Supervisory Review of Performance Monitoring
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What Is Performance Monitoring (PM)?

- Broadly speaking, performance monitoring is the task of assessing the quality of a quantitative or qualitative approach to confirm it is functioning as intended
  - The idea is that a firm should provide evidence to justify the ongoing use of a chosen approach – “burden of proof”
  - PM has different elements, including outcomes testing, sensitivity analysis, and benchmarking
  - PM should differ based on type of approach and how it is used
  - Performance should be assessed during development, during implementation, and over time (esp. when changes occur)
  - Generally, no single test or measure captures performance alone – but one poor result could disqualify an approach’s use
  - Overall, firms should present a good case to senior mgmt as to why an approach is suitable and worth using
    - But also where it has limitations and uncertainties
PM for Capital Planning & Stress Testing

- Firms’ capital planning efforts are intended to assess impact in various conditions & circumstances, including stressful ones

- PM for capital planning presents some particular challenges
  - Paucity of realized outcomes against which to test projections
  - Much more difficult to conduct out-of-sample/time testing
  - Scenario conditions driving outcomes usually not observed
  - Structural changes and regime shifts can occur
  - Often need to “triangulate” using more than one method

- Thus, greater caution warranted in PM for capital planning
  - Might involve more focus on qualitative information, such as key assumptions used or data constraints
  - Often higher uncertainty and lower confidence in PM outcomes
  - Be wary of test results that appear too positive!
Range of Practice for Overall PM

- **Weaker practices in overall PM include:**
  - Weak internal standards for comprehensive PM
  - PM policies and standards are sound, but not always followed
  - Internal standards do not call for ongoing and updated PM
  - Qualitative approaches not subject to same PM rigor
  - Independent review groups do not review PM with critical eye

- **Better practices in overall PM include:**
  - Take a holistic view of PM, reviewing all relevant information to render a judgment on the quality of the approach
  - Greater application of sensitivity analysis and benchmarking when “traditional” testing is less reliable or incomplete
  - Established standards for which tests/measures are best applied to which types of models
  - Ex ante thresholds for good/mediocre/bad test outcomes against which ongoing results are evaluated
  - Appropriate caveats used to describe uncertainty in output
Range of Practice for Sensitivity Analysis

- Weaker practices for sensitivity analysis include:
  - Do not analyze sensitivity to key assumptions
  - Do not apply sensitivity analysis to qualitative approaches
  - Only “top-line” analysis is conducted, not of component pieces
  - No action taken on questionable sensitivity analysis outcomes

- Better practices for sensitivity analysis include:
  - Both technical modeling and business assumptions are analyzed
  - Combine sensitivity analysis for a set of approaches to determine collective impact on portfolio or set of exposures
  - Extra sensitivity analysis conducted for vendor models
  - Conduct analysis on multiple variables at once to see interactions
  - Sensitivity analysis helps confirm conservatism of approach
  - Ongoing sensitivity analysis (not just during development)
  - Summarize sensitivity analysis into succinct, coherent reports for management that isolate key vulnerabilities
Range of Practice for Benchmarking

- Benchmarking practices should **supplement** overall PM, not meant to crowd out other activities or to be main source of PM

- **Weaker practices for benchmarking include:**
  - Internal standards do not list benchmarking as an expectation
  - Benchmarking is not applied where most needed
  - When benchmark methodologies (BMMs) used to influence estimates, not subject to review or broader MRM standards
  - Benchmarking developed just to “check the box” – not really used

- **Better practices for benchmarking include:**
  - Prioritization for application of benchmarking, including BMMs
  - Benchmarking uses a different approach (data, methodology, etc)
  - Different BMM types used (challenger, confirming, qualitative)
  - Benchmarking output combined with other PM to develop overall perspective on quality of estimates(12,13),(987,979)