Crowe

Smart decisions. Lasting value.™

Ask the specialists: CECL Q&A

A conversation with audit, accounting, advisory, and model validation specialists

May 24, 2022

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Crowe panelists

Crowe CECL team

Mandi Simpson, CPA
Accounting Advisory Partner

Mike Berti, CPA
Audit Partner

Ryan Michalik, CFA, CRC
Consulting Principal

Alex Campbell
Advisory Manager

Polling Question #1

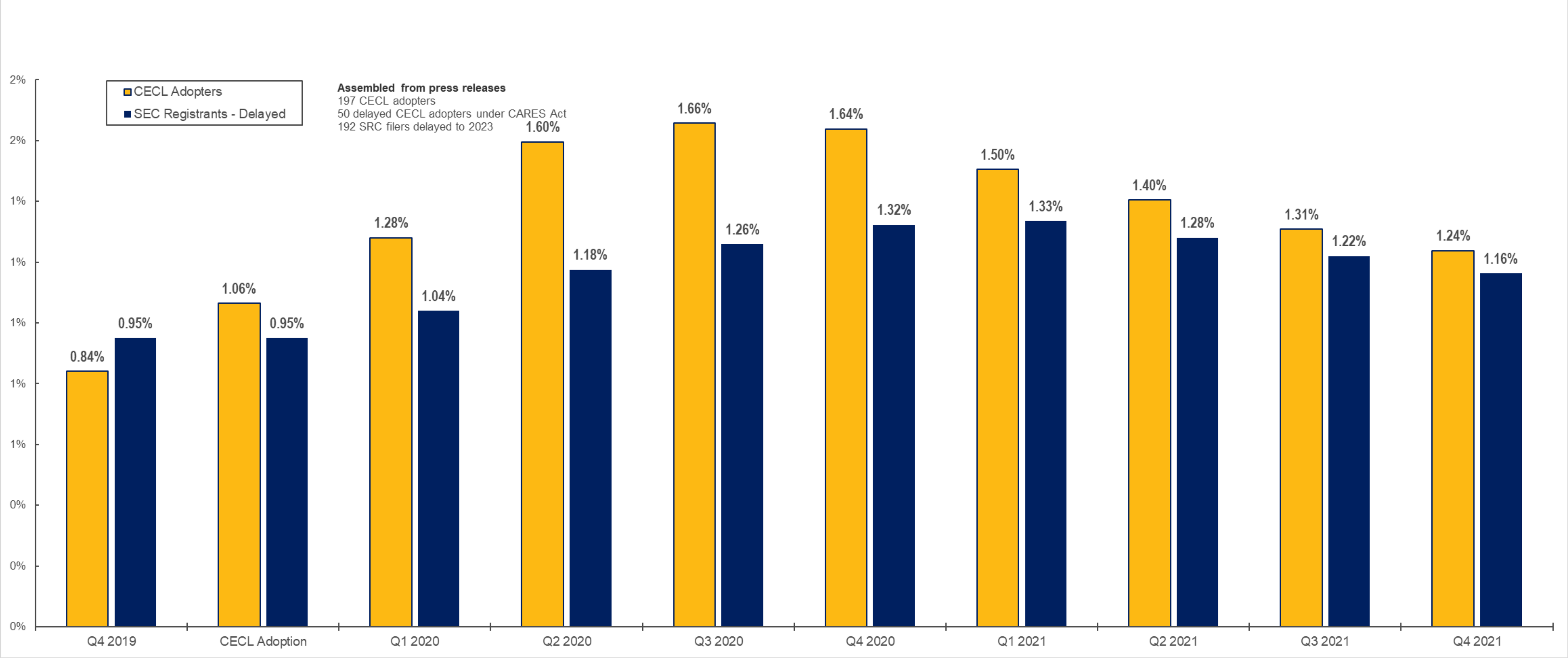
What is on top of your to do list for CECL adoption?

1. Segmentation decisions
2. Vendor/model selection
3. Model validation
4. Documentation/policies
5. Something else

Financial statement impact: What to expect at adoption

CECL vs. Incurred Allowance Trends for SEC filers

Crowe has audited, validated, or consulted with over half of the CECL adopters.



