The Latest on FASB's CECL Model and How to Prepare.

May 12, 2016 | New Orleans

PRESENTED BY

Rob Ashbaugh
Senior Risk Management Consultant
Sageworks

About Sageworks.

BUSINESS PROCESS MANAGEMENT

Workflow

Workflow with Templates

CREDIT RISK MANAGEMENT

Credit Analysis (ETRR)

Credit Report Access

Risk Rating

Probability of Default Model

Loan Pricing

Loan Administration

Document Library

BUSINESS ANALYTICS

Management Reporting

Management Reporting with Templates

PORTFOLIO RISK MANAGEMENT

Risk Rating

TDR

ALLL

ALLL Forecasting

Stress Testing

Document Library

Financial Performance & ALLL Benchmarks

Loan Pricing

INTEGRATION | TRAINING | ADVISORY SERVICES

Disclaimer.

This presentation may include statements that constitute “forward-looking statements” relative to publicly available industry data. Forward-looking statements often contain words such as “believe,” “expect,” “plans,” “project,” “target,” “anticipate,” “will,” “should,” “see,” “guidance,” “confident” and similar terms. There can be no assurance that any of the future events discussed will occur as anticipated, if at all, or that actual results on the industry will be as expected. Sageworks is not responsible for the accuracy or validity of this publicly available industry data, or the outcome of the use of this data relative to business or investment decisions made by the recipients of this data. Sageworks disclaims all representations and warranties, express or implied. Risks and uncertainties include risks related to the effect of economic conditions and financial market conditions; fluctuation in commodity prices, interest rates and foreign currency exchange rates. No Sageworks employee is authorized to make recommendations or give advice as to any course of action that should be made as an outcome of this data. The forward-looking statements and data speak only as of the date of this presentation and we undertake no obligation to update or revise this information as of a later date.

Agenda.

- What is CECL?
- Timelines
- Scope of CECL Implementation
- Forming An Implementation Committee
- Factors to Consider
- Data Requirements
- Considering the Impact of Moving to a More Robust Calculation
- How to Prepare

What is CECL?

- FASB released proposal December 2012
- CECL = Current Expected Credit Loss
- What's changed from Incurred Loss Model?
  - » Forward-looking requirements
  - » "Probable loss" threshold removed
    - "No triggers, no thresholds" ("Fed Perspectives," 2015)
  - » Need for accessible, loan-level data
  - » Longer loss horizon
  - » Makes ALLL more institution-wide calculation
- Purpose: Quicker recognition of losses. Changes in ALLL reserve balances will reflect changes in credit quality and flow through bank earnings ("Fed Perspectives," 2015)

CECL Timeline.

December 20, 2012
FASB Proposes CECL Model

May 31, 2013
Comment period ended

July 24, 2014
IASB's IFRS 9 Financial Instruments

February 2015
Basel ECL guidance released

February 4, 2016
FASB Industry Roundtable

April 1, 2016
First TRG Meeting & Updated CECL Draft

June 2016
Expected release of CECL model

Feb. 4 FASB Industry Roundtable.

- Participants from FASB, ABA, ICBA, SEC, OCC, Fed, FDIC, NCUA + more than a dozen financial institutions from $145M to $1.1B
- ABA Participants were critical of the “life of loan” concept
- FASB Board Members emphasized ability of bankers to use their judgement, and bankers expressed concern over the documentation to support those judgements that auditors and regulators will be looking for
- Participants voiced a need for more definitions and better examples

CECL Transition Resource Group.

- Members announced on March 22nd:
  - » SVP, CFO of Jeanne D'Arc Credit Union | $1.1B in assets
  - » EVP of TD Bank | $246B
  - » VP, Chief Accountant at BMO Financial Group | $104B
  - » Director of Accounting Policy at Wells Fargo | $1.6T
  - » Managing Director at Citigroup | $1.3T
  - » SVP at First Niagara Bank | $39B
  - » CFO at Mission Federal Credit Union | $2.7B
  - » President, CEO at Standard Bank | $466M

- Also, representatives from:
  - » Allstate Insurance, KBW, PWC, Grant Thornton, Crowe Horwath, Deloitte, KPMG, EY

ABA vs. ICBA.

- Following recent updates to the CECL draft, ABA and ICBA perspectives differ

- ICBA:
  - » New proposal minimizes fears that complex models will be required
  - » James Kendrick, ICBA VP:
    FASB "working to understand the plight of small institutions"

- ABA:
  - » Still enormous data demands on smaller banks
  - » Michael Gullette, ABA VP: Revisions "did not really address what is needed to justify the costs of the new standard on small banks"
  - » Gullette remains concerned about CECL requiring a set of data banks don't currently maintain

CECL Implementation Timelines.

