The Bank of England 2017 stress test: A catalyst for more efficient stress testing

The Authors

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Abstract

On 27 March the Bank of England published the details of the scenarios for this fourth annual stress test. Clearly this year's test is not just a routine annual process; the Biennial Exploratory Scenario (BES) and the incorporation of IFRS 9 serve to make this test more operationally challenging and will test the UK banking sector's resilience in new ways.

This year banks are expected to run the usual 'Annual Cyclical Scenario' (ACS) and the baseline scenario, but also:

• Ascertain the impact of IFRS 9 on 'day 1' of implementation and, if possible, forecast the impact of ECL accounting during each year of the stress period; and

• Conduct a separate 10 year stress test using the BES to evaluate the impact on their business and the actions they will take to remain viable when faced with severe drags on profitability from persistent slow global economic growth and low/zero interest rates, increased competition, conduct and compliance costs and significant investment in infrastructure.

Now that the starting pistol has fired, all of the firms subject to this year's stress test will go into execution mode. However given the challenges ahead and the game-changing nature of this year's test, an eye on future enhancements to improve efficiency would be useful. Three such enhancements are explored here.

1) Better integration of stress testing with the corporate planning process

Compared to the ACS, the BES feels much more like an extended corporate planning exercise. The BoE has said that its purpose is not to test the adequacy of capital in the short term against a sharp severe scenario; but rather to test the impact on banks' businesses and the actions management might take to sustain its viability over a prolonged period.

To accomplish this, the BES extrapolates trends already occurring in today's environment over its 10-year horizon. Therefore these are trends that banks should be considering in devising and testing their corporate plans.

Many banks are already working on aligning their planning and stress testing processes. Those that have started have likely not yet fully realised the benefits yet (possibly because they are still running on fragmented / disparate systems) and others are often running parallel process in separate functions using different systems with inconsistent governance.

Given the direction the BoE has taken with the stress test, if ever there was a time to merge the two processes, it is now. Enterprise Planning Management (EPM) tools can create an ideal platform to conduct the following tasks, which are common to both stress testing and corporate planning:

• Generation/expansion of driver based scenario variable sets;

• Modelling business assumptions based on these variables;

• Defining data models and dimension hierarchies;

• Automating interfaces from ERP and other source systems;

• Creating projections iterations, rolling forecasts, what-if analyses (or integrate with other models such as credit losses);

• Aggregation and consolation of forecasts;

• Process and work-flow for analysis, review and challenge; and

• Creation of data submission templates and formal reports.

2) A more dynamic approach to modelling

Banks' stress testing models continue to mature and develop but continue to be an area of sharp focus by the BoE. The recent PRA letter to heads of stress testing dealing with stress test model management is a helpful piece of guidance. But while primary stress testing models continue to be fine-tuned, banks should continue to explore alternative models that can:

- be used as challengers;
- enable quick what-if analysis (for example to quickly ascertain the impact of assumption changes or management actions); and
- form a top-down view of the high level impact on the entire business (or division/geography) of a given scenario.

Open source modelling platforms such as Python or Julia have become viable alternatives the creation of models to facilitate the above analysis. This has the advantage of being quick and inexpensive to develop, flexible, transparent and auditable. In a complex, multi-scenario stress test, this type of modelling can act as a quick and efficient way to generate or test stress test results.

3) Exploring automation technologies

While all banks subject to the BoE stress test have improved their internal processes considerably since the first exercise in 2014, few have fundamentally overhauled the process from an efficiency point of view. Highly manual intensive and time-consuming processes still abound.

Robotic Process Automation (RPA) is one way to do this. RPA uses software 'robots' to automate large parts of stress testing execution including extracting, preparing, transforming, loading and running calculations, communicating results and performing analysis (and iterating this over and over again).

RPA can be implemented (quickly) on top of existing systems architecture. It is also easy to configure (by users), flexible, accurate and well controlled. RPA has moved beyond proof-of-concept and stress testing presents a perfect use-case for implementing this technology and reaping the benefits.

A further, possibly less revolutionary, way to drive efficiencies in the stress testing process is through the use of more sophisticated workflow management tools. Some vendor packages have this functionality embedded, but there are other cost-efficient ways to develop bespoke workflow tools, including using the MS SharePoint platform to create a tool that facilitates management of data handovers, RAID logs, attestation and sign-off, audit trail of evidence and document storage, team communication and reporting.

In conclusion, put this all together, and what banks should be striving for in this world of multiple, more complex stress tests, is a capability that: integrates the stress test with the corporate plan; brings both onto a common technology platform; uses models in a more dynamic way; and combines process automation with smarter, more controlled work-flow. This is the stress testing process of the (hopefully near) future.

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