Example disclosure of Credit Quality Indicators by Vintage

	Term Loans Amortized Cost Basis by Origination Year								
As of December 31, 20X5	20X5	20X4	20X3	20X2	20X1	Prior	Revolving Loans Amortized Cost Basis	Revolving Loans Converted to Term Loans Amortized Cost Basis	Total
Commercial business:									
Risk rating:									
1–2 internal grade	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3–4 internal grade	-	-	-	-	-	-	-	-	-
5 internal grade	-	-	-	-	-	-	-	-	-
6 internal grade	-	-	-	-	-	-	-	-	-
7 internal grade	-	-	-	-	-	-	-	-	-
Total commercial business	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Commercial business loans:									
Current-period gross writeoffs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Commercial mortgage:									
Risk rating:									
1–2 internal grade	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3–4 internal grade	-	-	-	-	-	-	-	-	-
5 internal grade	-	-	-	-	-	-	-	-	-
6 internal grade	-	-	-	-	-	-	-	-	-
7 internal grade	-	-	-	-	-	-	-	-	-
Total commercial mortgage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Commercial mortgage loans:									
Current-period gross writeoffs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Debt Securities

HTM – use CECL model

- Will use an allowance instead of direct write-off (so permits reversals)
- Evaluations of expected credit losses for some debt securities likely to be similar to those previously used in practice
- Required pooling of HTM debt securities

AFS – modifies “other than temporary impairment” (OTTI) model

- Use an allowance instead of direct write-off (so permits reversals)
- Removes the criteria to consider the length of time and extent that FV < cost
- Removes the criterion to consider recoveries or additional declines in value post B/S
- Includes a fair value floor – which means credit losses are limited to amount of FV < amortized cost

Example:

AFS OTTI FV Floor	
Par	100
ECL	(5)
Fair Value	96
Recorded ECL	***(4)***

Polling Question #2

Has your institution been running CECL and ALLL models in parallel?

1. Yes
2. No

Modeling mistakes: Where should we be cautious?

Risk Identification/Data Inventory

- Four categories of data to consider (example):

Loan Attributes	Credit Characteristics
• **Financial asset type** • **Size** • **Effective interest rate** • **Acquired or originated**	• **Risk rating** • **Credit score** • **Policy exceptions** • **LTV** • **DSCR or DTI** • **Historical credit loss patterns** • **Loss History Needed**
Structure	**Economic and Geographical**
• **Payment Type** • **Vintage** • **Term** • **Rate structure** • **Prepayments**	• **Collateral type** • **Economic sector** • **Industry of the borrower** • **Geographical information**

Do you have key data elements in a way that is reportable and reliable? E.g. one source of the truth

Example segmentation

Loan Type	Current Segments	Recommended Segments
C&I	C&I	C&I
		C&I – IO
	SBA	SBA
Construction	Commercial Const.	Commercial Const.
	Residential Const.	Residential Const.
CRE	Non-Owner Occupied CRE	NOOCRE – Hotel
		NOOCRE – Other
	Owner Occupied CRE	OO CRE – Interest Only
		OO CRE – P&I
RRE	Resi 1st Mtg	Resi 1st Mtg – Jumbo
		Resi 1st Mtg
	Resi 2nd Mtg	Resi 2nd Mtg – Region #1
		Resi 2nd Mtg – Other
Consumer	Consumer	Consumer
	Auto	
	Cash Secured	Cash Secured
	Overdraft	Overdrafts

