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Validating the Move from Incurred Loss to Expected Loss

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Your Presenter

JOHN P. HURLOCK is the President of **SMARTER** risk management. Before starting **SMARTER** risk management, John was the Director of Risk Management Consulting Services for Sheshunoff Consulting + Solutions.

John has over 30 years of experience in financial institutions. His first fifteen years were spent working for financial institutions of various size and complexity, and has spent the last fifteen plus years in the business consulting arena. During John's banking career, he worked in several areas of banking including credit, treasury services and operations.

During John's consulting career he has worked with domestic and international financial institutions ranging in size from the community bank market to a US$1 trillion international financial institution. He has assisted banks as they have worked through regulatory orders and issues and been heavily involved in the roll out of advanced risk analytics including risk-based capital, the Basel II Accord and stress testing.

John has spoken and presented courses throughout the United States, Europe, the Middle East and Africa. In 2008 he conducted a workshop in Moscow, presented a credit risk analytic course for 11 banks in the Middle East, he led an operational risk program in South Africa in addition to conducting Board of Directors corporate governance and risk management program for international banks.

John has an undergraduate degree in Economics and an MBA from the University of Wisconsin. He is currently an adjunct professor for Webster University, teaching in their MBA program. He teaches Investment, Capital Markets and Management. John has also authored several articles and white papers and is a sought after speaker at banking conferences.

Agenda

- Overview
- Model discussion
- Validation
- Validation components for CECL
- Conclusion

11 (or so) Quarters to CECL

- Early Adopters 12/31/18

By

- 12/31/16
  - Pick your process
  - Begin capturing data
- 12/31/17
  - Clean your data
  - Identify additional data for things like stress testing
- 12/31/18
  - Parallel Runs
  - Go live or wait a year

Assuming Nothing Else Gets in the Way…

- No mergers or acquisitions
- No personnel changes
- No financial crisis
- …..

Types of Models Currently in Use

- Asset Liability Management
- Liquidity Management
- **Capital Management**
- **Loan Rating (Dual Factor)**
- **Loan Underwriting**
- Loan Portfolio Management
- **Credit Concentration**
- **Stress Testing**
- **ALLL**
- **Anti-Money Laundering**
- Fraud
- Vendor Management
- Budgeting
- Investment Portfolio
- Mark to Market
- VaR
- Deposit Pricing
- **Compensation**
- Profitability
- Compliance
- Fair Lending
- Internal Audit
- Behavior Monitoring
- **DFAST**
- …
- …

Bold indicates models SRM has validated for financial institutions

What Could Go Wrong from Using a Model?

- A wrong decision based off of poor information
- The model and/or its results is used for something besides its intended business purpose
- Lack of trust in the output leads to a delayed decision
- Missing/Inaccurate information could lead to a surprise

Every Model is Wrong…

- Static view of a dynamic future
- Using history as the guide
- Along with internal experts

Model Requirements

- Statement of purpose on model's intended use
- Documented methodologies – assumptions, calculations, limitations
- Model integrity

Model Integrity

In order to properly address data integrity, it is important to provide proper definitions.

- **Data Integrity** – This refers to the core information (alpha numeric) that has been input. In other words, if a 6 is put in the system in the correct field requiring a value like 6, that 6 appears.
- **Transformation Integrity** – Refers to data that is changed, often through a math equation. So, if 6 times 2 equals 18, then the system is said to lack transformation integrity.
- **Information Integrity** – This refers to the end result. Problems often appear in this arena because of the complexity of the data sources or the lack of strategic planning in the report creation process.

Correlations

- ALLL Portfolios To
  - Losses – leading, concurrent, lagging
  - Market (systemic)
    - Leading, concurrent, lagging

- Incurred Loss versus Expected Loss (EL)

PD, EAD, LGD and EL

PD – The most important concept (it is when all of the work starts).

- Determined from underwriting and portfolio performance

EAD – How does your Line of Credit usage change as a customer goes toward default?

LGD – What do you get back after the loan defaults and you collect?

- Determined from collateral value. A focus of the regulators.

EL – Expected Loss = PD X EAD X LGD

Model Validation

Model Validation – Approach

Purpose	**The reason the model was employed including the intended use of the information extracted from the model.**
Inputs	Automated and manual inputs as well as documented and undocumented assumptions used to create the model including any compliance requirements.
Transformation	Formulas used to transform the data into information that may be used to manage the activity.
Outputs	The presentation of the information and the ability to interpret the results in a consistent fashion.

Overall

- Excel models are a challenge as Banks grow
- Lack of project plans for converting to software
- Over reliance on software vendors for knowledge
- Lack of transition plan to new model
- Accounting for acquired loans
- Lack of documented procedures

What is needed for CECL

From a Validation Perspective

Project Owner and Project Plan

- Project Owner Skills
  - From either credit or accounting
  - The ability to manage a project and the time to do it
    - Time passes far more quickly then we realize
- Project Plan
  - Purpose and support from Executive Management
  - Affected areas (IT, Operations, Credit, Accounting, Legal/Compliance)
  - Milestones (especially for a long project)
  - Reporting and Escalation

Validation Steps the Bank Should Take (right now)

- Validate your current model
- Correct issues that are identified
  - Poor support for Q factors
  - Lack of adequate grading system
  - Impaired loan management
  - Managing the file from the core
- Prepare transition documentation

Transition Documentation

- Current model
- Future model
- What is different?
- Can the results (between models) be compared and the reasons for the difference in values identified?

The Keys to Model Risk Management Are…

- Establish the materiality and criticality of the model.
- Define (formally) why the model was created (or purchased) and what the intended use of the model is (purpose) including if model results are used as inputs into another model.
- Determine how (and by who) the model is used in decision making and management (criticality).
- Document in order to determine likelihood of a negative event.
- Ensure IT standards are maintained.

Model Validation Requirements

- Should be completed by individuals not involved in development or use of the model, who have the required knowledge and skills.
- Validation should occur to create a baseline, when changes are made and more frequently if warranted.
- Key Elements of Comprehensive Validation:
  - Evaluation of conceptual soundness, including developmental evidence.
  - Ongoing monitoring, including process verification and benchmarking.
  - Outcomes analysis, including back-testing where warranted.

Data Is and Will Be An Issue

- Going from portfolio to loan level detail.
- Historical losses (especially if you have had acquisitions).
- Back testing to a good data set will be very helpful.
- Using data for stress testing and other management tools helps to keep the data clean.
- Do you have a data warehouse?
- Vendors can help with data discipline.
- Formally supporting your data decisions is very important.

Validation Summary

- Look at Asset Liability Management models as an example.
- Start planning now.
  - The quarters will pass quickly!
- It will be much more expensive to wait until the last minute.
  - There are limited resources who have experience with this type of modeling.
- Validate now, fix things, and then validate during the parallel run period.

Thank You!!

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