More on CECL: A look at Models

Presented by

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WEALTH ADVISORY | OUTSOURCING | AUDIT, TAX, AND CONSULTING

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Create Opportunities

Session Objectives

- Review current information related to the current effective credit loss (CECL) method
- Walk through updated timeline of implementation
- Discuss auditor and examiner expectations related to CECL
- Review different models related to estimating CECL

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Acronyms

- CECL – current effective credit losses
- ALLL – allowance for loan and lease losses
- ASC – Accounting Standards Codification
- FASB – Financial Accounting Standards Board
- ALM – Asset/Liability Management

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The New Standard

- In June 2016, the FASB issued Accounting Standards Update No. 2016-13, Financial Instruments – Credit Losses (Topic 326)
  - Principles based standard versus a rules based standard

- Current Expected Credit Loss (CECL) model
  - Forward looking requirements
  - Removes “probable loss” threshold
  - Longer loss horizon
  - Effective for credit unions January 1, 2023 (after recent one year change in effective date)

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The New Standard – Recent Information

- October 24, 2018 FASB Board Meeting
  - Reduced transition complexity by requiring nonpublic business entities to adopt for fiscal years beginning after December 21, 2021
- November 7, 2018 FASB Board Meeting
  - Reaffirmed prior decision from August 29, 2018 meeting to include recoveries in determining the allowance utilizing CECL
  - Entities are required to evaluate contractual extensions or renewal options that are not unconditionally cancellable
- January 23, 2019 FASB Board Meeting
  - Reached a tentative agreement to remove held to maturity debt securities from *Topic 326, Financial Instruments – Credit Losses*
- July 17, 2019 FASB Board Meeting
  - Extended implementation date to financial periods beginning after December 15, 2022

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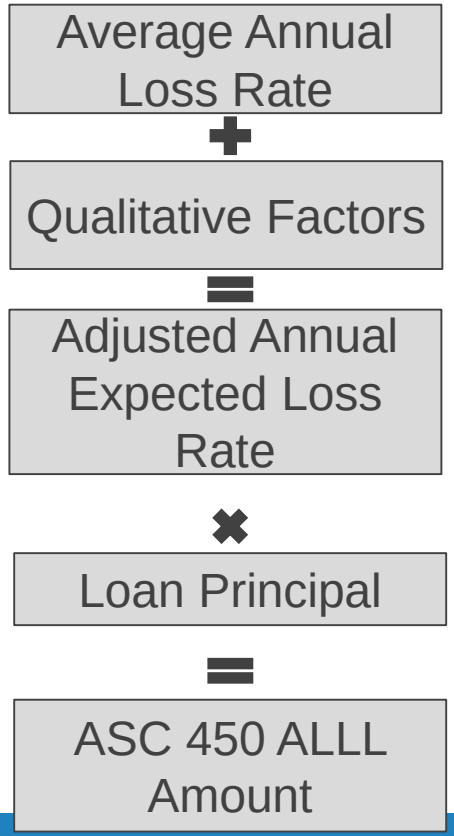
Mapping Current ALLL to CECL

1) Replaced by Historic Lifetime Loss Rate

2) Retained, but forecasting was added as a specific element to these adjustments



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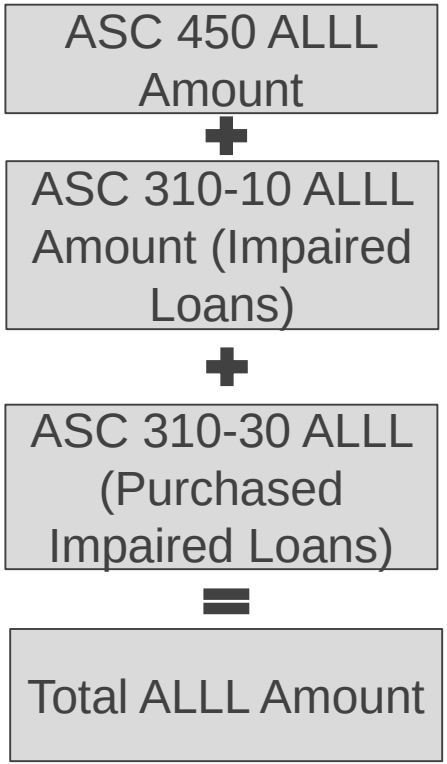
Mapping Current ALLL to CECL

1) Replaced by Historic Lifetime Loss Calculation

2) Removed, could still calculate lifetime losses in a similar fashion if you choose

3) Removed, included in normal reserves



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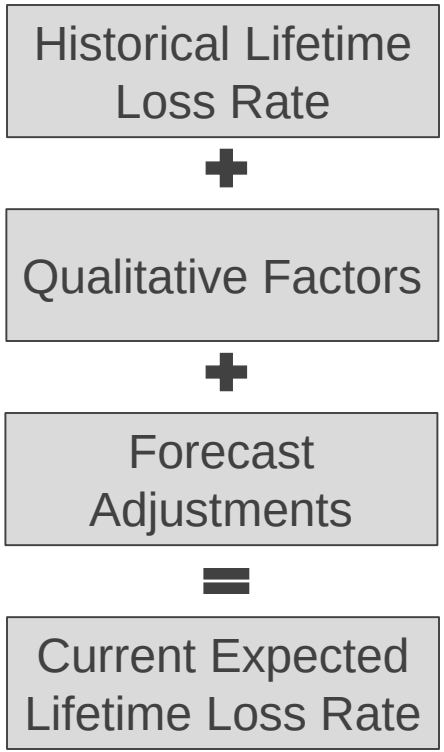
Current Expected Credit Loss Rate

Step 1: What methodology are you going to use to calculate the number?

Step 2: How are we going to adjust our qualitative factors and narratives to the new standard?

Step 3: What is our forecast period and how are we going to adjust our history?



We have to start here, until we can compute our historic lifetime losses, we cannot start adjusting them to current expectations

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The New Standard

What is the impact upon implementation?

