

CONVERSATIONS

WITH THE ST. LOUIS FED



FEDERAL RESERVE BANK *of* ST. LOUIS
CENTRAL TO AMERICA'S ECONOMY®

Current Expected Credit Losses (CECL) Methodology Q&A

**Thursday, March 1, 2018
2:30 PM to 3:15 PM CT**



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Today's Presenters

CONVERSATIONS
WITH THE ST. LOUIS FED



FEDERAL RESERVE BANK of ST. LOUIS
CENTRAL TO AMERICA'S ECONOMY®



- **Julie Stackhouse**
Executive Vice President
Federal Reserve Bank of St. Louis



- **Larry Sherrer**
Senior Examiner- St. Louis Fed's CECL Liaison
Federal Reserve Bank of St. Louis

Questions

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Thank You

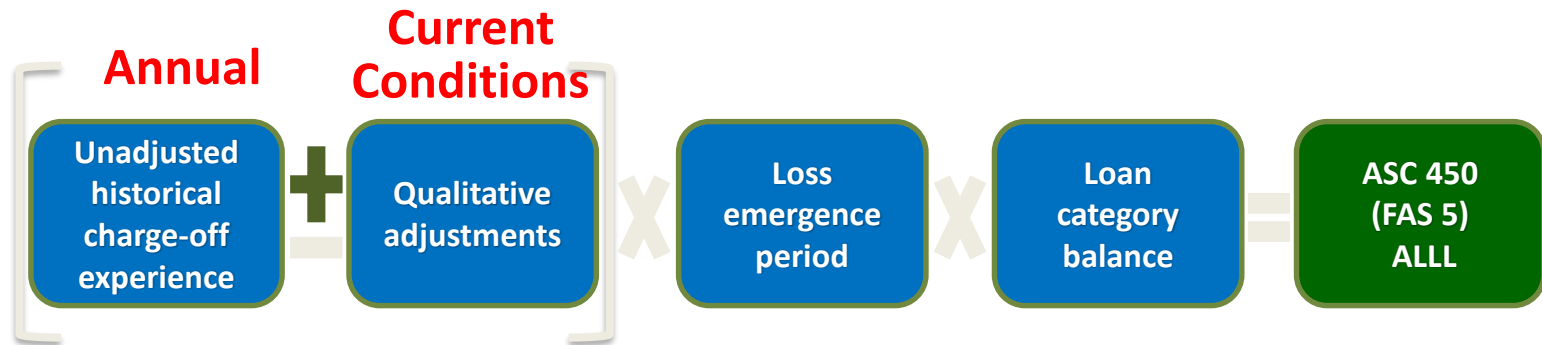
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EXAMPLES-

Loss Rate Methods – Today & Future

Current U.S. GAAP



CECL





Refresher: Incurred Loss Calculation

		A	B	C = B / A
Year End	Amortized Cost	Average Balance	Annual Net Charge-offs	Annual Charge-off Rate
2015	\$ 9,350			
2016	9,398	\$ 9,374	\$ 32	0.34%
2017	10,779	10,088	33	0.33%
2018	11,050	10,914	50	0.46%
2019	10,738	10,894	42	0.39%
2020	10,000	10,369	31	0.30%

(\$ in thousands)



What is Snapshot/Open Pool Method?

- The snapshot/open pool method takes a snapshot of a loan portfolio at a point in time in history and tracks that loan portfolio's performance in the subsequent periods until its ultimate disposition
- Charge-offs in the subsequent periods are aggregated to derive an unadjusted lifetime historical charge-off rate

Total charge-offs associated with
snapshot loan portfolio

=

Snapshot loan portfolio balance

*Lifetime
historical
charge-off rate
associated with
snapshot loan
portfolio*



Example 1: Snapshot/Open Pool Method

Fact Pattern:

- Calculate the allowance for credit losses as of 12/31/2020
- CRE loan portfolio (pool with loans of similar risk characteristics)
 - Amortized cost basis of \$10 million
 - Average life of 5 years (contractual term adjusted by prepayments and reasonably expected troubled debt restructuring)

Current Conditions and Forecast:

- Management expects the following in 2021 and 2022:
 - Decline in real estate values
 - Rise in unemployment
- Management cannot reasonably forecast beyond 2022
- Assume 0.25% qualitative adjustment to represent both current conditions and reasonable & supportable forecasts



Example 1: Snapshot/Open Pool Method (cont.)

