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Stress testing for risk management in commercial real estate

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Regulators in the US and Europe are requiring banks to report the results of stress tests. In a stress test, a projection of future economic and market conditions is set and the bank reports what the losses would be in that scenario.

Stress tests are well established in the financial industry as one of the approaches for assessing risk.

In many ways stress tests are a blunt but effective instrument: it only represents one stylized possibility for the future and does not give any probability of that event happening.

Despite these shortcomings, stress tests are effective in that it maximizes the transparency because the scenario is clearly set and there is minimal additional statistical analysis or interpretation. It therefore is a reasonable approach for the regulators to take in their push to increase transparency and understand the viability of each bank.

Stress testing for commercial real estate (CRE) is different from other asset classes because of the amount of structure within each transaction, principally because

of the lease structures. Stress tests have long been used in the CRE industry to assess the risks of individual transactions and CRE practitioners know that lease and financing structures make a large difference in the outcome of each stress.

For example, a deal with a debt service coverage ratio of 1.2 may or may not default if rental rates fall 30 percent, depending on the tenant quality and lease structures.

The risk in individual deals should also be greatly mitigated by the covenants and reserves that lenders have built in to the financing agreements. All of these factors mean that commercial real estate transactions are less risky than would be suggested by a simplified stress test.

It would greatly over-count the risk to simply take today's debt service coverage ratios and multiply them by the projected fall in rents and rise in rates.

Given this complexity and the long term nature of CRE loans, stress testing has been a common way of assessing the risk of individual loans at origination.

The challenge is to be able to apply a stress test across all loans in the portfolio. There are two parts to the challenge. One is to have a single standardized cashflow projection model that can take all deal types in a single framework and systematically subject each deal to the same stress. The other part of the problem is the collection of data.

Banks which prepared for Basel II by implementing cashflow simulation systems, the data col-

lection problem is already solved. Banks which prepared for Basel II by implementing scorecards have partially solved the data problem. They have centrally collected a few financial data items on each asset and these can be used as the starting point for making cashflow projections.

However there are many banks which settled for the cruder standardized or slotting approach for Basel II compliance. For these banks it is typical that the CRE loan and hedge data is centrally held, but information on the property, tenants, reserves and covenants is in spreadsheets, paper, or the customer's mind.

In such a sparse data environment, banks still have a few options. The most obvious one is to do the portfolio stress test manually by calling around the lending officers to get whatever data or estimates they have, paste it in a spreadsheet and apply some assumptions and stresses.

The result is time consuming, unreliable and largely not reusable because for the next stress test request, most of the exercise has to be repeated.

Another option is to try to go to the original spreadsheet cashflow models that were used in doing the deals and modify the models to try to replicate and extract the results for the new stress or try to

extract the data from each spreadsheet into a central database for making projections.

However, the best option is to do it right the first time. The data collection process should be set up so that by entering data into the central database, the lending officers get something in return, e.g., a fully populated credit review form or a consolidated picture of their sub-portfolio. Then the data-entry goes from being an administrative burden to a useful part of the daily workflow.

In this environment an inaccurate over-counting of risk can lead to an unnecessary restriction or termination of business and that is not helpful to the banks or regulators.

In many ways the choice comes down to either spending the effort in pushing together data in a one-off exercise, or pulling the data together in a sustainable way that will help the business in future. Either approach has to be as comprehensive and accurate as possible because limited data leads to the imposition of conservative assumptions and an over-estimate of the risk.

In this environment an inaccurate over-counting of risk can lead to an unnecessary restriction or termination of business and that is not helpful to the banks or regulators. ■

