Trading and counterparty risk for CCAR

Current status and possible future extensions

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Overview

• Supervisory Scenario for CCAR Market Risk covers potential losses in trading positions and private equity positions

• Stress test approach consists of models for mark-to-market losses and jump-to-default risk
  – Mark-to-Market losses consist of:
    • trading position losses
    • CVA losses for derivatives counterparties
  – Currently, losses from jump-to-default risk consist of:
    • incremental default risk for derivatives counterparties
    • incremental default risk for credit instruments

• Supervisory stress tests includes Adverse case and Severely Adverse case, but we won’t focus on that distinction here

• Today’s discussion will focus mostly on trading position losses
Current CCAR Market Risk Scenario

• Common scenarios used across all firms subject to Trading Book scenario
  – Some positions, including private equities and securitized products, face fixed price declines, depending on risk characteristics of positions
  – Other positions, including index positions, face fixed percentage declines
  – Derivatives positions are captured via a risk factor representation
    • Many thousands of risk factors are defined by supervisors
    • Banks report P&L effects of changes in these risk factors via ‘Greeks’ (deltas-gammas-vegas), P&L vectors (P&L effects of an index up or down 5%, 10%, 25%, and 50%), or P&L grids (P&L effects of various combinations of spot and volatility shocks)
  – Supervisors value banks’ positions at today’s levels and at Supervisor-determined shocked levels, and the aggregate P&L Effect of the Trading Book shock is the difference between these valuation levels
Advantages of Current CCAR Market Risk Scenario

• Trading Book stress test is transparent, as risk factors are explicitly identified and sizes of shocks are widely known
  – Little risk of mis-interpretation of what is being sought in the Supervisory Stress Scenarios

• Scenario is consistently applied across in-scope firms, therefore allowing cross-firm comparisons
  – BHC scenario results lack this cross-firm comparability

• Framework is flexible to allow for multiple scenarios (multiple sets of shocks) for each bank’s submission
Potential Drawbacks and Limitations of Current CCAR Market Risk Scenario

• Use of common scenarios across firms suggests scenarios are not tailored to individual firms’ positioning or exposures

• Market risk shocks are instantaneously applied
  – Timing is inconsistent with the nine-quarter path laid out for the macro scenario
  – Application of instantaneous shocks does not allow for dynamics of management behavior or market liquidity under stress

• Market risk shock sizes are not necessarily scaled to be consistent with the severity of the macro shock

• Basis risks at more granular levels than provided by the risk factor specification are not captured
  – Not clear there are outsized losses in spread trades relative to large directional positions in traded credit, structured products, or private equity
Considerations for Future CCAR Market Risk Scenarios

• Extend stress scenarios to different states of the world
  – Deviations from 2H2008
    • Choose multiple stress scenarios?
    • Layer on variations – rising rate scenarios? geographical stresses? product specific stresses? counterparty level stresses?

• Change structure of data collection
  – Design to maintain an internally coherent structure
  – Structure to allow for ‘top-down’ scenario development
    • Currently difficult, with so many thousands of risk factors
  – Structure must be credible to all stakeholders
    • Historical scenarios are more inherently credible than hypothetical scenarios, no matter how carefully crafted

• Use of Supervisory reverse stress testing?
  – Are the results of a reverse stress test “actionable” by Supervisors?
Additional Analysis for CCAR Market Risk Scenarios

• Benchmark portfolio analysis can evaluate level of variability across firms in estimating values and price sensitivities
  – Is the goal of cross-firm comparability being undermined by variations due to differences in firms’ valuation and risk models?
  – How granular should such benchmark portfolios be?

• Robust independent supervisory modeling of trading book positions would augment the supervisory challenge of firm-specific and common industry trading models

• Sometimes unclear how qualitative supervisory assessments of firms’ CCAR processes should best be translated into quantitative effect on loss estimates
Questions?