- January 1, 2023 – (unless subject to an earlier implementation date or the credit union chooses to early adopt)
  - Adjustment is made to the allowance for loan and lease losses based on the impact of CECL in estimating the ALLL. The other side of the entry will be to undivided earnings.
  - March 31, 2023 call report will be filed utilizing CECL to estimate the ALLL
- After initial adoption
  - Future adjustments and initial recording will be recorded through earnings

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CECL Model

- Life of loan losses versus losses over the next operating cycle
- Based on current, known factors and reasonable and supportable forecasts about the future
- Concept – every loan originated increases exposure to credit risk
- Contractual loan payments reduce this exposure
- Transparency for financial statement users

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CECL Overview

- Expected credit loss is an estimate of the present value of cash flows not expected to be collected based on quantitative and qualitative information such as:
  - Past events
  - Historical loss experience
  - Current conditions
  - Borrower credit worthiness
  - Forecasts of expected credit losses
  - Current point and forecast direction of economic cycle

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CECL Overview

- High Level Considerations
  - Reasonable and supportable forecasts
  - Loans with zero credit loss
  - Variable rate loans
  - Impact on CECL related to troubled debt restructured (TDR) loans
  - Determining life of credit cards

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CECL Overview

- Reasonable and Supportable Forecasts
  - Determine the period for the estimate
    - ◊ Does not consist of a policy election
    - ◊ There is no bright line
    - ◊ Relation of the ability to determine forecasts of economic conditions
    - ◊ Will be different by institution, loans, and assumptions
  - Need for consistency with other forecasts such as ALM, strategic plans, budgets

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CECL Overview

- Zero Credit Losses
  - Is allowed where expectation of non-payment is zero
    - ◊ Share secured loans
    - ◊ Mortgage loans
      - Probably no, even if never suffered a loss
  - ASC 326-20-30-10 indicates the following:
    - ◊ Entity shall not expect nonpayment of the amortized cost basis solely based on collateral value, but shall consider:
      - Nature of collateral
      - Potential future changes in collateral values
      - Historical losses of loans with similar collateral

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CECL Overview

- Variable Rate Instruments
  - Considerations when utilizing a discounted cash flow method to estimate credit losses
  - Example – adjustable rate mortgages
- Impact of TDRs
  - Included when there is a reasonable expectation at the reporting date
  - Difficulties when looking at different types of concessions on TDRs
  - Record utilizing discounted cash flow method when a concession is granted where it only can be measured using a discounted cash flow model

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CECL Overview

- Estimating Life of Credit Cards
  - No stated interest or principal payments consisting of revolving debt where unused limit can be cancelled by institution
  - Payment application considerations
    - ◊ FIFO method – apply estimated payments to current balance
    - ◊ CARD Act method – forecast future draws and apply estimated payments based on CARD Act hierarchy
  - Payment determination
    - ◊ Forecast all payments to be received
    - ◊ Forecast a portion of payments

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CECL Implementation Timeline

Identify timeline from implementation date - Implementation date is: January 1, 2023

- 2019-2020 Year
  - Evaluate different estimation methods
  - Identify key assumptions
  - What data is missing?
  - Begin data gathering for key assumptions

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CECL Implementation Timeline

Identify timeline from implementation date - Implementation date is: January 1, 2022

- 2021 Year
  - Run different models and assumptions to identify most relevant
  - Are assumptions reasonable?
- 2022 Year
  - First half of year – evaluate assumptions with model selected
  - Second half of year – run model in “test” environment looking for errors

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Data Collection Examples

- Risk rating(s)
- Date of risk rating
- Prepayment rates
- Probability of default
- Loss given default projection
- TDR
- Maturity date
- Past due status
- Loan number
- Member name
- Origination date
- Original loan balance
- Current loan balance
- Charge off date
- Charge off amount
- Recovery amount
- Recovery date

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Data Collection Examples (Continued)

- Loan-to-value (LTV)
- Debt service coverage ratio (DSC)
- Appraisal date
- Credit score
- Loan commitment amount
- Expected loss rates
- Industry data

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Data Collection

- Additional data collection may be necessary depending on how granular you want to get
- Other elements may include loan to value, debt service coverage, credit scores, etc.
- You do not want to get too granular, as you may end up with very small pools that will not be statistically relevant

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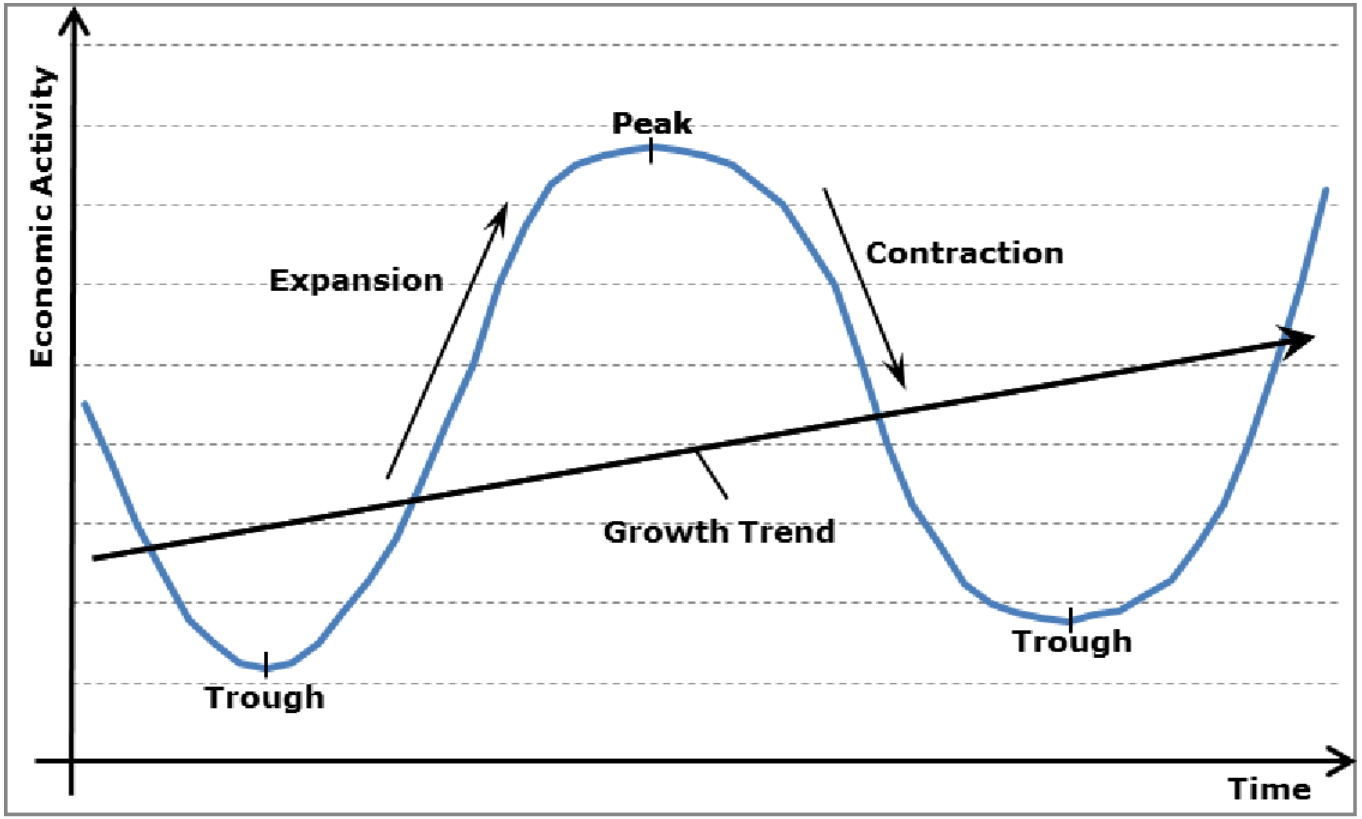
Economic Cycle Concept



