Technology Providers Jump into Stress-Test Fray

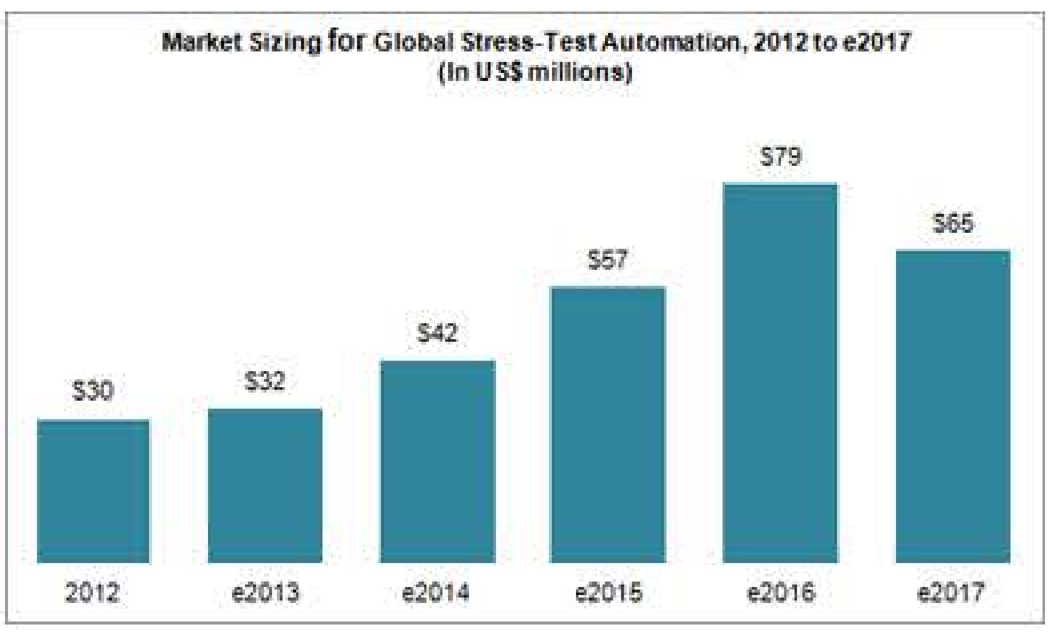
Solutions proliferate, but no single one will fit all firms or all situations

Thursday, November 21, 2013 , By Katherine Heires

U.S. stress testing mandates are expanding in breadth and scope, prompting more and more banks to seek technology solutions and assistance.

Most of the operational burden so far has fallen on the biggest institutions -- in November, for example, the Federal Reserve, in its latest round of stress tests, added a new, counterparty-risk focused test for the largest banks, along with requiring U.S. subsidiaries of several foreign banks to participate in stress tests. Earlier in the year, banks with $10 billion to $50 billion in total assets were added to the stress test mandate list, effective in 2014, and the regimen is being adopted in some form by institutions in many size ranges.

Technology vendors, meanwhile, are offering a profusion of platforms, tools and software, often as additions or enhancements to broader risk management and analytics offerings, designed to help automate and streamline the stress testing process. Among the latest offerings -- and sampling of those in or coming to the market -- are new or updated solutions from Moody's Analytics, OpenGamma and Trepp.



Source: Aite Group

"As I look across the banks, they are making sizable investments in their stress testing capabilities," says Luther Klein, managing director in the risk management practice at consulting firm Accenture.

He cites, among reasons for the push, the penalties paid by the banks that failed earlier stress tests. "They can be fairly severe," Klein says, involving limits to dividend payouts, for example, and capital actions. What's more, stress testing requirements have evolved to require more statistical capabilities in forecasting efforts. Starting next year, Klein adds, banks conducting stress tests will have to be prepared for a greater focus on liquidity forecasting.

No One Solution

Adam Girling, a principal in the financial services office at Ernst & Young, which now goes by the brand name EY, emphasizes that "no single system can cover all aspects of the stress testing process," and given the process' complexity across various business units, "we will never have a push-button solution."

The good news, Girling notes, is that vendors are catching up and developing solutions "around where the requirements have landed." Updates to stress testing requirements continue, with U.S. banks now having to consider the Basel III capital rules, and as a result, "the need for investment in stress testing-related technology is universal across all firms."