- New effective dates announced 4/27 by FASB:

SEC Filers

Public Business Entities that are Non-SEC Filers, including not-for-profit entities

Scope of CECL Implementation.

"CECL implementation is, in many ways, a project management challenge that will affect most parts of your business to one degree or another."
(["Fed Quarterly Conversations," 2015]())

"The CECL model represents the biggest change – ever – to bank accounting."
(["ABA Letter to the FASB - CECL," 2016]())

Operational

- IT Systems
- Vendor Management

Credit

- Credit
- Business Lines
- Mergers & Acquisitions
- Counter-parties

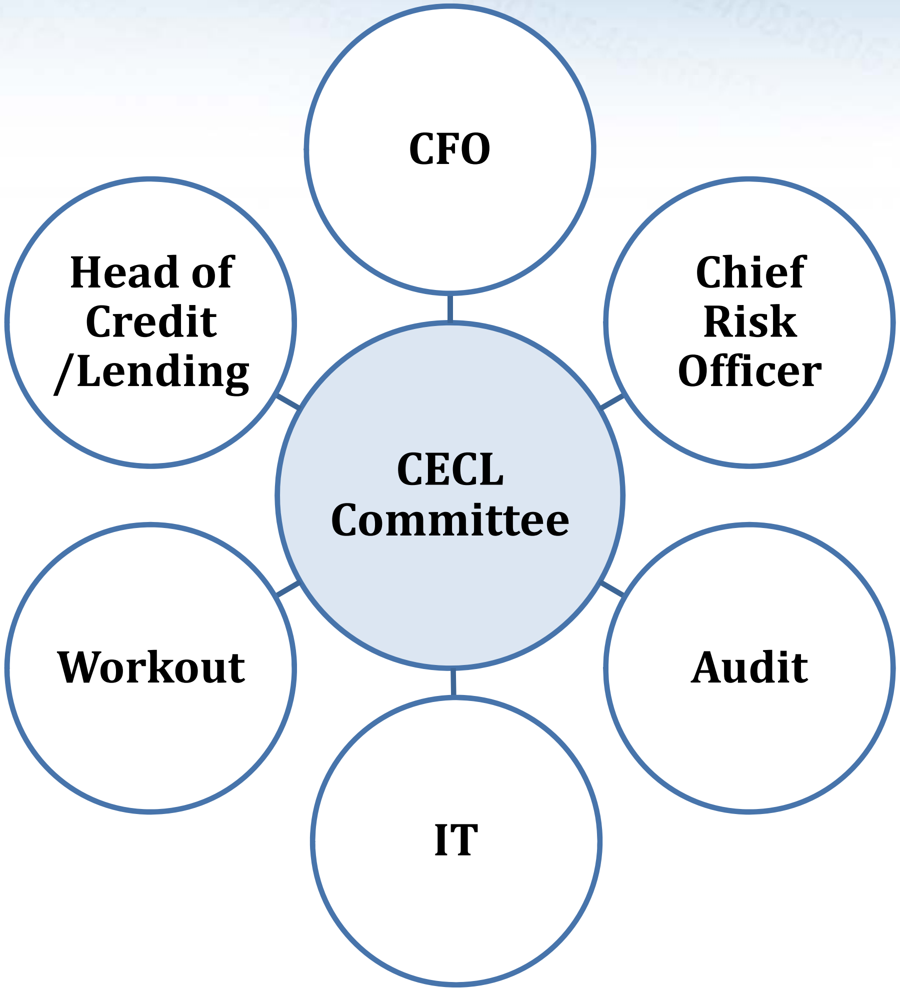
Legal/ Compliance

- R ulatory R porting
- T
- F ancial R porting

Forming an Implementation Committee.

Forming An Implementation Committee.

- Look at how the allowance calculation flows through your institution and how many business areas touch it
- Strive for senior level representation across all departments
- CECL will require significant collaboration across functional areas



Factors to Consider.

Methodology Changes	Historical loss to migration, PD/LGD, vintage analysis
Data Requirements	"Reasonable and supportable forecasts"
Capital Adjustment	Life of loan expected loss versus one year incurred loss
Communication	Model validation
Projected Impact	Internal controls
	External provider

Factors to Consider.

- Methodology Changes
- **Data Requirements**
- Capital Adjustment
- Communication
- Projected Impact

Building and maintaining a data warehouse
Assessing availability and quality of historical data
Determining key data needed for calculation
Data validation process
Report building process

Factors to Consider.