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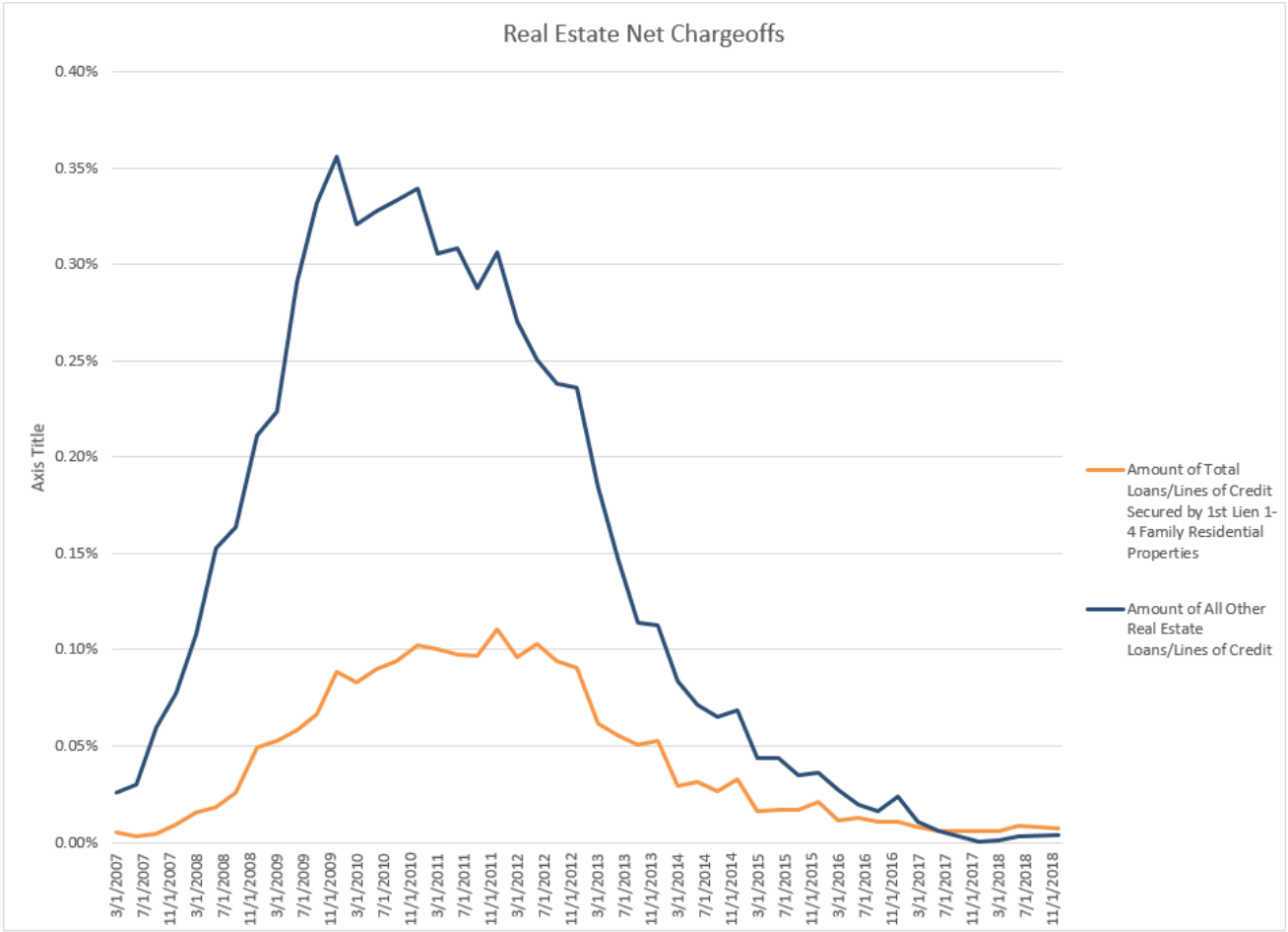

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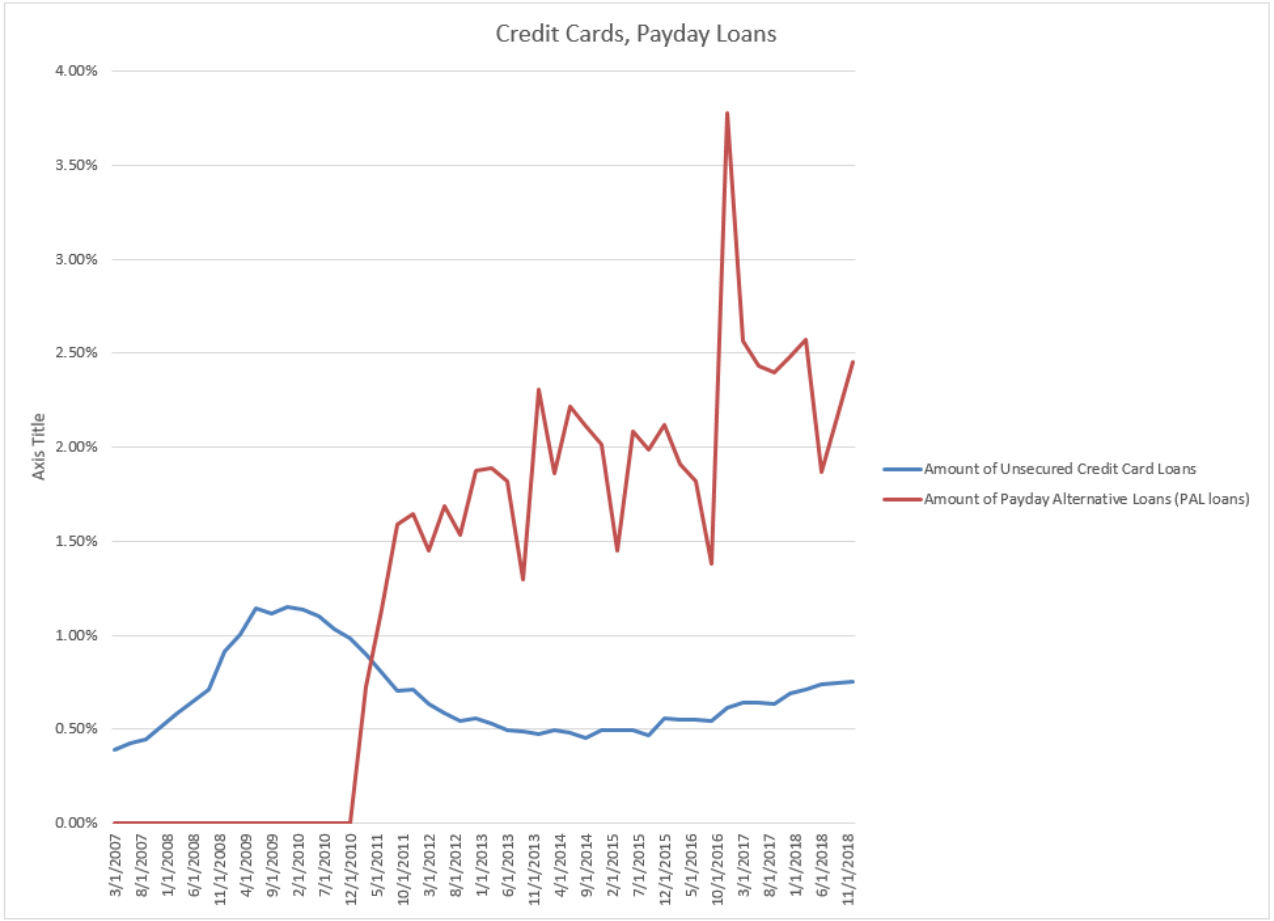