In general, stress testing entails conducting forecasts for credit risk management and capital planning, and should be tailored to reflect a bank's unique vulnerabilities to economic factors that affect exposure and risks. Thus, it is critical that banks work with technology -- in some instances, highly specialized technology -- that can address specific stress-test needs as well as overall risk management efforts.

Choosing what works, tailored to a specific institution's business mix and characteristics and its ability to aggregate and integrate the necessary data and technology, can be daunting, as was covered in two previous www.garp.org articles: Stress Testing and Technology Stress and Stress Testing Solutions: The Supply and Demand.

Conversations with representatives from three companies now in the middle of the fray provide more insight.

Translating Policy into Analytics

Trepp LLC, in business since 1979 and named for its founder, has long been known as a provider of data, analytics and technology to the commercial mortgage-backed securities and commercial real estate markets. In 2010, Trepp acquired Foresight Analytics, providing entrée into the banking sector. Foresight had a team of analysts and programmers led by Matt Anderson, who is now lead architect of Trepp's banking models.

According to Manus Clancy, senior managing director at New York-based Trepp, the firm developed its own capital-adequacy stress testing module -- within the Trepp Bank Navigator product -- in early 2012, soon after results were reported for the top 19 banks. The module is not sold separately and is part of the firm's risk management platform for banks.

"In 2012, with the release of specifics about macroeconomic-variable and capital-ratio targets, we pivoted to make our stress testing models tightly correspond to the regulator guidance," says Clancy. As a matter of course, Trepp meets regularly with the Federal Reserve, other regulatory agencies and congressional staff to stay up to date.

Says Clancy, "We aim to maintain the model to be compliant with current regulations, so clients don't have that burden year after year."

The platform utilizes 500 separate algorithms and calculations for forecasting income statement, balance sheet, loan losses and capital ratios for the three Dodd-Frank mandated scenarios. Banks can also enter their own assumptions or micro-economic scenarios and create "break the bank" scenarios.

For banks that need more granular commercial real estate or multifamily data to calibrate their own internal models or to create a bottom-up model, Trepp has over 15 years of loan-by-loan CRE/multifamily data, consisting of more than 100,000 assets and 250 pieces of data per loan including updated net operating incomes, debt service coverage ratiosand loss data.

The stress testing code is delivered to clients over the Web; it runs on Microsoft SQL Server technology. Clancy says Trepp always tries to build flexibility into its products to allow customization and experimentation by clients.

Clancy says banks in the $5 billion to $50 billion-asset range are "our sweet spot." While Trepp is a technology, and not a consulting, company, its customer support team often becomes consultant-like in the face of stress testing's challenges and complexities.

"To some degree, we feel like SAT prep guys," Clancy says. "It's part of the value-added support of our product."

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He notes that regulators retain the right to adjust and update stress test scenarios, looking to replace one each year, with what is deemed the most immediate risk. Such a replacement would be a flow-through on the Trepp system, Clancy says, adding, "We have been telling our clients for some time to think about a deflationary scenario, and they have taken our advice to heart."

Open-Source Provider and Partner

OpenGamma, founded in 2009 with offices in London and New York, is a venture-capital-backed company funded in part by interdealer brokerage ICAP. It calls its product the first open-source analytics and risk management platform for the financial services industry.

OpenGamma Platform 2.0, launched in July, offers advanced stress testing capabilities for banks and other institutions to meet Dodd-Frank, EMIR (European Market Infrastructure Regulation) and Basel requirements. The company also announced a partnership with Risk Focus, a consultancy that specializes in building out and integrating risk management infrastructures, to assist banks of all sizes with their stress testing efforts.

"The real value-add of the OpenGamma open source platform comes for those banks active in the derivatives space," says OpenGamma chief executive Mas Nakachi. "A lot of risk at banks has been moving from their balance sheets to central counterparty balance sheets, and as a result, the regulators want more transparent ways of managing these [derivatives-related] risks."

Brian Lynch, CEO ofNew York-based Risk Focus, says the OpenGamma platform can be particularly helpful because "stress testing is an extremely fluid, dynamic environment; it's not like VAR [value-at-risk] where you establish rules and produce reports."

