STRESS TESTING FOR (CRASH) DUMMIES

Why financial institutions should perform stress testing in today's economic environment

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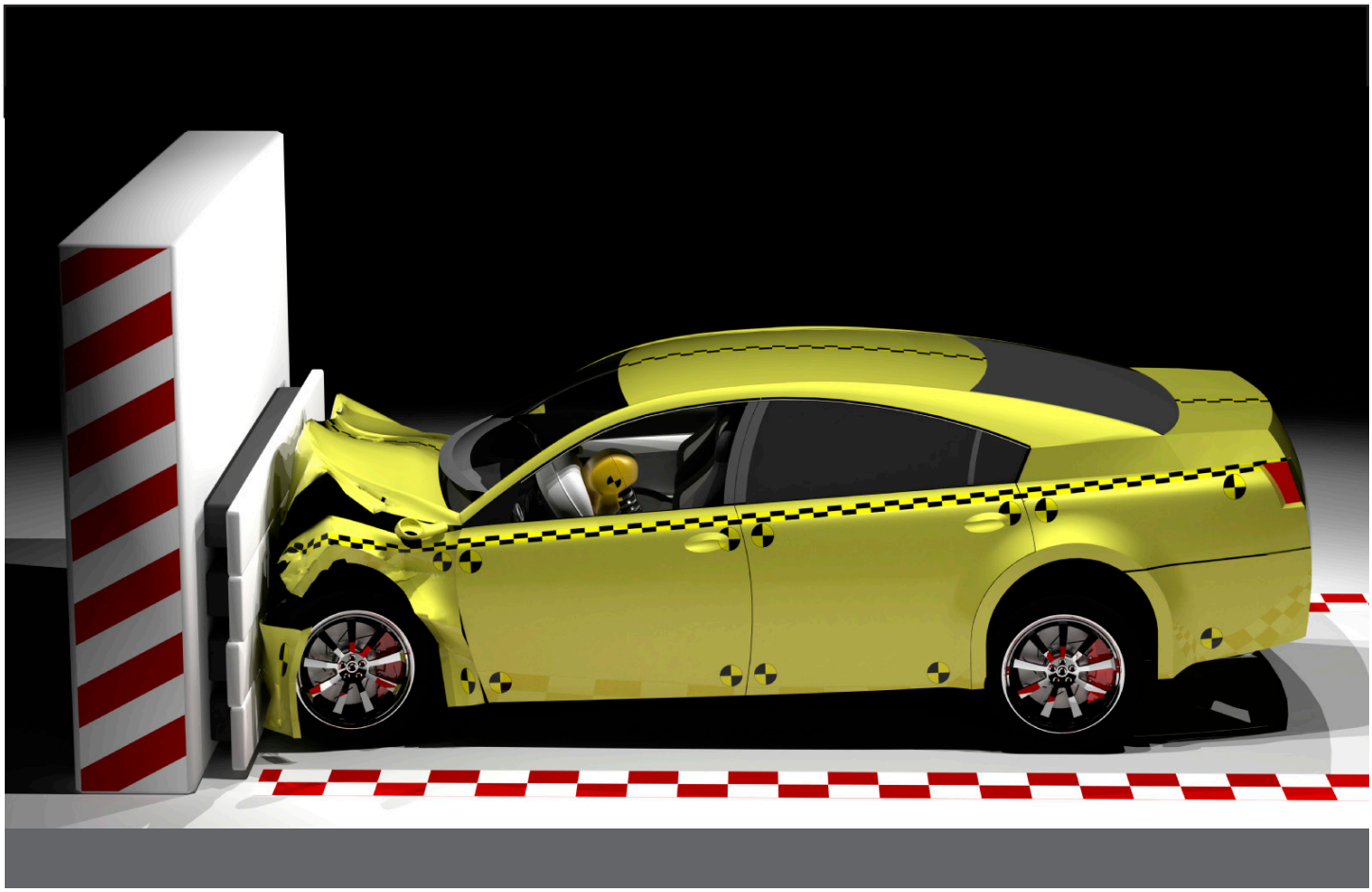
Practical Solutions to Complex Financial Problems



A popular opinion among bankers is that stress tests are based more on fantasy than reality. After all, stressing your balance sheet to the extreme includes events and assumptions that we NEVER expect to happen in the real world. So why should we perform stress testing?

Test Track

My sons will attest to the fact that one of my favorite amusement park rides is Test Track at Walt Disney World in Orlando, Fla. We've been to the park and enjoyed this ride many times over the years. I have the keychain and even a miniature Test Track Mickey, a sure sign of affection. And I believe there is a close correlation between this ride and stress testing in banking.

The ride examines various tests placed on your vehicle. You swerve to make sure your brakes, tires and overall handling are adequate to avoid obstacles. Environmental changes such as temperature extremes are simulated to ensure that the occupants remain comfortable and the engine is not adversely effected. Rough terrain, hills and other challenges are posed to test your vehicle's ability to perform smoothly. And a simulated crash is part of the excitement, allowing you to pretend you are a crash dummy.

