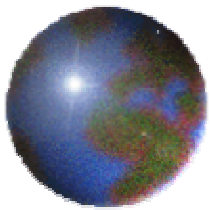

Quantitative Impact Study – 4
Preliminary Results
AMA Framework

Mark L. O'Dell
Deputy Comptroller, Operational Risk
Comptroller of the Currency

QIS-4 Preliminary Results

- Background
- Progress being made
- Risk Quantification Methodologies Vary
- Significant Challenges Remain
- Next Steps

QIS-4 Caveat…

The analysis that follows is from the data received from QIS4 submissions. The conclusions on based on our preliminary analysis. Caution should be exercised in the use of the data and conclusions.

Background

- QIS-4 Goals
  - Understand how the Basel II AMA framework affects the industry and each bank
  - Inform NPR (and ANPR) and future international discussions

Background

- 26 institutions participated
  - About 20 of these institutions participated in QIS-3
- Participation on a voluntary, best-efforts basis

QIS4 Storyline…

- Progress is being made in developing and implementing AMA Frameworks.
- Risk quantification methodologies vary, significantly in many cases.
- Significant bank and supervisory challenges remain in building credible AMA frameworks.

Progress is being made…

- An increasing number of institutions have working AMA models.
  - Benchmarking review - only 4 or 5 institutions had working models
    - All first generation
    - None fully robust
  - QIS4 – 6 months after benchmarking, over half institutions have working AMA frameworks
    - Several banks are refining existing models
    - More robust, but none that fully meet ANPR standards

Progress is being made…

- Convergence toward LDA methodology
  - Over half of all participating banks use some form of LDA methodology,
  - But all approaches are unique
- Majority of institutions submitted data on EL+UL basis. However…
  - About half with working AMA frameworks provided a specific EL breakout, as requested.
  - Answers on questions regarding support of EL offsets limited and not very useful.

Risk quantification varies…..

- General observations:
  - Significance/weighting of four elements (internal data, external data, scenario analysis and BE&ICF) varies
  - No convergence on the ‘unit of measure’ – the granularity of risk quantification
  - Wide dispersion of the magnitude of capital adjustments (EL, diversification, risk mitigants)

Risk quantification varies…..

- Use of the four elements:
  - Internal data:
    - Most prominent direct input for over half of banks with working AMA frameworks
  - External data is being used by most banks
    - Sources: vendor or consortium supplied
    - Direct input for half of the banks
    - Indirect input of about a third of the banks with working AMA frameworks
    - Common use – supplementing internal data at LOB or loss event type level

Risk quantification varies…..

- Use of the four elements:
  - Scenario Analysis
    - Most significant input for over a third of the banks with working AMA frameworks
    - Significant driver of operational risk capital charge for at least a quarter of banks with working AMA frameworks
  - BE&ICF
    - Only half of the banks with working AMA frameworks, have developed processes to incorporate BE&ICFs
    - Of those, most use BE&ICF as qualitative adjustment in allocating capital to LOB or to business units

Risk quantification varies…..

- Unit of measure:
  - Several banks submitted only ‘top of the house’ capital computations
  - The other computed capital at LOB or loss event type level
    - Level of granularity varied significantly
    - Unit of measure ranged from 1 to over 100

Risk quantification varies…..

- EL:
  - Less than half of the banks with working AMA frameworks provided specific estimates of EL. We used LDCE data to help estimate EL for the remaining banks
  - EL is a significant number for many banks

Risk quantification varies…..

- Diversification:
  - Over half banks assumed zero correlation across LOB and loss event types
  - On average, diversification averaged 33% of undiversified capital
  - There is a range of diversification benefits

Risk quantification varies…..

- Risk Mitigation:
  - Approximately half of the banks estimated risk mitigation (insurance) in some manner
    - Most did on ex-post basis, not embedding effects of insurance into their capital model
  - Given the approaches taken, comparisons of relative impact of risk mitigants cannot be made

Significant challenges remain…

- Not all banks employ all four elements of the AMA framework
  - Scenario analysis and BE&ICFs least used elements
  - When used, scenario analysis has significant affect on resulting capital
- Capital numbers submitted have some variation

Significant challenges remain…

- There are significant technical variations in approach.
  - Do they matter?
  - If they do, does the variation affect the quality or integrity of the bank's AMA framework?
  - Is there a better way to evaluate the AMA framework and resulting capital numbers than by scaling by assets, existing capital, or gross income?

Next Steps

- Work to better understand differences and variations in models and capital results
- Monitor industry efforts with respect to:
  - EL and support of EL offsets
  - Use of risk mitigants
  - Correlation/diversification

Next Steps

- Provide QIS feedback to participating banks
- Address outstanding regulatory issue
  - EL/UL
  - Unit of measure