Operational Risk Management and Scenario Analysis

July 18, 2006

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1. Importance of Scenario Analysis in Op Risk Management

- New trend of op risk management → Capturing and managing op risk profile based on loss data and their statistical analysis as like the case of other risk categories

  but……

- Data tend to be too few to be analyzed statistically for following reasons
  - Short history of op risk loss data collection for risk quantification purpose
  - The op risk environment surrounding banks has been changing constantly
  - Life is too short to see the occurrence of low frequency but high severity and thus quite important losses

- Besides collected data for op risk management, however, we have plenty of experience on op risk losses, which have not necessarily been documented or recorded as data but surely memorized as part of human history

  → Importance of "scenario analysis"

2. Challenge to God's Wisdom

- Only God knows the future loss information required for op risk management (What will happen from now to 1000 years later.)

- However, we might observe a certain cycle or pattern in past data occurrence → if these cycles or patterns are repeated, then we might see a part of future world of operational risk losses.
- Who can do this…
  - Scientists
  - Experts
  - Others (prophet?)

- How to use above information for operational risk management

3. Awareness of Human Limits

- Although human capacity of imagination is great….
- The scenario events which can be used for op risk management should have a certain probability and also be manageable enough for banks to have some incentives to reduce their probability or impacts.
  - For example…
  - In 2200 Geological sinking of Japan archipelago
  - In 2300 Earth downfall by Mars attack
- Although their possibilities can not be said zero, we have no idea of managing their causing losses (at least at this moment).
- How about big earthquakes?

  →we cannot stop the happening of earthquakes but can manage their impacts in some ways (e.g. through construction of backup center and BCP)
- Use of scenario analysis →sometimes helpful in minimizing moral hazard such as ignoring any counter-measures against severe loss events only because they looks “extreme case.”

4. Issues of Scenario Analysis for Op Risk Quantification

- To ensure level playing field, it is important to share the similar view of the "op risk world" between banks from the following perspectives.
- Comprehensiveness
  - Loss events due to external (extra-human society) factors
  - Loss events due to social factors
  - Loss events due to internal factors
- Hypothesis of frequency and severity of losses
  - How to collect information (from experts including staff and scientists, etc.)
  - How to use the information they have collected
- Through discussion among banks and research works, we would better build some consensus regarding "the op risk world" that risk management sections have to manage through scenario analysis.

5. Potentiality of Scenario Analysis

- Scenario analysis of op risk management can be seen as a pioneering work in some senses
  - Scenario analysis of credit and market risk management are so far limited to complementary tools rather than main tools of risk quantification → many subjective stories but not beyond
- The idea of scenario analysis that *knowledge based on experience is converted into more objective data and is used for risk quantification* could apply to wider area
- If developing further all these techniques, banks might be a future leading industry of operational risk management area, in which every industries should have some interests.