Outsourced Risk Analytics Services for Commercial Real Estate Loan Portfolios

Many banks have large holdings of commercial real estate loans on their balance sheets. Risk reporting on these exposures is essential both for internal mandates and for the requirements of investors, rating agencies and the regulators.

Complex, highly structured, yet idiosyncratic, CRE has proven to be a difficult asset class for risk measurement. Historically the first attempts to model the risk of CRE assets have often been to merely adapt risk models from the world of commercial and industrial lending. These generally fail to capture the nuances, diversity and structure of CRE assets, which is why Risk Integrated has developed a suite of cashflow simulation models to capture the business realities of CRE lending.

Risk Integrated's *Specialized Finance System* has been built and delivered over ten years to global banks, asset managers and regulators. At the deal-level it is used for origination, structuring, pricing, and Advanced Basel compliance. At the portfolio-level it is used for stress testing and economic capital.

Historically the SFS has been delivered as an in-house enterprise software package, however, today Risk Integrated also offers a suite of analytic services for reporting the risk profile of commercial real estate portfolios on a wholly outsourced basis.

Details of the Service

The service is structured to rapidly give results with minimal work required by the financial institution's analysts. The service therefore takes a relatively "black-box" approach in which the financial institution provides the deal-level input data and then Risk Integrated uses the SFS and Risk Integrated's analysts to provide the deal-level results. In deeper projects, the financial institution has the option to be trained to use the models and run their own analyses.

Deliverables

The main deliverable for this service is a report showing the grades, losses and portfolio projections under a base case and two stressed forecasts. For each stress there is a report as in the example report available. In addition, the results used to create the report will be provided on a deal-by-deal basis in an Excel file for the financial institution's further analysis.

Assumptions

1. Typically for the standard service the main assumptions are as follows:
2. In addition to the base case, two different stresses will be run: down and severe
3. The model and parameter settings will be determined by Risk Integrated
4. The following forecasts may be supplied by the financial institution:
    a. Base case:
        i. Economic variables: GDP, CPI, LIBOR, average stock market growth, unemployment, and average bankruptcy rates
        ii. Property market variables: value index, rental index and vacancy rates by sector and geography at whatever level of granularity is meaningful to the institution
    b. Stress cases:
        i. Economic variables as required
        ii. Optionally, stressed property market variables. If these are not supplied by the financial institution, they can be derived by Risk Integrated
5. The input data items will be the standard items supplied to the regulators.
6. The macro economic data will be supplied in the standard template supplied by Risk Integrated.

Process

The service has the following steps:

1. A mutual confidentiality agreement is completed.
2. The financial institution will describe the set of input fields to be used so Risk Integrated can identify the extent of remapping needed.
3. The financial institution will supply the data file for the portfolio (not including personal or property identifiers).
4. The financial institution will supply the nominal and stressed forecasts.
5. Risk Integrated will parameterize the macro-economic models to these forecasts.
6. Risk Integrated will then run the full set of analyses and produce the grading and stress reports.
7. The reports will be provided at the portfolio level. In addition the detailed deal-by-deal results will be delivered in the form of an Excel file.

Many of these steps do not need to be repeated if the reports are to be generated on an ongoing basis. The work required by the financial institution staff is as follows:

1. Agree/provide the mutual confidentiality agreement
2. Provide the data set describing the portfolio
3. Provide the stresses to be run
4. Review the results

Future Options

Beyond this first exercise there are several options.

1. We repeat the exercise on a monthly or quarterly basis, with Risk Integrated's staff running the reports.
2. Risk Integrated gives the models and training to the financial institution so that the institution can run its own analyses. This would be appropriate if the institution wants to run many different types of analysis and have close control over the parameterization and development of their models.