

Regulators need increased visibility of capital adequacy of banks under stressed scenarios.

As part of a scenario testing exercise they need the ability to assess the projected stress results submitted by regulated firms, and take a view on how the capital model has been projected, which means having the calculation capability within the regulator's capital model.

The regulator must then take a view on the impairment modelling and may want to feed in results from their own models.

## Manage risk stream modelling

Taking a view on impairment modelling does not mean that every risk has to independently modelled at the regulator. By controlling the process from the capital model, a mixture of independent modelling and benchmarking across firms can chosen, which also allows the amount of regulatory effort to be controlled and targeted at the most material risks.

## Model the effects of management actions

Having come to a view of the capital under stress scenarios regulators then want the ability to examine the effects of the management actions in the capital plan available to the firm to see which ones are plausible to allow in the stress scenarios.

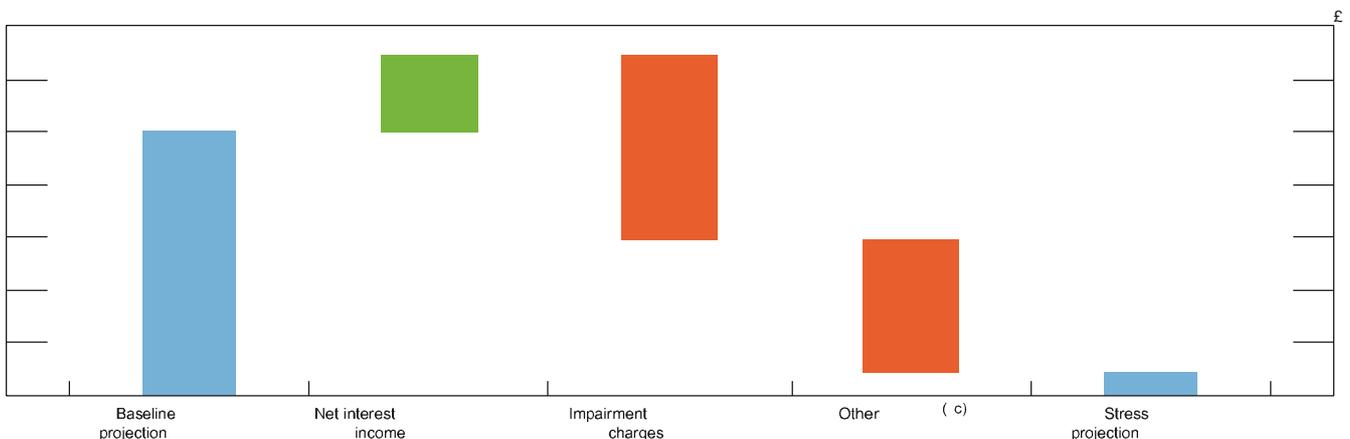
## Produce reports

By building the stressed capital model in a structured way we can speed up the process, manage the complexity and allow the data to be

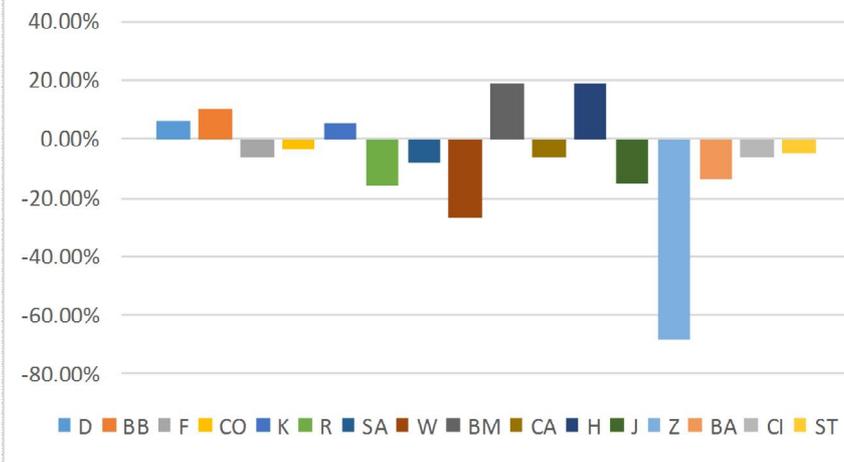
*“Supervisors should make regular and comprehensive assessments of a bank’s stress testing programme ...”*