Year End	Amortized Cost	Charge-offs Associated with 2015 Snapshot Balance	
2015	\$ 9,350		
2016	9,398	\$	32
2017	10,779		32
2018	11,050		14
2019	10,738		9
2020	10,000		2

(\$ in thousands)



Example 1: Snapshot/Open Pool Method (cont.)

Year End	Amortized Cost	Charge-offs Associated with 2015 Snapshot Balance
2015	\$ 9,350	
2016	9,398	\$ 32
2017	10,779	32
2018	11,050	14
2019	10,738	9
2020	10,000	2
2015 Pool's cumulative charge-offs (a)		\$ 88
2015 Amort cost (b)		\$ 9,350
Unadjusted lifetime historical charge-off rate (a)/(b)		0.94%
Qualitative adjustments		0.25%
Total allowance for credit losses ratio as of 2020 (c)		1.19%
2020 Amort cost (d)		\$ 10,000
Total allowance for credit losses as of 2020 (c)x(d)		\$ 119

(\$ in thousands)



What is Remaining Life Method?

- Remaining life method utilizes average annual charge-off rates and remaining life to estimate the allowance for credit losses
- For amortizing assets, remaining contractual life is adjusted by the expected scheduled payments and prepayments (i.e., paydowns)
- Average annual charge-off rate is applied to the amortization adjusted remaining life to determine the unadjusted lifetime historical charge-off rate

Avg annual
charge-off rate



Amortization
adjusted
remaining life



*Lifetime historical
charge-off rate*



Example 2: Remaining Life Method (cont.)

Step 1: Compute annual charge-off rate (same as incurred loss info)

(\$ in thousands)

		A	B	C = B / A
Year End	Amortized Cost	Average Balance	Annual Net Charge-offs	Annual Charge-off Rate
2015	\$ 9,350			
2016	9,398	\$ 9,374	\$ 32	0.34%
2017	10,779	10,088	33	0.33%
2018	11,050	10,914	50	0.46%
2019	10,738	10,894	42	0.39%
2020	10,000	10,369	31	0.30%

Average annual charge-off rate 0.36%



Example 2: Remaining Life Method (cont.)

Step 2: Calculation Option 1

		A	B	A*B
Year End	Est. Paydown	Projected Amort Cost	Avg Annual Charge-off Rate	Allowance for Credit Losses
	2020 Actual Amortized Cost	10,000		
2021	3,849	6,151	0.36%	36
2022	2,528	3,623	0.36%	22
2023	1,828	1,796	0.36%	13
2024	1,208	588	0.36%	7
2025	588	-	0.36%	2
Estimated unadjusted lifetime charge-off amount				\$ 80
Unadjusted lifetime historical charge-off rate				0.80%
Qualitative adjustments				0.25%
Total allowance for credit losses rate as of 2020				1.05%
Total allowance of credit losses as of 2020 (\$10,000 x 1.05%)				\$ 105

(\$ in thousands)



Example 2: Remaining Life Method (cont.)

Step 2: Calculation Option 2

(\$ in thousands)

Year End	Est. Paydown	Projected Amort Cost	Remg Life
<i>2020 Actual Amortized Cost</i>		10,000	1.00
2021	3,849	6,151	2.00
2022	2,528	3,623	3.00
2023	1,828	1,796	4.00
2024	1,208	588	5.00
2025	588	-	
Weighted avg amortization adjusted remaining life			2.22 A
Average annual charge-off rate			0.36% B
Unadjusted lifetime historical charge-off rate			0.80% A * B
Qualitative adjustments			0.25%
Total allowance for credit losses rate as of 2020			1.05%
Total allowance of credit losses as of 2020 (\$10,000 x 1.05%)			\$ 105

Expected paydowns can be obtained from loan system or approximated from asset and liability management practices



Example 2: Remaining Life Method (cont.)

