Model Risk Management Principles for stress testing

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Model Risk Management – stress testing

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Introduction

• Rapid increase in quantity of data and computing power lead to improvements in risk modelling and the use of automatic decision making.

• Data are useful information to support decisions, but there is no guarantee that the outcomes are correct.

• While the use of models undoubtedly improve the way decisions are made, it comes at a potential cost …

the risk of an economic loss due to the misuse or incorrect use of model results for strategic business decisions.
Model Risk – regulatory responses

- Historically, model risk led to significant losses:
  - The London whale
  - Scholes & Merton’s hedge fund
  - The 2007 subprime crisis
Importance of managing model risk for stress testing

• Stress testing is an important risk management & supervisory tool

• Banks
  – Balance sheet vulnerabilities
  – Strategic business decisions
  – Internal buffers and profit distributions

• Regulators
  – Test resilience of the system
  – Micro and macro-prudential requirements
Review of banks’ stress testing frameworks

• Managing of stress test model risk lags
  – BAU models
  – Improvements in other areas of stress testing frameworks

• The better performing banks
  – Model development standards
  – Clear & well-documented frameworks / policies
  – Robust inventories & strong independent review capabilities

• Challenges
  – Scope and coverage
  – Documentation
  – Engagement with senior management and board
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Model risk management principles for stress testing

- Principle 1 – Banks have an established definition of a model and maintain a model inventory.

- Principle 2 – Banks have implemented an effective governance framework, policies, procedures and controls to manage their model risk.

- Principle 3 – Banks have implemented a robust model development and implementation process, and ensure appropriate use of models.

- Principle 4 – Banks undertake appropriate model validation and independent review activities to ensure sound model performance and greater understanding of model uncertainties.
Concluding remarks

An effective model risk management framework is …

*an integrated and iterative process supported by a strong governance culture*
We should keep challenging ourselves

• How do you present model risk to your board?

• Is there value in formalising the principles for all models?

• How do you quantify the impact of model risk?