OpenGamma offers the ability to move with the market and quickly add new risk engines into a stress ecosystem or to make changes to specific parts of the stress framework dynamically, Lynch explains. "Configuring such rules in a legacy, monolithic platform is just not going to be as fast or flexible," he says, noting that his target market is customers who aim for a high level of customization in their stress testing environment.

Lynch also likes the open-source analytics libraries that OpenGamma provides to customers. They represent a comprehensive set of analytics related to credit, equities, fixed income and foreign exchange, across cash and derivative asset classes. Banks can leverage the libraries as a whole, or choose components to complement or replace internal or third-party models.

"They've invested heavily in their analytics library, so those banks and smaller players who may not have access to their own can quickly access such data and then apply it to their stress test scenarios," Lynch says.

A Catalogue of Solutions and Bespoke Work

Moody's Analytics, a unit of New York-based Moody's Corp., lists 26 different solutions comprising its stress testing offering.

Among the long list are Scenario Analyzer, a tool to coordinate stress testing across the enterprise; RiskAuthority, which delivers regulatory capital calculations and management for Basel I, II and III, including the risk-weighted asset calculations required for CCAR (Comprehensive Capital Analysis and Review) reporting; RiskCalc Plus, offering stress-test modeling for evaluating U.S. private-firm commercial and industrial loan portfolios across regions and industries; and Structured Finance Data, which offers loan, pool and bond level performance data for RMBS, CMBS, ABS and CDOs, for bottom-up mortgage stress testing model creation and calibration.

Moody's Analytics says it provides end-to-end stress testing solutions, including advice on regulatory reform; advisory services to help banks develop a stress testing roadmap; data sets for credit, economic and financial risk; and off-the-shelf and customized models to calculate the impact of macroeconomic, event-driven and institution-specific scenarios to estimate credit losses across asset classes and forecast P&L. It also has an advisory service to help document methodologies and assumptions required to generate templates, as required by regulators.

According to Tom Day, senior director, regulatory and risk solutions, Moody's Analytics is spending a lot of time helping banks orchestrate the business process management piece of the stress testing exercise, providing solutions to help with scenarios and populating them with proper inputs so that scenario data is consistent across all models.

"For the top 18 banks, the Fed wants not just the use of reference data, but also a bank's own internal data, so we do a lot of collaboration with clients, particularly if there is not enough data history or if they have not maintained the right data sets," Day says.

He adds that the firm is spending a lot of time improving credit models and doing a lot of bespoke work in credit risk. He also observes that for many banks, marrying risk data with financial data is a real challenge, and so, his team has been assisting in those efforts.

Moody's Analytics product manager Mehna Raissi notes that some clients "are starting to include stress testing in their underwriting process, not just focusing on the regulatory requirements, and are using stress testing as a best practice in their risk management efforts."

Day adds that even as banks are saddled with compliance requirements, they are asking, "How can we put all these models and scenarios to practical business use."

Most clients of the Moody's Analytics stress-testing platform are in the $50 billion-asset and up bracket, but the level of interest at banks between $10 billion and $50 billion "has gone through the roof." He anticipates more growth in that segment as well as expansion into more global markets.

Too Much Rigidity?

For many, the hope is that stress testing and related technology will yield positive, strategically beneficial byproducts and innovative thinking about risk assessment.

Til Schuermann, a former senior vice president at the Federal Reserve Bank of New York and now a partner in Oliver Wyman Group's financial services practice, calls for closer examination. In a March 19, 2013 *Wall Street Journal* article, Schuermann said that given the emphasis on the Fed's models, banks have been preoccupied with replicating the central bank's results, rather than tracing out their own risk profiles. Schuermann fears this poses a serious risk to the overall financial system.

"The incentives to get close to the Fed's numbers are powerful enough to stifle genuine creativity, imagination and innovation by risk managers and their modelers," Schuermann wrote. "Deviating from standard industry practice is now increasingly viewed with suspicion and often discouraged by bank regulators." He warned that "by discouraging innovation in risk models, we risk sowing the seeds of our next systemic crisis."

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