



Stress Testing: Drafting a “Battle Plan” for the CRE Portfolio

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Addressing the National Defense Executive Reserve Conference in Washington, D.C. in 1957, President Dwight D. Eisenhower made a fascinating observation. "In preparing for battle," he said, "I have always found that plans are useless, but planning is indispensable."

Even though events never materialize exactly as planners envision, the preparation process enables decision makers to keep themselves "steeped in the character of the problem" that they may one day be called upon to solve.

The president cautioned that "if you haven't been planning you can't start to work, intelligently at least" when emergencies arrive. Delivered by the man who had orchestrated the largest seaborne military invasion in world history thirteen years earlier, the remarks came with an undeniable gravitas.

In finance, as in warfare, some potential impediments can be assessed months or years beforehand; others become manifest only on short notice. In either arena, plans that quantify the prospective impact of anticipated difficulties enable decision makers to craft better solutions. For banks interested in formulating either short- or long-term "battle plans," stress testing is a good place to start.

Stress testing received considerable attention in early 2009 as Treasury, Federal Reserve, FDIC, and OCC officials implemented a mandatory Supervisory Capital Assessment Program (SCAP) amongst the nation's 19 largest bank holding companies in response to the global financial crisis. The exercise was designed to identify the potential losses, resources available to absorb losses, and resulting capital buffer needed to ensure that each bank could meet minimum capital requirements (Tier 1 and Tier 1 Common risk-based ratios of 6% and 4%, respectively) under specified adverse macroeconomic scenarios.

In formulating the SCAP, regulators mandated that the banks evaluate the prospective losses of loan and securities portfolios given designated changes in GDP, housing prices, and unemployment rates. Ostensibly, by applying "a consistent and systematic approach across the group," each bank would furnish an objective appraisal of its situation. The SCAP may have achieved its objective in assuaging severe concerns about capital adequacy during the depths of the financial crisis, but the "one-size-fits-all" approach is not an ideal stress testing methodology.

Currently, banks with fewer than \$10 billion in assets have no regulatory requirement to run regular stress tests. Nevertheless, regulators have stipulated that risk management

practices and capital levels should be commensurate with portfolio risks, particularly with regards to commercial real estate (CRE). Concerned that some institutions' risk management practices were "not evolving with their increasing [CRE] concentrations," the OCC, Federal Reserve, and FDIC distributed an interagency memo addressing the issue in December 2006.

The memo was largely focused on "CRE loans for which the cash flow from the real estate is the primary source of repayment," i.e., investor-owned income producing properties, whose debt is mostly serviced by tenant rents, rather than owner-occupied properties whose debt service is principally serviced by cash flows from regular business operations. "An institution with CRE concentrations should perform portfolio-level stress tests or sensitivity analysis to quantify the impact of changing economic conditions on asset quality, earnings, and capital," the memo said.

The regulators' concerns were not unfounded. An FDIC study noted that "in all years between 1980 and 1993, the concentrations of commercial real estate loans relative to total assets were higher for banks that subsequently failed than for nonfailed banks." Examining the ratio of commercial real estate loans relative to total real estate loans for failed and nonfailed banks told a similar story.

Prior to the 2007-2009, meltdown in residential housing, commercial real estate had been the most nettlesome asset class for commercial banks. Historically, CRE had drawn more speculation- and consequently, more volatility- than residential markets. Long gestation periods meant that the financial viability of a given construction project could change markedly before its completion. In particular, the lengthy production process for office buildings exacerbated price collapses when regional markets turned downward in the late 1980s and early 1990s. Collateral value declines in excess of 50% were commonplace in energy-producing states like Texas, where falling oil prices exacerbated the problems caused by overbuilding and poorly-underwritten loans.

The interagency memo states that "a strong management information system (MIS) is key to effective portfolio management," explaining that "MIS should provide management with sufficient information to identify, measure, monitor, and manage CRE concentration risk." Indeed, the ability to readily access contemporary data from a bank's core system and its most recent call report is integral to running a robust stress test.

Joseph J. Hill, president of bank consulting firm CEIS Review Inc., expounds the point: "The Agencies are increasingly looking for banks to identify and analyze the possible consequences of their concentrations. While the degree of granularity in this process will depend on the size and nature of the portfolio, the need for banks regardless of size to develop the capability to articulate the risk in the portfolio at the portfolio level is critical. In order to achieve this capability, the data gathering process must be organized in an economic and efficient manner."

Just as they would group their loan portfolios into pools with similar risk characteristics for FAS 5 impairment tests, banks should likewise stratify their CRE portfolios for stress

tests. Property type, geographic market, tenant concentrations, tenant industries, developer concentrations, and risk rating are all legitimate stratification criteria.

After the portfolio has been segmented, appropriate stress parameters should be applied to each segment. Debt service coverage adequacy may be tested by stressing property operating income and interest rates downward and upward, respectively. Operating income may be stressed directly by applying an appropriate discount to current NOI, or indirectly by raising vacancy rates. Similarly, collateral values can be directly stressed by discounting current appraisals, or indirectly by reducing NOI and/or raising capitalization rates.

Stress effects should be considered for each segment in isolation; segment results should also be aggregated to examine the combined effects on capital, asset quality, and earnings. After re-segmenting the portfolio by different criteria, the exercise should be repeated- i.e., segment and test by geographic exposure, then by collateral type, then by risk rating, etc. Beyond examining impairment effects, managers may want to employ software which also shows rating migration trends under various scenarios.

The more scenarios that management evaluates, the more effectively it can draft appropriate action plans and prepare for contingencies. If concentration levels are deemed modestly excessive, exposure might be sufficiently managed by changing underwriting criteria or limiting origination of various loan classes. If concentrations are heavily skewed, however, management might consider selling or securitizing loans to reduce exposures. In either case, ensuring capital adequacy is the paramount concern.

Perhaps the greatest testament to the necessity of stress testing can be found by comparing a claim made by the interagency memo against contemporary data. The memo states that "consideration should be given to the lower risk profiles and historically superior performance of certain types of CRE, such as well-structured multifamily housing finance." As of March 31st, delinquency rates on securitized commercial mortgages are averaging 9.4%. In a noteworthy irony, the worst-performing sector is multifamily housing, with 16.2% of securitized loans currently delinquent (Trepp).

Things never go exactly according to plan; studying history does not provide generals, bankers, or regulators with perfect clairvoyance. But considering the past in the context of present trends and future possibilities is an invaluable exercise. The discipline of planning forces a leader to consider how his army (or bank, as the case may be) should respond to potential scenarios in order to secure the most favorable outcome. In any endeavor, proactive preparation will always trump a reactive, ad hoc policymaking approach. As Ike asserted during his first presidential campaign, "Neither a wise man or a brave man lies down on the tracks of history to wait for the train of the future to run over him."

Incidentally, he won by a landslide.

About James Adams, CFA: James Adams is a Senior Analyst at Sageworks, a leading

provider of credit risk management, loan loss reserve, and stress testing software to financial institutions. Adams is also the author of Waffle Street: The Confession and Rehabilitation of a Financier, a humorous examination of money, banking, and economics by a hedge fund (and foodservice) professional. Adams began his career with Protective Life Insurance Co. and Jefferson-Pilot Financial, serving as a corporate bond analyst at both companies. Subsequently, he was a vice president at a \$30 billion money management firm. Adams received his MBA from the University of North Carolina's Kenan-Flagler Business School and a BS in Analytical Finance and Accounting from Wake Forest University.

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