Mort. 1-4 (1st): Credit characteristics

Crowe Credit360

1.2bn
Total Current Balance

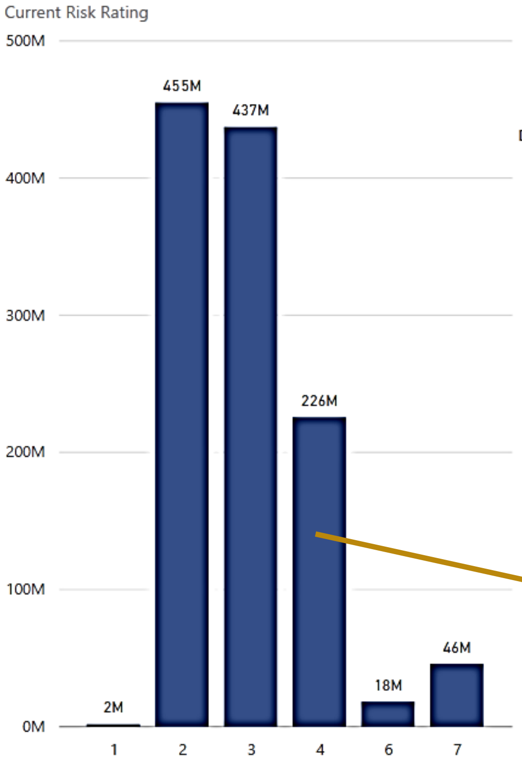
3,090
Active Loan Count

5.23 %
WA Current Rate

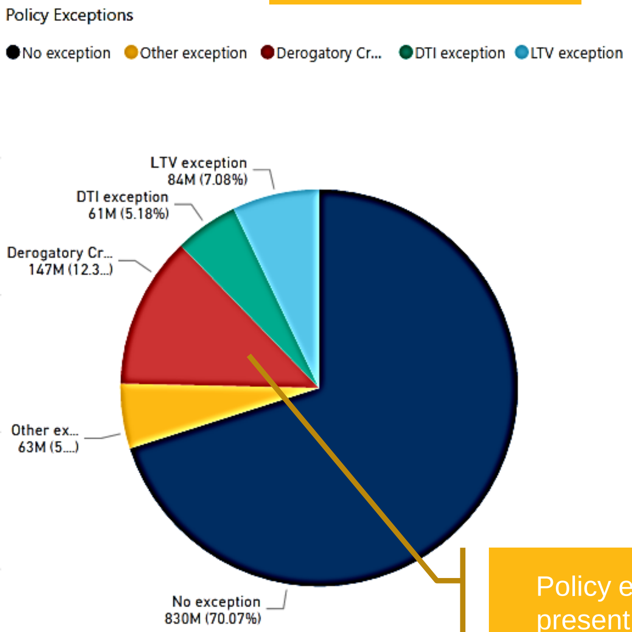
3.00
WA Risk

8.90
WA Term

$383,160
Avg. Current Balance

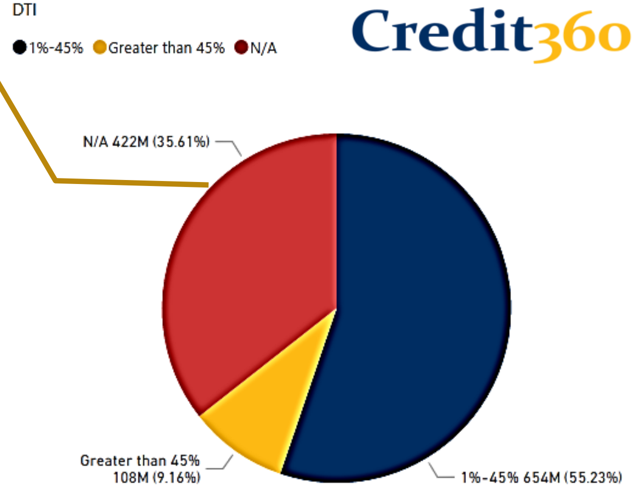


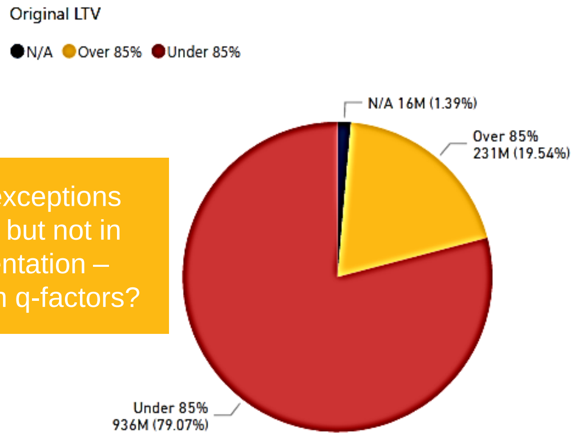
Not archived, continually overwritten, but generally deemed irrelevant



Policy exceptions present but not in segmentation – impact on q-factors?