*BCBS 155 Principles for sound stress testing practices and supervision, principle 16*

BCBS



% Difference between firm and FED Tier 1 Capital ratio in 2015 DFAST



## Taking a view on projection results

A key decision in designing a stress testing regime is in how much of a view the regulator takes versus relying on the projections calculated and submitted by the banks.

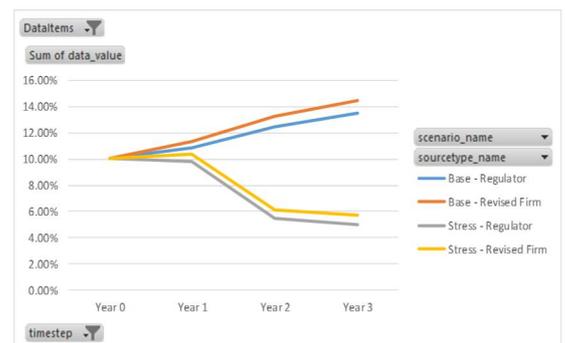
The box opposite shows the variations between the firm results and the view taken by the US FED for the 2015 Dodd Frank Stress Tests (DFAST) showing the risk of variability if only the results from the banks are used.

## Our Solution

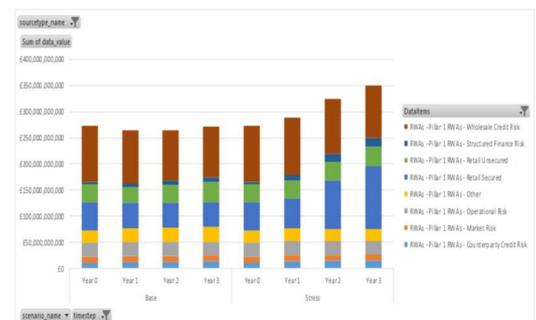
### Capital Tool Functionality

Our Capital Tool gives regulators the capability to:

- define a configuration template capital model in terms of line items in submodels and to link them together with the appropriate calculations;
- define informal submodels to perform checks and reconciliations;
- map bank submitted projection results through the configuration template into the tool to create a capital model for the firm;
- provide a workflow for own assessments by the regulators on a risk-by-risk basis to be fed into the model in the own assessment part of the model;
- bring together bank results, modified bank results and regulators' own assessments to be viewed side by side for base and stress scenarios;
- define an "impact" submodel to see the effect of risk-by-risk impairments/losses on key capital ratios;
- turn on and off individual management actions and see their effect on the capital model by building a "Management Actions" version of the model;
- export the resulting capital model into reporting tools for presentation;
- allow access to be controlled for particular firms or functions with flexible role-based permissioning;
- use the optional sensitivity module to analyse the effects of a range of impairments results from the risk streams.