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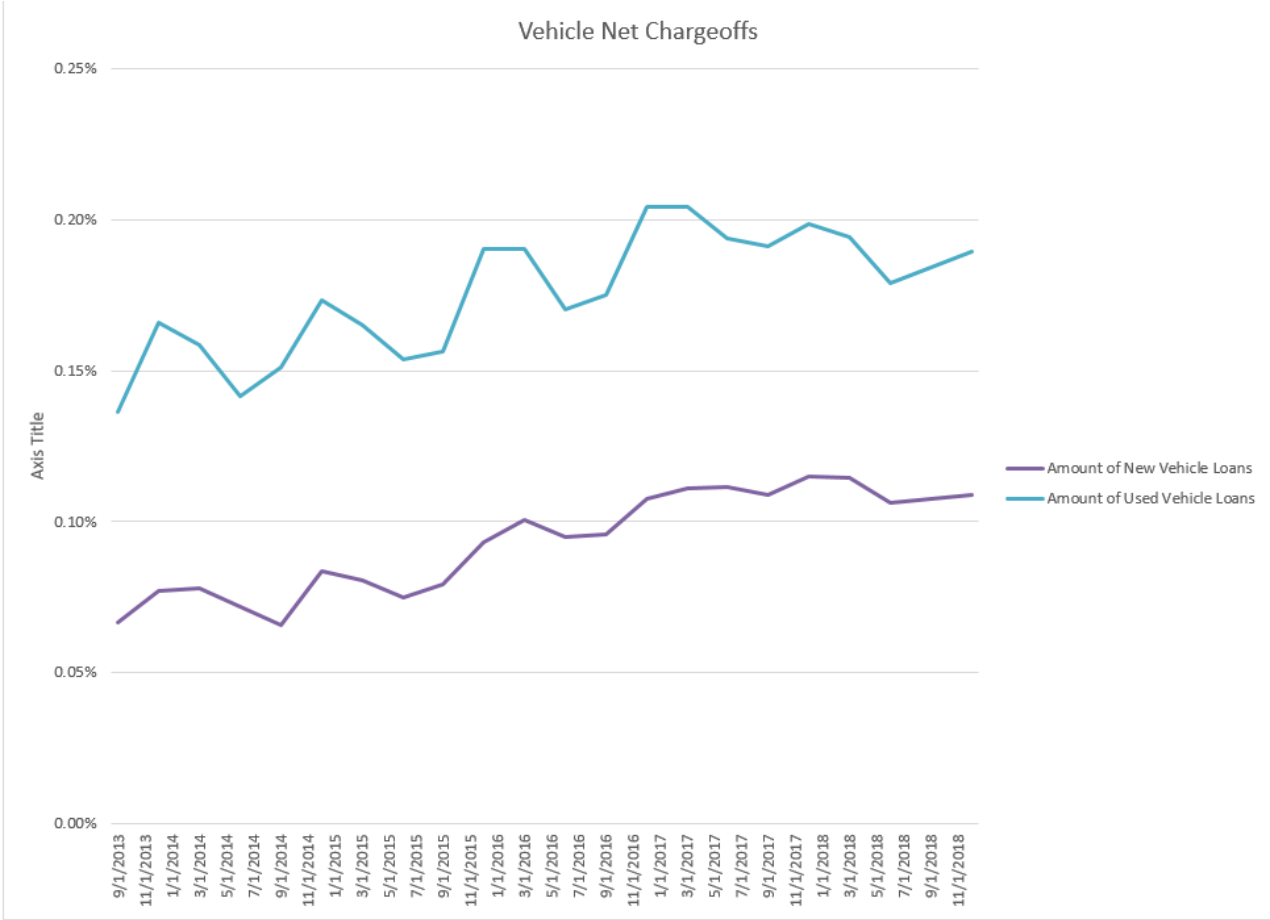

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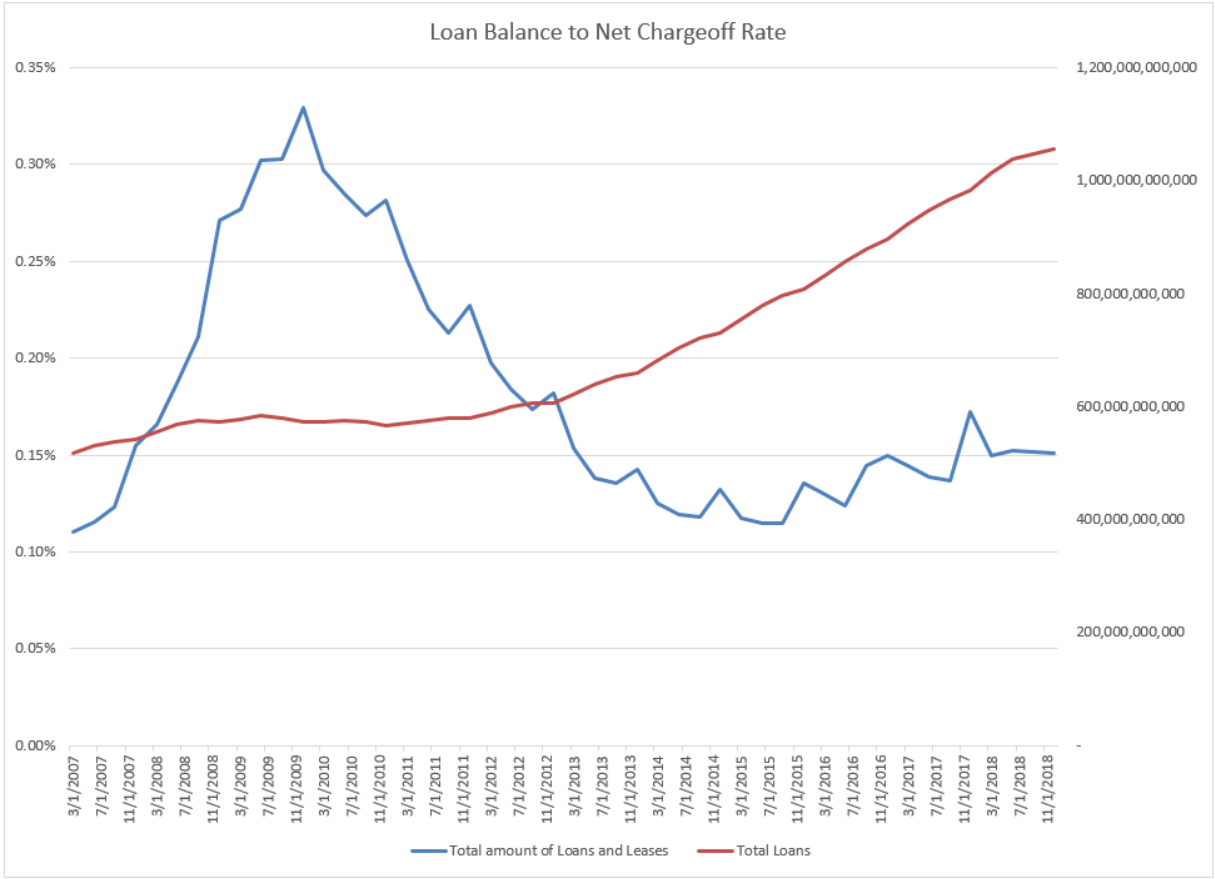