- Methodology Changes
- Data Requirements
- **Capital Adjustment**
- Communication
- Projected Impact

Need to raise additional capital?
Timing consideration
Shareholder communication
Regulatory communication

Factors to Consider.

Methodology Changes

Data Requirements

Capital Adjustment

Communication

Projected Impact

- Socialization of CECL with board and senior management
- Periodic meetings
- Documents read into the minutes

Factors to Consider.

- Methodology Changes
- Data Requirements
- Capital Adjustment
- Communication
- **Projected Impact**

- Earnings projection due to changes in provision
- Peer comparisons will change
- Asset and liability management
- Stress testing
- Loan pricing
- Underwriting guidelines
- Segment lending limits

CECL Data Requirements.

Data Requirements.

Now

Historical Loss Rates

- Charge-offs
- Recoveries
- Aggregate pool data
- Beginning balance of pool
- Ending balance of pool

Future

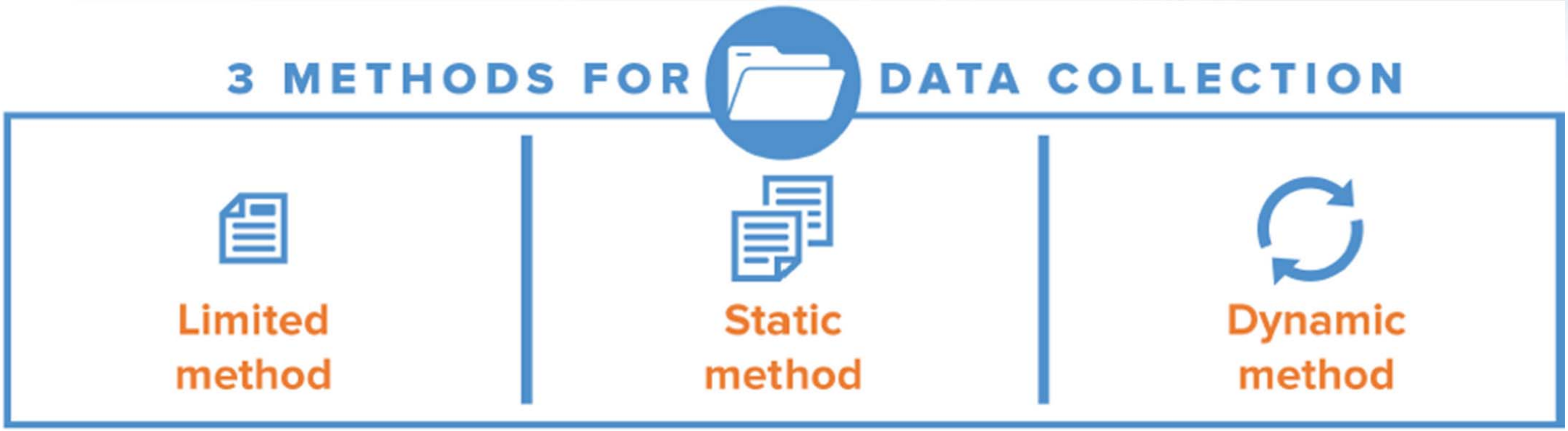
Expected Loss Rates

- Charge-offs
- Recoveries
- Aggregate pool data
- Beginning balance of pool
- Ending balance of pool

- **Risk rating by individual loan**
- **Loan duration**
- **Individual loan balance**
- **Individual loan charge-offs and recoveries (partial and full)**
- **Individual loan segmentation**

New

Capturing Loan-Level Data.



Use your institution's core to capture detailed data. Most cores go back to an approximate max of 13 months.

Begin storing core archives in a data warehouse. If you don't have the internal IT resources, some core providers offer storage, or you can seek out a third party vendor.

Use an automated solution to capture and store data for your institution automatically. It will also make the data accessible for reporting purposes.

Data Adequacy Checklist.

- ✓ The data is labeled appropriately (headers consistently applied and are understandable)
- ✓ Data does not contain duplicates (fields, rows or entities)
- ✓ There are no inconsistencies in values (e.g., truncated by 000's vs. not truncated
- ✓ Data is stored in the right format (e.g., numbers stored as numbers, zip codes stored as text)
- ✓ The file extracted from the core system is stored as the right file type
- ✓ File creation is automated; not requiring manual file creation
- ✓ Data is reliable and standardized throughout the institution, across all departments
- ✓ Data fields are standardized and governed to ensure consistency going forward
- ✓ Data storage does not have an archiving time limit (e.g., 13 months)
- ✓ Data is accessible (usable format like exportable Excel files, integrates with other solutions)
- ✓ Archiving function captures data points required to perform range of robust methodologies

Consider the Impact of Moving to a More Robust Calculation.

