
STRESS, SIMULATION AND SENSITIVITY

by [Steve Brown](#)

Most bankers have heard the statistic that 90% of all restaurants fail in the 1st year of operation. A professor at a major university decided to crunch the math because he could not believe it was true. He ran hundreds of simulations and found out what everyone's gut had been telling them - it was impossible. The professor tracked industry growth rates, health department records and then patiently monitored 2,500 restaurants in OH over a 3Y period. What he found was that really only about 25% of restaurants close or change ownership within their 1st year. That number rises to 60% in 3Ys, but it is still well below the 90% myth. In addition, while a 60% failure rate may still sound high, it is interesting to note that it equals the average rate of failure for all businesses across the country and not just restaurants.

This information is not only useful when community bankers are considering lending to restaurants, but on a broader scale it comes into play during stress testing and sensitivity analysis. Since these concepts are important to a strong risk management process, we discuss each one in turn.

Stress testing is useful when banks are trying to get a handle on what sort of impact a given event or series of events could have on the organization. Stress testing considers multiple factors and situations that are usually different than current market conditions and trends. Such testing may or may not include evaluating the impact of strained events that have occurred in the past. In short, stress testing gives a bank a way to conduct "what if" analysis on a variety of factors at once, in order to determine the potential impact of a given situation actually occurring. This allows the bank to be more prepared, in the event the unexpected occurs, or when considering volatility of earnings related to assets (or establishing policy concentration limits). Banks with robust stress testing processes often consider the impact of different events on earnings, liquidity, capital and other factors to better prepare contingency plans and improve preparation.

Sensitivity testing, on the other hand, is usually used to quantify how individual factors impact the output of a given test. Sensitivity testing is important because it helps management teams better understand how singular inputs can impact model results under various scenarios. Determining which factors cause the most distress in a changing environment for example can be very beneficial to developing contingency plans and preparing for a potential event.

Whether a bank is moving one factor only (sensitivity testing) to determine the impact of a given event or multiple factors (stress testing), having a good handle on where risks are coming from before problems arise is the baseline goal.

These days, community bankers should focus not only on improving the inputs into modeling processes, but also drive to increase the frequency of testing. Modeling performed on a quarterly basis is good, but when you consider how much can happen in only 3 months, it is important to perform testing more frequently than that in many instances. To truly be prepared, some critical analysis may need to be run as frequently as daily, depending on the potential impact to the organization, likelihood that a given event could occur and overall sensitivity to changing conditions. A high impact, high probability event requires more frequent testing and review to help mitigate potential losses.

While bankers have little time to do any additional modeling given all that is going on, it is in the bank's best interest to focus on improving risk management. No matter the processes employed, cleaning up data, capturing key inputs and building a base of internal support to analyze both market and credit risks should be a medium-term goal.

Some of our favorite restaurants and our favorite community banks have disappeared during this once-in-a-100Y downturn, but others have survived and thrived. At a minimum, banks that incorporate and enhance stress testing and simulation analysis as part of a solid risk management platform are better prepared.

BANK NEWS

CU Closed

Ensign Federal Credit Union (\$98mm, NV) was closed with EDS Credit Union (\$772mm, TX) assuming member accounts. YTD, this is the 13th CU liquidation.

The Dutch

The Netherlands will inject \$4.5B into ABN Amro and Fortis Bank, as they merge the two bailed out lenders. Both banks have US middle market lending operations.

Branch M&A

Royal Credit Union (\$1.0B, WI) will purchase 11 branches from AnchorBank (\$5.2B, WI) and \$177mm in deposits, loans and assets.

By City

In the multifamily sector, cities with the most projects in distress (according to a new report from Real Capital Analytics) in order are New York, South Florida, Houston, Phoenix and Las Vegas.

Amex

The largest US credit card lender launched a consulting division to provide business customers analyses based on spending trends. The new division, called Business Insights, will analyze the consumption patterns of approximately 90mm card holders to detail spending patterns within 127 key markets.

ATM Hack

4 have been indicted for allegedly stealing \$9mm from ATM machines on the RBS network. An estimated 1.1mm social security #'s may also have been stolen.

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