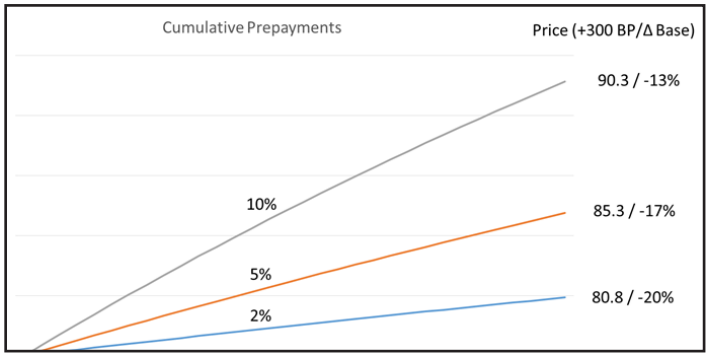
You don't expect to personally experience any of these situations on a regular basis, if ever. But it gives us comfort to know our vehicles can withstand these extremes if we ever have to face them. This is so important that manufacturers place safety ratings on their vehicles and focus tremendous amounts of energy and advertising dollars on publicizing them. But how do we ensure our financial institutions can withstand the extreme conditions we may have to face?

Balance Sheet Stress Testing

Financial institutions have many types of risk inherent in their balance sheets. A few examples would be fluctuations in interest rates, questions of borrowers' ability to repay loans and uncertainty around customer payment and withdrawal patterns. Institutions attempt to quantify and understand these risks using internal models and third party consulting services, which can inadvertently add other risks.

Interest rate modeling is probably the most widely performed and best understood type of stress testing. Assessing the impact on your earnings and value as you shock and twist potential future rates is much like the handling tests mentioned above on Test Track. Recent regulations have pushed similar exercises into the world of credit. While these are a good start, a bank has many other parts that can "break down" if not subjected to the same type of stress testing to ensure proper controls and structural soundness.

Consider prepayments using a very simplified example. Assume you gather data for a fixed-rate product and calculate an average of 10 percent historical prepayments for that product. Having no other information, it may be reasonable to assume that if rates rise prepayments will slow to five percent. This would have a significant effect on the cash flows and price for that product. But what if your reasoning is wrong, and they drop all the way to two percent? The impact on your cash flows and price risk is even more dramatic.



Following this same logic for other assumptions, what if decay rates on deposits are faster than your estimates and you have to generate more funding than expected? What if product spreads tighten and your margins are not as high as planned? Understanding the impact of these and other variables on your bottom line will help you plan more effectively for the unknown.

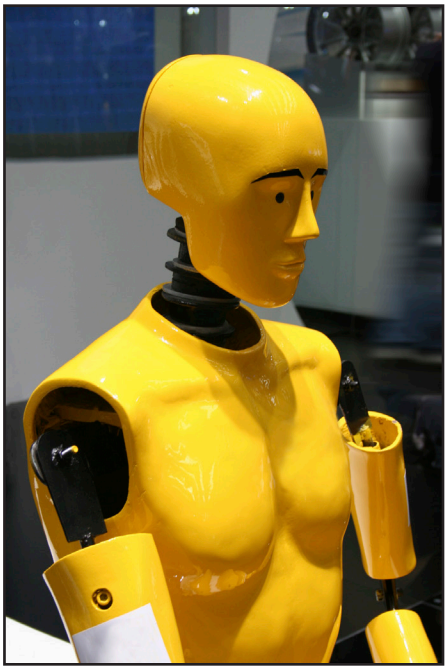
The key message here is that stress testing is a good thing. You want to be able to identify potential areas of weakness in your institution so that you can proactively address them before they cause problems. And stress testing is not something you should be performing after the fact or as a regulatory requirement. Stress testing as part of your business planning ensures that you will be ready for a wider variety of situations when they occur.

Crash Tests

The extreme example of stress testing is a crash test. In this setting, you are pushing the limits of what could happen, to identify potential issues that individual stresses did not reflect. It may be difficult to stage and costly to perform, but the result can point out structural issues you were not aware of. For example, none of the individual stress tests in Disney's Test Track would confirm the safety of the cockpit, but a full crash test would look at structural rigidity (frame), how the body would bend backwards, airbag deployment, etc. DFAST and other large bank regulatory stress tests are like crash tests for banking. Many variable are stressed simultaneously to see if there are potential weaknesses that otherwise might not have been exposed in an organization.

Be a Crash Dummy

Traditional market stress tests have been in place for many years. While these are good starting points, failing to test other behaviors in your balance sheet is like checking your tires but ignoring all other aspects of your vehicle. From time to time you need a full inspection and safety check. Stressing other variables such as spreads, prepayments, and decay rates in your plans, forecasts, and budgets will help you further find outlier issues. And ultimately, running a periodic crash test on the entire organization is prudent, especially given the uncertainty that exists in our present economy.



About the Author

Jerry Clark is Vice President of Sales for ZM Financial Systems and has more than 30 years of experience in market risk, treasury, accounting, and finance. He is also a motorcycle enthusiast, although has no experience (thankfully) related to crash testing bikes. He believes that is better left to the dummies.

About ZM Financial Systems

ZM Financial Systems brings practical solutions to complex financial problems, offering complete solutions in securities and fixed-income analytics, credit-adjusted ALM, liquidity, risk management, budgeting and funds transfer pricing. We also offer large bank solutions to meet the evolving regulatory risk reporting requirements.

With nearly 1,000 institutions depending on ZMFS products/analytics to identify, measure and monitor risk and value in their balance sheets, we are one of the fastest growing financial software companies in the U.S.

Founded in 2003, ZMFS is a privately-held corporation located in Chapel Hill, N.C. In addition to the 25 percent of our staff who have PhD's in the advanced quantitative field, our development and product support teams all have experience in finance arena. Because our teams continuously collaborate, we can quickly navigate complex solutions to complete client-requested enhancements in days or weeks, versus months or years.

Delivering state-of-the-art risk/reward analysis tools, such as ZMdesk, OnlineALM.com and OnlineBondSwap.com, our clients are empowered to uncover hidden risk while maximizing performance; test lending, investment and funding strategies; and respond to various regulatory requirements while efficiently delivering actionable information.

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