Measurement of ECLs.

As outlined by the Federal Reserve in their October webinar on CECL:

Unadjusted historical lifetime loss experience + **Adjustments for past events and current conditions** + **Adjustments for reasonable and supportable forecasts** = **Estimate of expected credit losses**

- Choice of methods include:
  - Loss-rate methods
  - PD/LGD
  - Migration analysis
  - Vintage analysis

- Any reasonable approach may be used – guidance is not prescriptive

Source: "Loss Data, Data Analysis, and the Current Expected Credit Loss (CECL) Model", Fed Perspectives Webinar, 10/30/15

Migration Analysis.

- Often considered a more “robust” form of analysis
- Evaluates the movement of a sub-segment (risk level, risk grade, etc.) of loans to loss over a selected timeframe, without regard to new loans
- Exposes greater clarity on loan quality within each segment
- Sound risk rating process and program needed
- Appropriate for certain asset sizes?
  - » Adequate number of loans in each segment is necessary

Historical Loss vs. Migration Analysis.

Migration Analysis vs. Historical Loss Rate Method ALLL Provisions							
Migration Analysis for ALLL Provisions using Current Balances					*Using Re-Structured Ratings*		
C&I Pass	163	0.08	13.04		183	0.08	14.64
C&I Special Mention	57	0.14	7.98		57	0.14	7.98
C&I Substandard	30	0.36	10.80		10	0.36	3.60
Total ALLL Provision			**31.82**				**26.22**
Historical Loss Rate for ALLL Provisions using Current Balances					*Using Re-Structured Ratings*		
C&I	250	0.093	23.29		250	0.093	23.29
Total ALLL Provision			**23.29**				**23.29**

PD / LGD Method.

- Methodology gaining popularity after mentions in Basel II, Basel III and FASB CECL guidance
- Currently used by larger institutions, primarily

PD × LGD × EAD = Expected Losses

- **PD (probability of default)**: the average percentage of borrowers that default over a certain time period
- **LGD (loss given default)**: the percentage of exposure to a bank if the borrower defaults
- **EAD (exposure at default)**: an estimate of the outstanding amount, or exposure to the bank, in the event a borrower defaults

Probability of Default – Example.

- Definition of "default" must be determined – 90 days past due?
- Also, time period over which PD is measured

Probability of Default Calculations

June 2015 - Balances

Segment: Commercial & Industrial (C & I) ▼

Probability of Default Factors

Risk Level	Probability of Default
Pass	0.7500%
Special Mention	1.8000%
Substandard	5.0000%
Doubtful	40.0000%
Loss	80.0000%

Loss Given Default – Example.

Loss Given Default Calculations

Please use this screen to configure your Loss Given Default Factors

June 2015 - Balances

Segment: Commercial & Industrial (C & I)

Loss Given Default Factors

Risk Rating	Loss Given Default
1	4.0000%
2	6.0000%
3	8.5000%
4	11.2500%
5	12.7500%
6	20.0000%
7	35.0000%
8	50.0000%
9	75.0000%

PD / LGD – Example.

Loan Number	Customer Name	Loan Balance	Reserve Amount	Loan Type Code	Probability of Default	Loss Given Default	Qualitative Adjustments	Loss Rate
180110550	SULLIVAN FARM ASSOCIATION INC	$79,295	$1,067	Commercial & Industrial (C & I)	0.7500%	12.7500%	1.2500%	1.3456%
180110558	COMMODORE COMMONS CONDOMINIUM	$128,514	$2,069	Commercial & Industrial (C & I)	1.8000%	20.0000%	1.2500%	1.6100%
180110599	TWIN OAKS CONDO ASSOC INC	$65,868	$886	Commercial & Industrial (C & I)	0.7500%	12.7500%	1.2500%	1.3456%
180110619	AREA CONGREGATION S TOGETHERINC	$267,883	$3,605	Commercial & Industrial (C & I)	0.7500%	12.7500%	1.2500%	1.3456%
180110722	FIRST ORONOKE INC	$952,374	$12,815	Commercial & Industrial (C & I)	0.7500%	12.7500%	1.2500%	1.3456%
180110751	JOE'S REFUSE REMOVAL LLC	$40,087	$539	Commercial & Industrial (C & I)	0.7500%	12.7500%	1.2500%	1.3456%
18531345	ALL ABOUT SERVICE S & P CARTING INC	$0	$0	Commercial & Industrial (C & I)	0.7500%	4.0000%	1.2500%	1.2800%

Vintage Analysis.