Debt-to-income not captured, yet deemed important





Polling Question #3

Would your institution benefit from additional portfolio analytics tools?

1. Yes
2. No

Find the right model for you

- Understand your loan and loss data availability and limitations – which modeling approach fits with that data?
- Do you need to incorporate peer data?
- What level of model complexity is right for you, and will you be able to explain the model and its results?
  - “The agencies expect that smaller and less complex institutions will be able to adjust their existing allowance methods to meet the requirements of the new accounting standard without the use of costly and/or complex modeling techniques.” – Federal Reserve FAQ

Scalable modeling solutions that can be efficiently deployed are important – modeling technology that you can deploy quickly gives you more time for parallel runs, and a scalable solution ensures that model fits your specific situation. Crowe Credit360 can solve this for you, or we can provide guidance on the direction that suits you.

Model options

Deployment Models	Key Inputs/Assumptions	Example Assumption Model Options/Input Source
Loss Rate	Remaining life loss rate	Snapshot loss/open pool Vintage loss/closed pool
	Balance	Portfolio snapshot(s) as of analysis period: e.g. current balance; total origination balance for each vintage
PD/LGD/EAD	PD	Vintage PD Transition matrix Logit regression Reference table Scorecard (dual risk rating)
	LGD	Historical loss data Vintage LGD Regression models Reference table Scorecard (dual risk rating)
	EAD	Current balance; expected EAD (cash flow distribution)
Weighted Average Remaining Life	Contractual cash flows	Loan level cash flow engine
	Prepayment	Potentially ALM provider; internal analysis
	Annual loss rate	Average annual loss rates
Discounted Cash Flow	Contractual cash flows	Loan level cash flow engine
	Prepayment	Potentially ALM provider; internal analysis
	PD	Same as PD/LGD/EAD options
	LGD	Same as PD/LGD/EAD options
	Recovery lag	History or reference table
	Discount rate	Effective yield (consider impact of premiums and discounts on yield)

Polling Question #4

What type of method has your institution selected? (Select multiple if necessary.)

1. Cumulative Loss Rate (aka Cohort)
2. Transition Matrix
3. Migration Analysis
4. Discounted Cash Flow
5. Weighted Average Remaining Life
6. Other / not sure yet

Model validation: When are you ready?

Polling Question #5

Has your institution scheduled a model validation yet?