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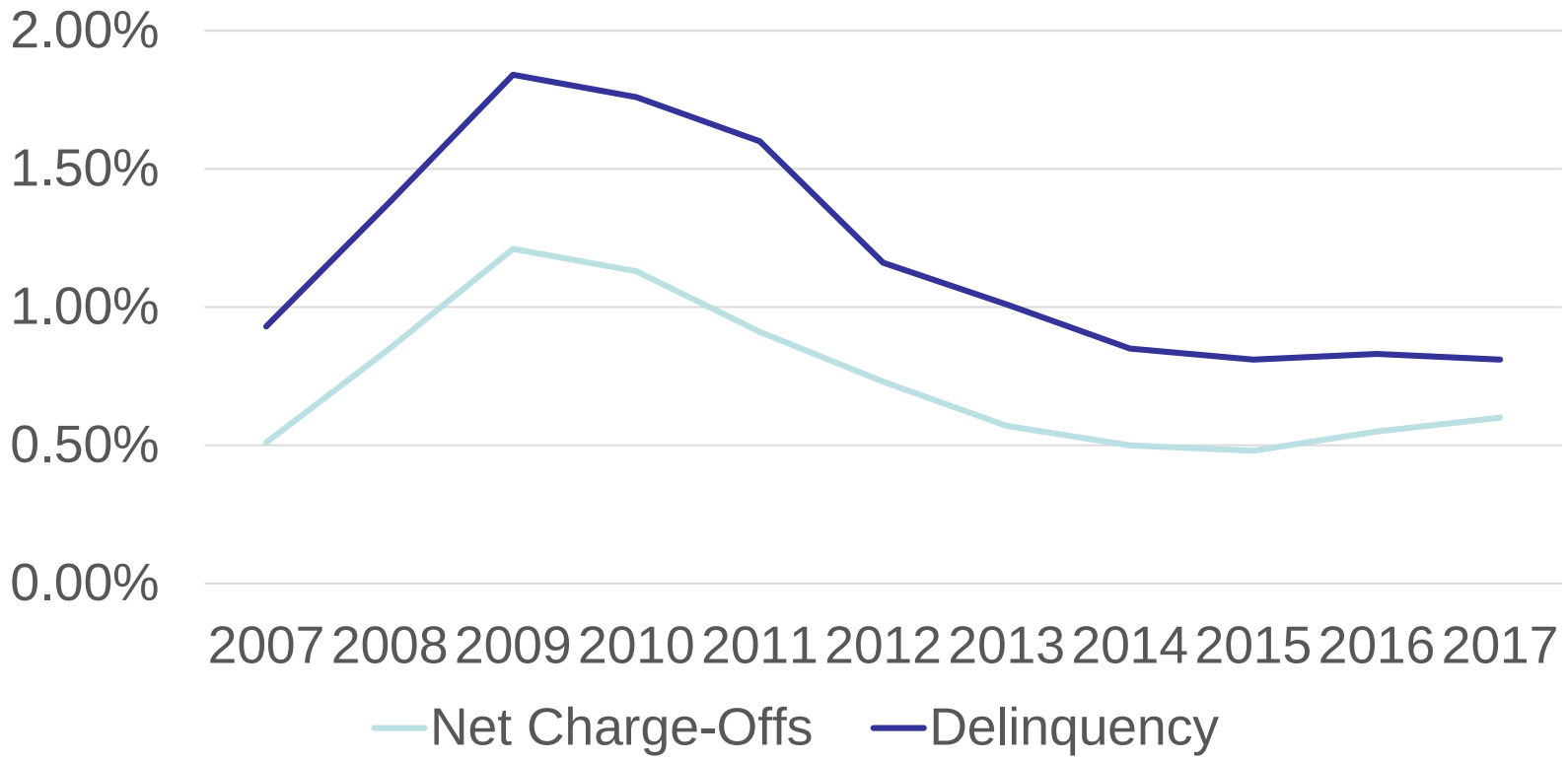
NCUA Net Charge-Off & Delinquency History