- Track homogeneous loans by origination period
  - » Year, quarter, etc.
- Measure losses accumulated on each vintage
- Apply the expected cumulative loss to the remaining vintages outstanding
- At measurement date, adjust expected loss rate for current conditions and reasonable & supportable forecasts

Origination Year	Loss Rates by Vintage				
	Year 1	Year 2	Year 3	Year 4	Total
2010	0.20%	1.00%	1.40%	0.30%	2.90%
2011	0.25%	1.00%	1.50%	0.35%	3.10%
2012	0.30%	1.20%	1.30%		
2013	0.25%	1.25%			
2014	0.35%				
2015					

Can use economic indicators to forecast

Adapted from: "Credit Risk Management's Role in Measuring ECLs" by Graham Dyer of Grant Thornton at 2015 Risk Management Summit

Data Points by Methodology.

- Historical Loss (blue)
- Migration Analysis (orange)
- Vintage Analysis (green)

	Historical Loss	Migration Analysis	Vintage Analysis
Individual loan charge-offs	■	■	■
Individual loan recoveries	■	■	■
Individual loan balances	■	■	■
Individual loan pool segmentation	■	■	■
Individual loan duration	■	■	■
Individual loan risk classification		■	
Migration of loans between classification		■	
Individual loan origination dates			■
Individual loan origination amounts			■

How to Prepare Now.

2016: Create Roadmap.

Key Action Items

- Build committee
- Set project plan
- Review final CECL language
- Inform board & management of committee/ALLL changes
- Examine data/current processes

Key Takeaways.

- Minimize risk in loans you're underwriting today
- Avoid the temptation of simply adapting your current methodology
- Reduce dependency on spreadsheets
- Start cross-department conversation now, including Credit and Finance
- Review/strengthen risk rating procedures at the institution
- Capture, archive and incorporate loan-level detail into the ALLL
  - Improve data processes and increase data integrity
  - *"Begin identifying and collecting actual loss data required for the implementation of the CECL model"*
    – Ask the Fed Webinar, October 22, 2015

Contact Information & Questions.

Rob Ashbaugh
Senior Risk Management Consultant
robert.ashbaugh@sageworks.com
866.603.7029
www.sageworksanalyst.com

LinkedIn Groups
- ALLL Forum for Bankers

2016 Risk Management Summit
- Sept. 14-16 in Austin, TX
- ALLL & Stress Testing Conference
- www.sageworks.com/summit

CECL Prep: Data Guide
- web.sageworks.com/CECL-Prep-Guide-Data/

CECL Prep: Data.
Ensuring data adequacy and quality

IN THIS GUIDE
- Summary of CECL data requirements
- List of data points by methodology
- Important characteristics of data
- Handy data checklists
  - » Data adequacy checklist
  - » Third-party vendor checklist

INTRODUCTION

The Financial Accounting Standards Board (FASB) is expected to release the final standard of the current expected credit loss (CECL) model in the first half of 2016.

The CECL model is a change in guidance for the allowance for loan and lease losses (ALLL) that will include, among other provisions, forward-looking requirements, the removal of the "probable loss" threshold, a longer loss horizon and the need for accessible, loan-level data. Some industry experts have asserted that the CECL model may be the biggest change ever made to financial institution accounting.

In order to comply with the proposed new regulatory guidance, institutions should ensure they have the proper loan-level data in order to run more robust and forward-looking calculations. Capturing this data is a prerequisite for testing methodology changes and planning for potential capital adjustments.

Transitioning to CECL will be challenging for many institutions, and the first step — capturing and archiving loan-level data — presents its own unique set of challenges. This guide outlines some of the challenges and objectives for your institution to consider while identifying, assessing and addressing your data needs in preparation for the FASB's CECL model.

ALLL TDR STRESS TESTING CREDIT ANALYSIS RISK RATING LOAN PRICING LOAN ADMINISTRATION WORKFLOW

Appendix – Additional Resources.

Additional Resources.

- ALLL.com – Everything ALLL, including news articles, whitepapers, and peer discussions
- ALLL Forum for Bankers – LinkedIn group for ALLL news & discussion
- CECL Post-release webinar - panel-style webinar with thought leaders from top accounting firms
- FASB's CECL Prep Kit - complimentary toolkit, to help you better prepare
- Sageworksanalyst.com – Learn about Sageworks ALLL
- Interested in talking with a specialist?
  - » Email us now: sales@sageworks.com