1. Yes
2. No

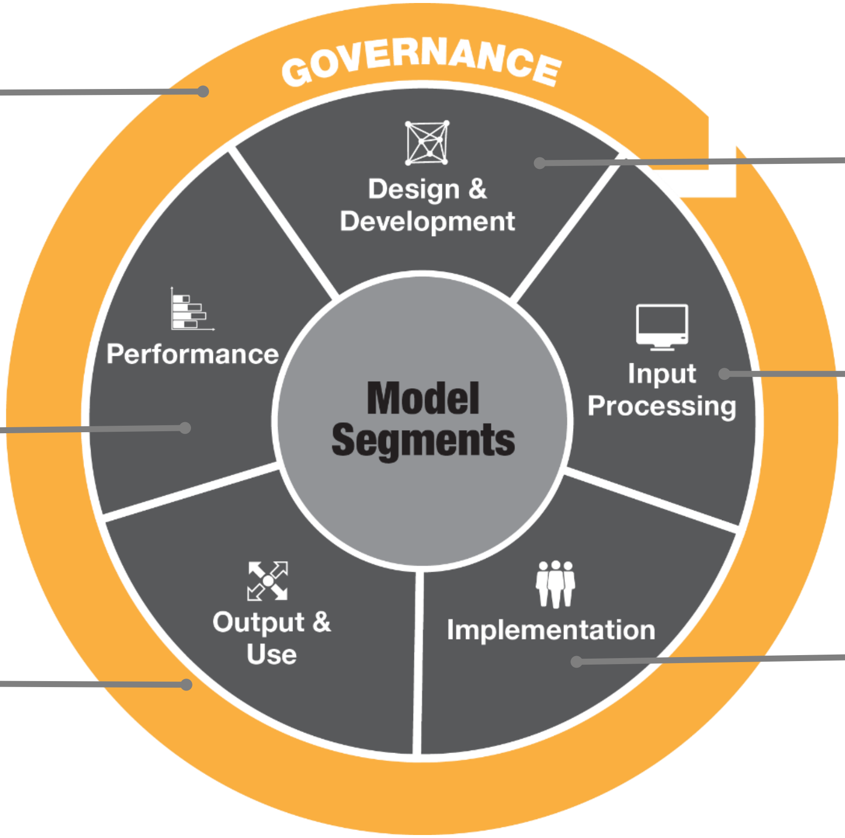
Model Validation Methodology

Crowe's Model Validation testing framework is focused on six key segments.   Each model segment has unique model risks. These model risks, along with the associated control environment, require testing and effective challenge to form a reasonable belief that the model is operating as designed and intended.

Evaluates that roles and responsibilities are defined and that the model is being maintained in alignment with the established model risk management framework.