Example CET1 ratio in Base and Stress



Example RWA in Base and Stress

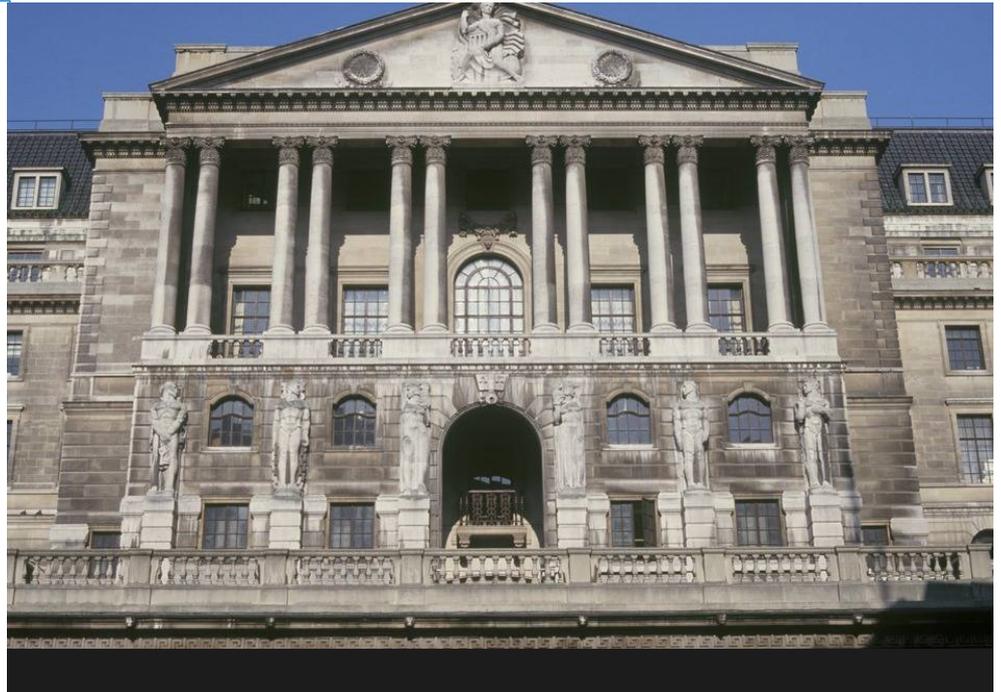
## Asset Quality Reviews and workflow

An overall stress testing process may also incorporate asset quality reviews (AQR) and regulators' own impairment modelling.

Regulators need a workflow to feed the results of the AQR and their own view of impairments into the capital model.

An important lesson learned in building these systems for the UK was finding the Capital Modelling Tool to be key in bringing structure to the overall process.

It was the mechanism that brought all of the results together and allowed a clear picture of the sensitivities and the overall results.



## Benefits

Ben Bernanke said in 2013 “One of the most important aspects of regular stress testing is that it forces banks (and their supervisors) to develop the capacity to quickly and accurately assess the enterprise-wide exposures of their institutions to diverse risks, and to use that information routinely to help ensure that they maintain adequate capital and liquidity”.

Our tool will provide regulators with the confidence they need that a structured and consistent assessment of stress testing has been carried out on a timely basis. This will give them a robust means of understanding the vulnerabilities of specific banks enabling the implementation of remedial actions to ensure the stability of their financial system.

## Regulatory Actions

With the capital ratios modelled under the scenarios the regulators can then take actions in terms of setting appropriate capital buffers and discussing capital plan actions such as dividend distributions with the banks, and deciding what to disclose publically.

# About Analytic Risk Technology

Analytic Risk Technology can provide deep experience in building the stress test business process and governance as well as implementation of the supporting systems.

## Experience

The picture of regulatory practice for stress testing and the systems required to support it are still emerging. Our CEO, Timothy Murnaghan, played a leading role in building these systems of the UK regulators first at the FSA and then the PRA/Bank of England. The practice that is emerging is one which is gaining critical respect in terms of being thorough and credible, while at the same time being pragmatic in not requiring huge resources at the regulator.

Thanks to this experience, we are able to provide not only the platform for capital modelling but also implementation, quantitative modelling and ongoing support.

## Contact Us

Give us a call for more information about our services and products

### Analytic Risk Technology

+44 79 56 55 51 16

[info@analyticrisktechnology.co.uk](mailto:info@analyticrisktechnology.co.uk)

Visit us on the web at  
[www.analyticrisktechnology.co.uk](http://www.analyticrisktechnology.co.uk)

**Analytic Risk Technology**  
London  
EC2Y 8BN