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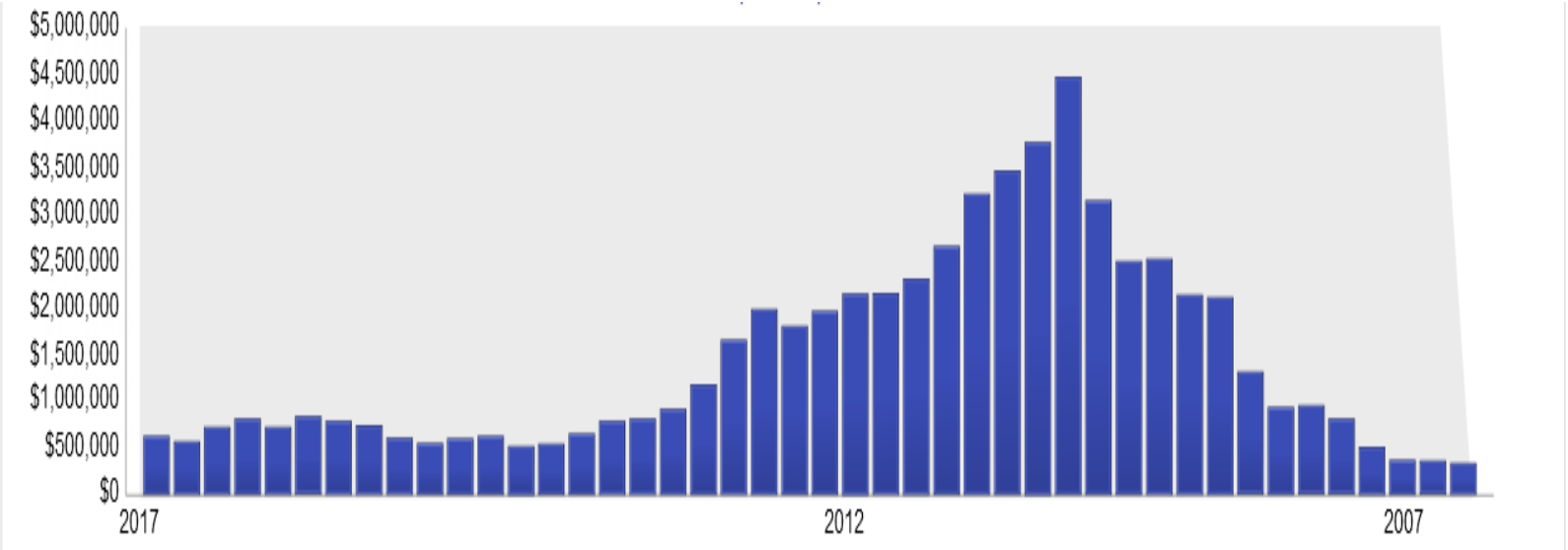
Large Bank Charge-Off Curve



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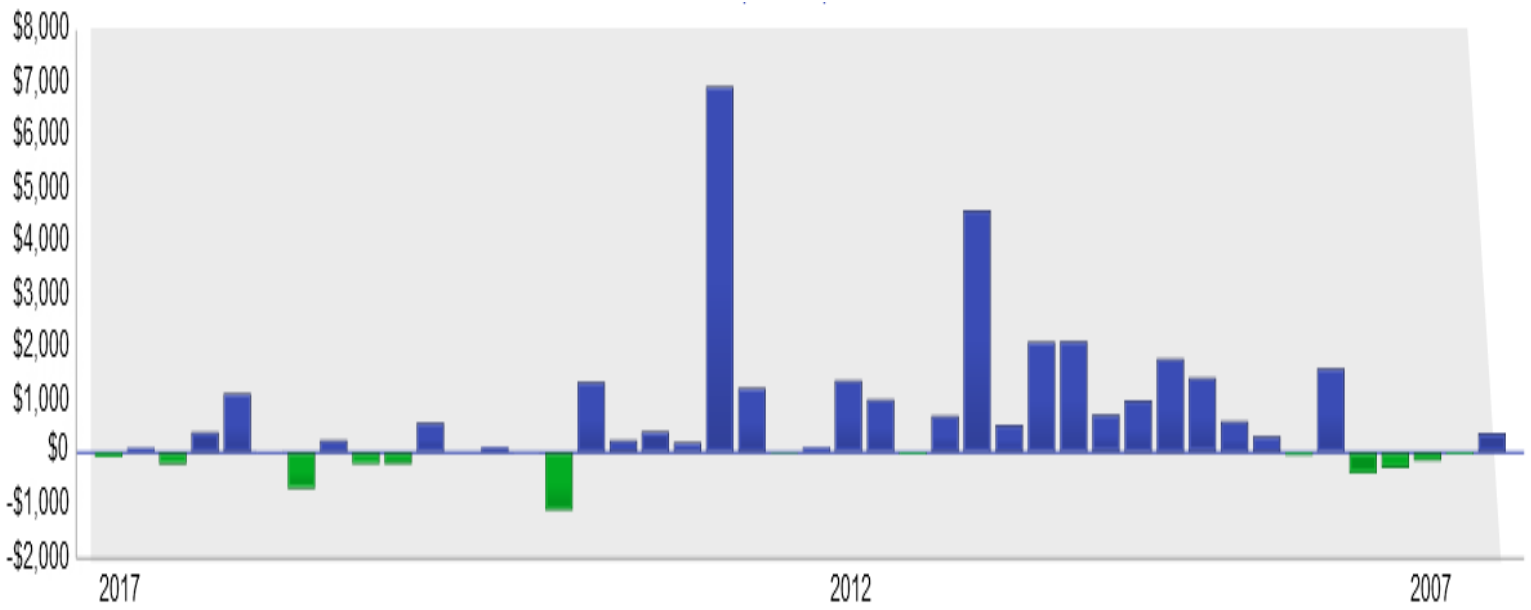
Community Bank Charge-Off Curve



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Reasonable and Supportable Forecasts

- 326-20-30-9 – Adjustments to Historical Credit Loss Information
  - Meant to adjust historical information to reasonable and supportable forecast period
  - Reasonable and supportable forecast period doesn't need to cover expected life of the loan or pool
  - Reversion to historical loss data beyond the reasonable and supportable forecast period
    - ◊ Straight line
    - ◊ Rational or systematic basis

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Six Critical Ways that CECL will Impact Your Q Factors

1. Expected losses instead of probable losses
2. Impact of flexible historical loss periods
3. Will Q Factors be higher or lower under CECL?
4. Setting Q Factors for loan types with low lifetime loss history
5. Use of industry data
6. Relationship between reasonable and supportable forecasts and Q Factors

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Q Factors

- Perform analysis for a number of years
- Choose the time period(s) that best represent today's environment
  - Single period
  - Average of a number of years
- Compared to the historical loss rates used, does the credit union expect that losses will be higher or lower?

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Q Factors

- 326-20-55-4 - To adjust historical credit loss information for current conditions and reasonable and supportable forecasts, an entity should consider significant factors that are relevant to determining the expected collectability.

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Q Factors (continued)

- The borrower's financial condition, credit rating, credit score, asset quality, or business prospects
- The borrower's ability to make scheduled interest or principal payments
- The remaining payment terms of the financial asset(s)
- The remaining time to maturity and the timing and extent of prepayments on the financial asset(s)

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Q Factors (continued)

- The nature and volume of the entity's financial asset(s)
- The volume and severity of past due financial asset(s) and the volume and severity of adversely classified or rated financial asset(s)
- The value of underlying collateral on financial assets in which the collateral-dependent practical expedient has not been utilized

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Q Factors (continued)

- The entity's lending policies and procedures, including changes in lending strategies, underwriting standards, collection, write-off, and recovery practices, as well as knowledge of the borrower's operations or the borrower's standing in the community
- The quality of the entity's credit review system
- The experience, ability, and depth of the entity's management, lending staff, and other relevant staff

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Q Factors (continued)

- The environmental factors of a borrower and the areas in which the entity's credit is concentrated, such as:
  - Regulatory, legal, or technological environment to which the entity has exposure
  - Changes and expected changes in the general market condition of either the geographical area or the industry to which the entity has exposure
  - Changes and expected changes in international, national, regional, and local economic and business conditions and developments in which the entity operates, including the condition and expected condition of various market segments.

