will be disclosed in this section.

Contact Information

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