Validates the ongoing monitoring plan activities to continuously assess and calibrate model performance. Also reviews how model reporting informs business users.

Assesses the reasonableness of the model's estimate or forecast through back-testing, sensitivity testing, and benchmarking.



Validates the intended purpose of the model, the model logic and functionality, alignment of the model to the purpose, assumptions and limitations of the model, and methodology used to design and develop the model.

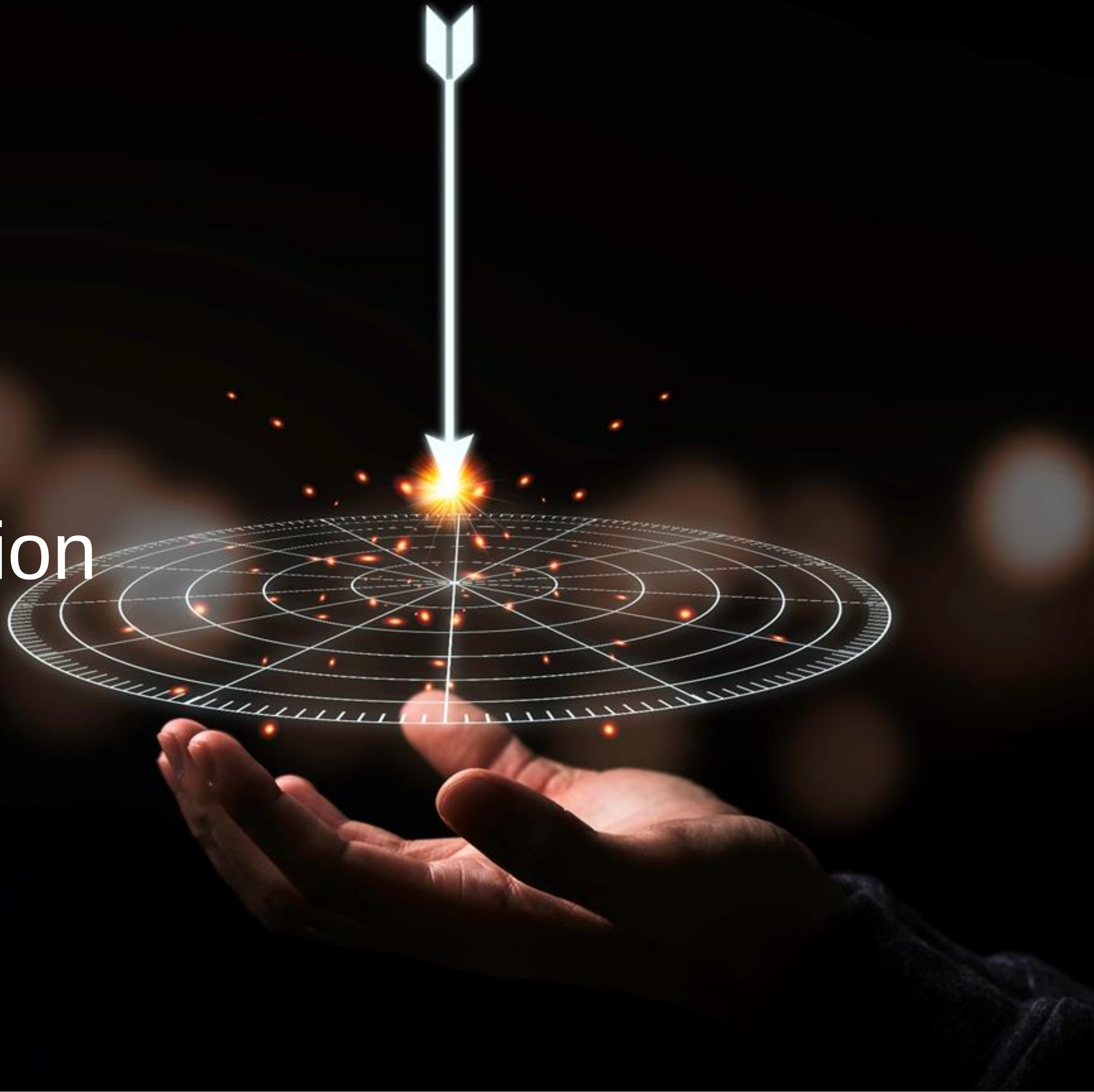
Validates the inputs relied upon by the model including the accuracy and completeness of the model data as well as the ongoing maintenance of inputs.