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Examiner and Auditor Expectations

- Examiner
  - Part of 2019 supervisory focus
  - What is status of credit union's preparation?
- Auditor
  - Ability to support assumptions (need to show your work)
  - Use of assumptions and data that best estimates ALLL, not provides lowest amount in ALLL

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CECL Methodologies

Any reasonable approach or approaches may be used – guidance is not prescriptive such as

- Loss-rate methods, such as weighted-average remaining maturity method (WARM)
- Probability of default and loss given default
- Migration analysis
- Vintage analysis
- Cash flow analysis

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Financial Impact of CECL Implementation

- Complexity vs accuracy of utilizing multiple methodologies
- Importance of risk rating accuracy, timely update and tracking
- Changes to policies, procedures and process controls
- Consistency of assumptions across models

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CECL Methodologies – WARM Method

FASB Staff Q&A Topic 326, No. 1 – Whether the weighted-average remaining maturity (WARM) method is an acceptable method to estimate expected credit losses

- Provides answers and examples when applying this method
- Give insight as to what are important factors when applying a method to CECL
- This method is intended for smaller, less complex pools of loans
- This method considers an estimate of expected credit losses over the remaining life of the loans occurring through the end of the contractual term

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CECL Methodologies – WARM Method

Q&A indicates an entity that is using loss rate based method currently may be able to continue with a comparable method. HOWEVER, the entity's assumptions needs to address:

- Contractual term of the loans
- Prepayments
- Reasonable and supportable forecasts

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WARM Method - Example

- Allowance calculated as of December 31, 2020
- Pool of financial assets with similar risk characteristics
  - Amortized cost basis of $13.98 million
  - Five year term adjusted by prepayments
- Unemployment is expected to rise in 2021 and 2022
- Management cannot reasonably forecast beyond 2022
- Qualitative adjustment of .25% for both current conditions and reasonable and supportable forecasts

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WARM Method - Example

Step 1: Calculate Annual Charge-Off Rate

Table 1: Calculate Average Annual Charge-off Rate				
		A	B	C = B/A
Year	Amortized Cost	Average Balance	Actual Annual Net Charge-offs	Annual Charge-off Rate
2015	$ 5,126			
2016	8,969	7,048	21	0.30%
2017	11,220	10,094	51	0.51%
2018	12,312	11,766	42	0.36%
2019	12,936	12,624	32	0.25%
2020	13,980	13,458	49	0.37%
Balances are in thousands except charge-off rate data				
			Average annual charge-off rate	0.36%

Source: FASB Staff Q&A Topic 326, No. 1

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WARM Method - Example

Step 2: Estimate the Allowance for Credit Losses

Table 2: Estimated Amortized Cost Basis

		A	B	A*B
Year End	Est. Paydown	Projected Amort Cost	Avg Annual Charge-off Rate	Allowance for Credit Losses
2020 Actual Amortized Cost		$ 13,980	**0.36%**	$ 50
2021	$ 3,700	10,280	**0.36%**	37
2022	3,900	6,380	**0.36%**	23
2023	3,000	3,380	**0.36%**	12
2024	2,160	1,220	**0.36%**	4
2025	1,220	-	**0.36%**	-
Est. unadjusted charge-off amount for remaining balance				126
Paydown & amortized cost balances in thousands				
Unadjusted historical charge-off rate for remaining balance				0.90%
Qualitative Adjustment				0.25%
Total allowance for credit losses rate as of 2020				**1.15%**
Total allowance of credit losses as of 2020 ($13,980 x 1.15%)				**161**

Source: FASB Staff Q&A Topic 326, No. 1

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WARM Method - Example

Impact of Q Factors in Q&A Example

- Based on significant factors that could affect expected collectibility of the amortized cost basis of the pool
- Determined unemployment rate was the primary factor
- Observed unemployment rate has increased as of the current reporting period
- The 25 basis point increase reflects estimated increase in incremental losses for future periods (2021 and 2022)

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No Saved Scenarios

Save Scenario

$ 8,380	**Current ALLL** Allowance as of Jun-18 Call Report	$ 9,507	**Projected CECL Impact** Allowance will increase under CECL
$ 17,887	**Estimated ALLL** Estimated Allowance under CECL requirements	113 %	**Projected Increase to ALLL** Percent increase to current ALLL level

NCUA Call Report date: Jun-18

ALLL Elements | Non-Pooled Loans | User Inputs | Future Losses | Practical Guidance | Utilize Average Annual Losses ☐

EXPORT TO EXCEL

User Inputs have not been customized	No. of Pools	Principal Balance	# of Loans	Weighted Avg. Remaining Mat. (in Quarters)	Expected Lifetime Loss Rate	Peer Grp. Lifetime Loss Rate	Qualitative Factors / Forecast	Total Expected Lifetime Loss	Calculated Loss
Unsecured Consumer Loans									
Unsecured Credit Cards	36	41,128	26,961	8	12.46%	7.31%	0.00%	12.46%	5,124
Payday Alternative Loans	0			4	0.00%	0.00%	0.00%	0.00%	
Non-Federally Guaranteed Student	0			8	0.00%	0.00%	0.00%	0.00%	
Auto Loans									
New Vehicle	21	67,934	2,225	8	1.67%	0.24%	0.00%	1.67%	1,137
Used Vehicle	21	147,516	10,161	8	1.57%	1.15%	0.00%	1.57%	2,322
Real Estate Loans									
1st Mortgages	24	165,588	622	20	11.90%	8.24%	0.00%	11.90%	19,704
Other Real Estate Loans/Lines	28	8,366	508	16	9.96%	13.47%	0.00%	9.96%	833
Other Loans and Leases									
Leases Receivable	0			8	0.00%	0.00%	0.00%	0.00%	
All Other Loans/Lines of Credit	36	8,092	9,183	8	19.36%	5.02%	0.00%	19.36%	1,566
		$438,625	**49,660**						**30,686**

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No Saved Scenarios | NCUA Charter #

Save Scenario

$ 8,380	**Current ALLL** Allowance as of Jun-18 Call Report	$ -2,020	**Projected CECL Impact** Allowance will decrease under CECL
$ 6,360	**Estimated ALLL** Estimated Allowance under CECL requirements	-24 %	**Projected Decrease to ALLL** Percent decrease to current ALLL level

NCUA Call Report date: Jun-18

ALLL Elements | Non-Pooled Loans | User Inputs | Future Losses | Practical Guidance | Utilize Average Annual Losses ☐

