Validation of Credit Rating and Scoring Models: Panel Discussion

Kesav T Kesavan

Consumer Risk Modeling and Analytics

Consumer Risk Management

Chase Bank

February 2-3, 2006

Validation is integral part of model development process

- At Chase Bank, **Model risk is governed through Consumer Risk (Model) Policy**
  - Model Specialist – Internal oversight and independent evaluation
  - Ownership for validation separated from model developers
  - Documentation requirements integral part of model approval process
  - Accountability

- **Validation as integral part of model development (Dennis Glenn and Mitchell Stengal)**
  - Kick-off meeting : Model purpose, Implementation and Validation process
  - Data review : Development, Validation and Benchmark samples
  - Model robustness evaluated across development and validation (out-of-time) samples
    - K-S, ROC (C- Stat), % bad captured
  - Validation of proposed segmentation schemes

- **Evaluating Forecast Performance (Erik Larson)**
  - Increased focus on both discriminatory power and forecasting effectiveness
  - Goodness of fit statistic: HL or Modified HL Test
    - Also useful to evaluate value of alternative segmentation schemes
  - AVM models : how do we validate their accuracy and precision?

Proactively Manage Model Risk…
---Process verification – Mike Carhill
---Benchmarking (Nazmul Hasan)

- ## We have deployed a Model Monitoring System for model tracking and validation

  - Modelers work closely with testing and implementation team to insure integrity of data and model algorithms

  - Credit score models scaled based on *benchmark sample* that best reflects future

  - Dynamic reporting with drill down capabilities

    - Early Warning

    - Population Stability and Characteristics Analysis Performance reports

  - KS statistic may not be a good indicator to measure the strength of a single score over time

    - We also focus on PDO and Odds (or bad rate) at reference score

  - Has become an effective management tool beyond just scorecard validation

    - Model inventory

    - Model management

    - Understand score impact due to unexpected events

Challenges

- Investment
- Modeling Efficiency
  - Reduce model development cycle time without compromising quality and meeting all documentation/validation requirements.
- IT Resource Prioritization
- Structural Changes
  - Market expansion
  - Shifts in product/marketing strategy
- Fraud Model Tracking (low bad rate with high volume)