Tests the integration of the model's design and functionality into the institution's business-as-usual processes and technology. Model procedures, access, and change control management are evaluated.

Key activities to complete prior to validation

- **Governance**
  - Complete key model risk activities.
- **Design & Development**
  - Document and support key model assumptions.
  - Be comfortable in your understanding of the vendor model.
- **Input Processing**
  - Document data lineage.
  - Develop data quality and reconciliation controls.
- **Output & Use**
  - Complete sensitivity analysis of key assumptions.
  - Complete back-testing.
- **Implementation**
  - Request vendor’s model certification report.
  - Draft procedures to supplement the vendor-provided user manuals.
- **Performance**
  - Understand the vendor’s go-forward testing and support.
  - Define the ongoing monitoring plan.

Audit and exam readiness: How to position your institution for success



Where are your auditors going to focus? Qualitative factors

- An added emphasis has been placed on qualitative factors
- 9 factors were specifically identified in the standard:
    - Lending policy procedures
    - Economic and business conditions
    - Nature and volume of loans
    - Lending staff
    - Problem loan trends
    - Loan review quality
    - Collateral value
    - Credit concentrations
    - Competition, legal and regulatory environment

How are you going to support these factors and analyze how your portfolio has changed over time?

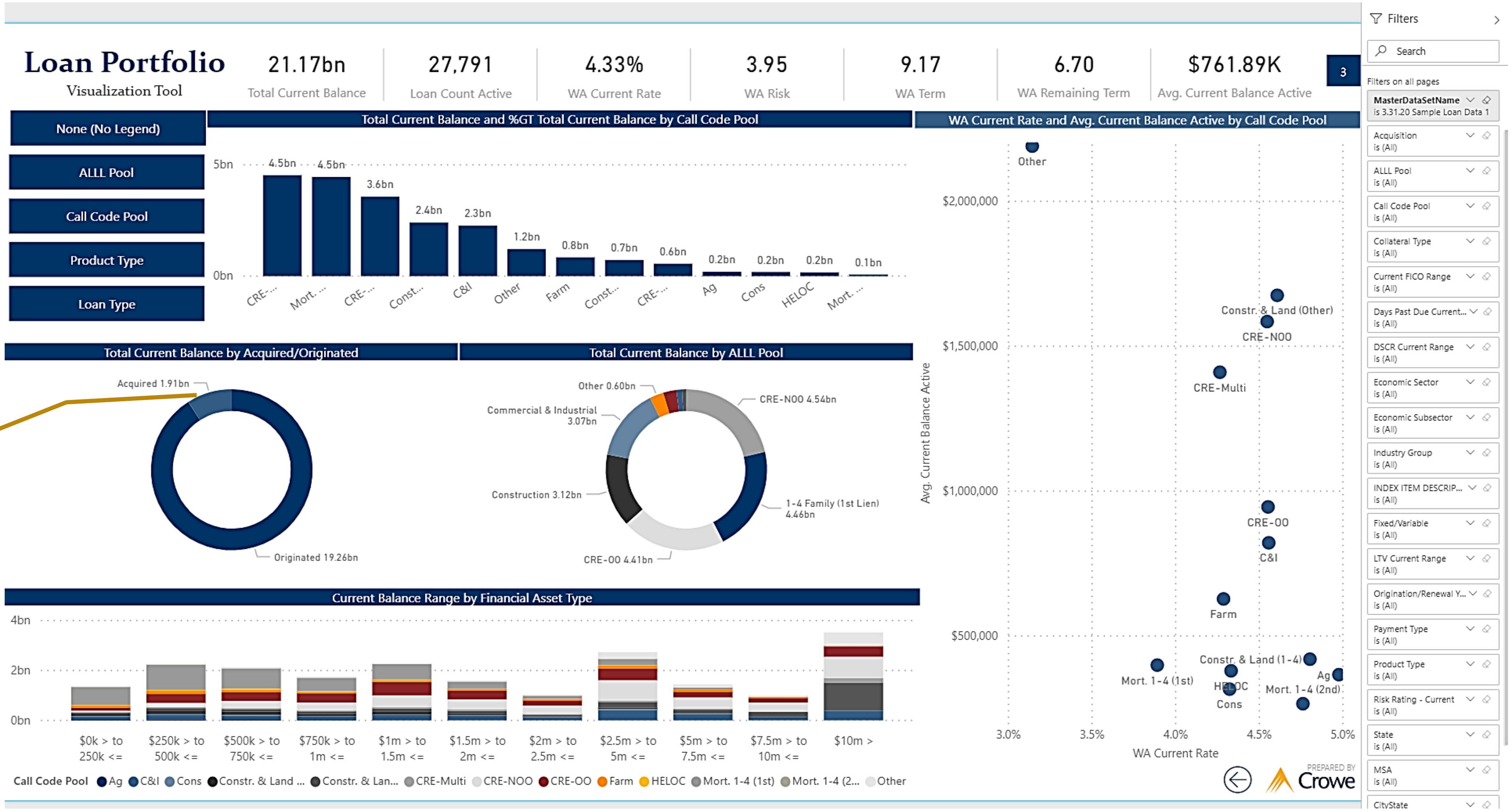
Which piece of the puzzle might get the most scrutiny?

Historical Loss Information	Includes both relevant internal and external information or combination of both. Pooling or segmentation is based on identification of common risk characteristics.
+ Current Conditions	Adjustments to adequately fit historic information to current conditions, i.e. current economic conditions or asset specific risk characteristic differences. This may be through qualitative or quantitative factors.
+ Reasonable and Supportable Forecasts	Adjustments to adequately reflect entities' forecast of economic impact on the asset in the future. These may be qualitative or quantitative in nature. Additionally, these adjustments may be made at the input level or as top of model adjustments.
+ Reversion to History	Entities are to revert to historical loss information when unable to make reasonable and supportable forecasts. This may be done at the input level or in aggregate. Reversion should follow a rational systematic approach.
= Expected Credit Loss	The end result should represent the expected credit loss over the remaining contractual term of the financial asset or group of financial assets.

The first two steps are similar to what we do today – just different math to get to lifetime loss and more moving parts.

Forecasting is interesting, but **history** is at the foundation.

How might your auditors challenge model elections?



Do acquired loans share risk characteristics of the originated portfolio?

Polling Question #6

What do you anticipate your adoption impact will be?

1. Increase in ACL
2. Decrease in ACL
3. No material change in ACL
4. Not sure yet

Question

Would you be open to be contacted by Crowe to learn more about CECL service offerings?

Yes, please contact me via email

Yes, please give me a call

No, not at this time

Thank you

For more information, please visit www.crowe.com/cecl

Mandi Simpson
mandi.simpson@crowe.com

Mike Berti
mike.berti@crowe.com

Ryan Michalik
ryan.michalik@crowe.com

Alex Campbell
alex.campbell@crowe.com