EXPORT TO EXCEL

***User Inputs have not been customized**	No. of Pools	Principal Balance	# of Loans	Weighted Avg. Remaining Mat. (in Quarters)	Expected Lifetime Loss Rate	Peer Grp. Lifetime Loss Rate	Qualitative Factors / Forecast	Total Expected Lifetime Loss	Calculated Loss
Unsecured Consumer Loans									
Unsecured Credit Cards	12	41,128	26,961	8	6.94%	3.22%	0.00%	6.94%	2,852
Payday Alternative Loans	0			4	0.00%	0.00%	0.00%	0.00%	
Non-Federally Guaranteed Student	0			8	0.00%	0.00%	0.00%	0.00%	
Auto Loans									
New Vehicle	12	67,934	2,225	8	0.66%	0.53%	0.00%	0.66%	448
Used Vehicle	12	147,516	10,161	8	1.17%	1.05%	0.00%	1.17%	1,727
Real Estate Loans									
1st Mortgages	0	165,588	622	20	0.00%	0.00%	0.00%	0.00%	
Other Real Estate Loans/Lines	4	8,366	508	16	0.00%	0.00%	0.00%	0.00%	
Other Loans and Leases									
Leases Receivable	0			8	0.00%	0.00%	0.00%	0.00%	
All Other Loans/Lines of Credit	12	8,092	9,183	8	39.54%	2.20%	0.00%	39.54%	3,200
		$438,625	**49,660**						**8,227**

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Probability of Default Method

Requires Three Inputs:

- Probability of default
  - Calculate the probability a loan in a pool will default
  - Based on historical performance adjusted for forecasted changes
- Loss given default rate
  - Estimate of expected loss when a loan defaults
- Exposure
  - What is the principal balance when the loan defaults

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Migration Analysis Method

- Tracks the changes in a credit quality factor of a pool of loans over a period of time to determine if the credit quality improves or worsens
- Could be a good method to track commercial loans by risk ratings
- Requires database modeling application
- Incorporates changes in credit quality

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Vintage Analysis Method

- Loan pools are separated into different vintage periods
- Losses are assigned to the appropriate vintage period
- Trends are analyzed by the different vintages
- Could be challenging matching up losses to when loans were originated
- Provides precise information on historical loss rates

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Cash Flow Analysis Method

- Entity projects out the expected cash flows to be received over the life of loan pool.
- Key assumptions in include: interest rate, remaining term, loss rates (probability and expected loss), discount rate, prepayment speed
- Most precise method of estimating CECL
- Most assumptions and data needed
- Will likely need specialized software

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Closing Thoughts

Internal Audit Considerations

- Is management preparing for the adoption of CECL and on track for implementation?
- What is the overall attitude related to CECL?
  - Accurately reflect ALLL?
  - Find as little ALLL as possible?
- Can internal audit provide assistance to the implementation?
  - Validate data
  - Independently assess assumptions

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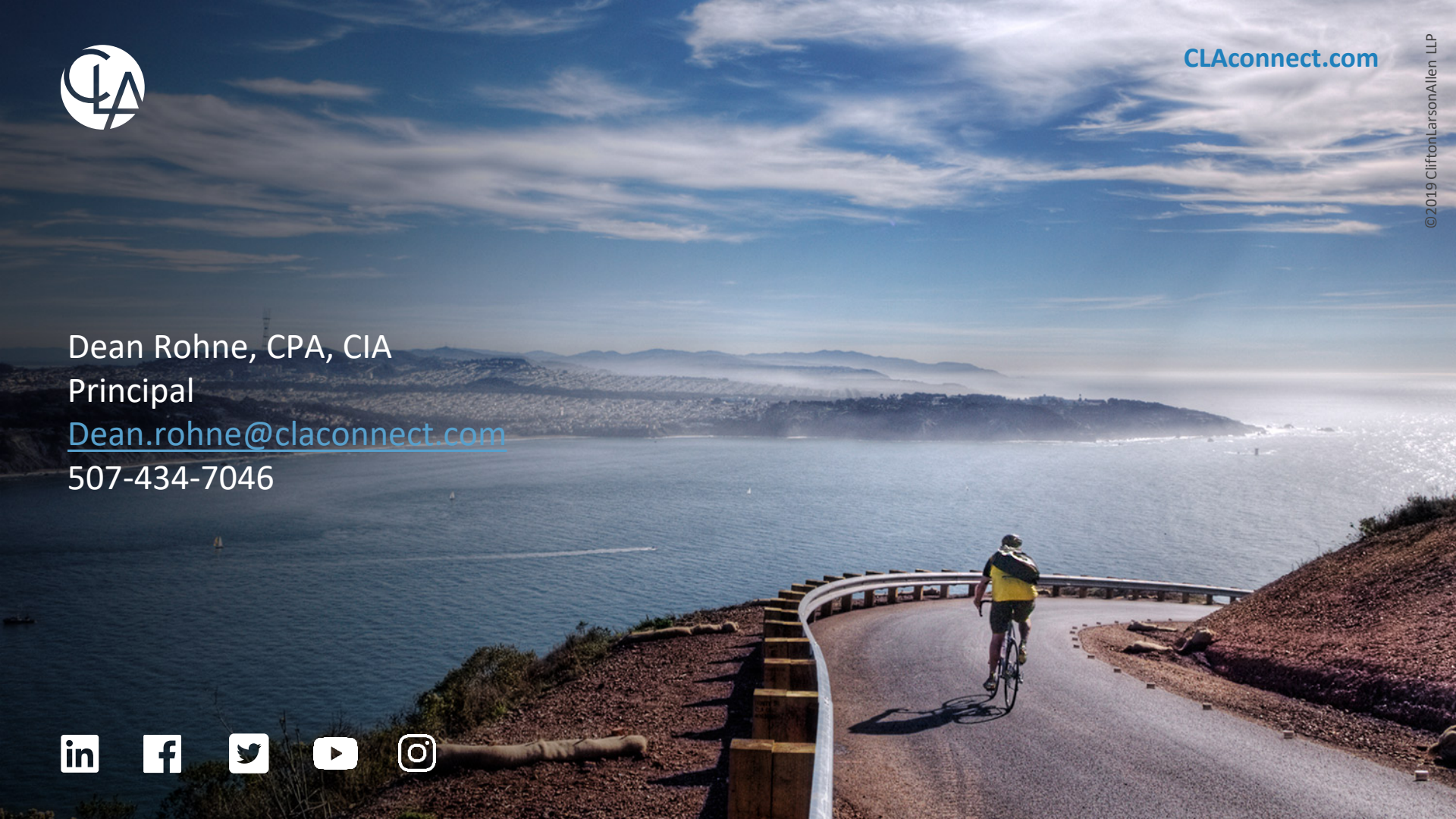

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