Step 2: Calculation Option 2 – Formula for 2.22 years

	B	C	D = BxC	D/A
Year End	Paydown	Remg Life	Calc Method 2:	
2020 Amort Cost	10,000	A		
2021	3,849	1.00	3,849	0.38
2022	2,528	2.00	5,056	0.51
2023	1,828	3.00	5,484	0.55
2024	1,208	4.00	4,832	0.48
2025	588	5.00	2,940	0.29
		2.22		2.22

(\$ in thousands)

Calc Method 1 (excel formula):

2.22 = Sumproduct (column B: Column C) / A



What is Vintage Method?

- “Vintage” refers to the year of origination
- Vintage method tracks all charge-offs associated with a specific vintage (i.e., origination year)
- Borrowers’ historical charge-off pattern is used to estimate future losses

Total charge-offs related to 20XX originations

=

Total amount of 20XX originations

*Lifetime
historical
charge-off rate
associated with
20XX vintage*



Example 3: Vintage Method (cont.)

Step 1: Capture and organize historical loan charge-off data

Origination			Charge-offs (\$)					Inception to Date Charge-offs	Total Lifetime Charge-offs
Amount	Date		Period 1	Period 2	Period 3	Period 4	Period 5		
\$ 5,500	2015		2	19	14	8	2	45	45
\$ 5,000	2016		2	35	15	8		60	
\$ 3,500	2017		-	18	8			26	
\$ 3,100	2018		1	14				15	
\$ 3,100	2019		1					1	
\$ 2,940	2020							-	

(\$ in thousands)



Example 3: Vintage Method (cont.)

Step 2: Compute loan charge-off rates

Origination		Charge-offs (%)					Inception to Date Charge-offs	Total Lifetime Charge-offs
Amount	Date	Period 1	Period 2	Period 3	Period 4	Period 5		
\$ 5,500	2015	0.04%	0.35%	0.25%	0.15%	0.04%	0.83%	0.83%
\$ 5,000	2016	0.04%	0.70%	0.30%	0.16%		1.19%	
\$ 3,500	2017	0.00%	0.50%	0.23%			0.73%	
\$ 3,100	2018	0.04%	0.45%				0.49%	
\$ 3,100	2019	0.02%					0.02%	
\$ 2,940	2020						0.00%	

(\$ in thousands)

Denominator is the origination amount (NOT the outstanding loan balance) used to compute loan charge-off rates under vintage analysis



Example 3: Vintage Method (cont.)

Step 3: Determine which historical loss period is a reasonable period on which to base the expected credit loss rate calculation

Origination			Charge-offs (%)					Remaining Lifetime	Remaining Lifetime
Amount	Date		Period 1	Period 2	Period 3	Period 4	Period 5	Charge-offs (%)	Charge-offs (\$)
\$ 5,500	2015		0.04%	0.35%	0.25%	0.15%	0.04%	N/A	N/A
\$ 5,000	2016		0.04%	0.70%	0.30%	0.16%	0.04%		
\$ 3,500	2017		0.00%	0.50%	0.23%	0.15%	0.04%		
\$ 3,100	2018		0.04%	0.45%	0.26%	0.15%	0.04%		
\$ 3,100	2019		0.02%	0.50%	0.26%	0.15%	0.04%		
\$ 2,940	2020		0.03%	0.50%	0.26%	0.15%	0.04%		

(\$ in thousands)

Average charge-off rate 0.03% 0.50% 0.26% 0.15% 0.04%



Example 3: Vintage Method (cont.)

Step 4: Compute allowance for credit losses: $A \times B = C$

A

B

C = A x B

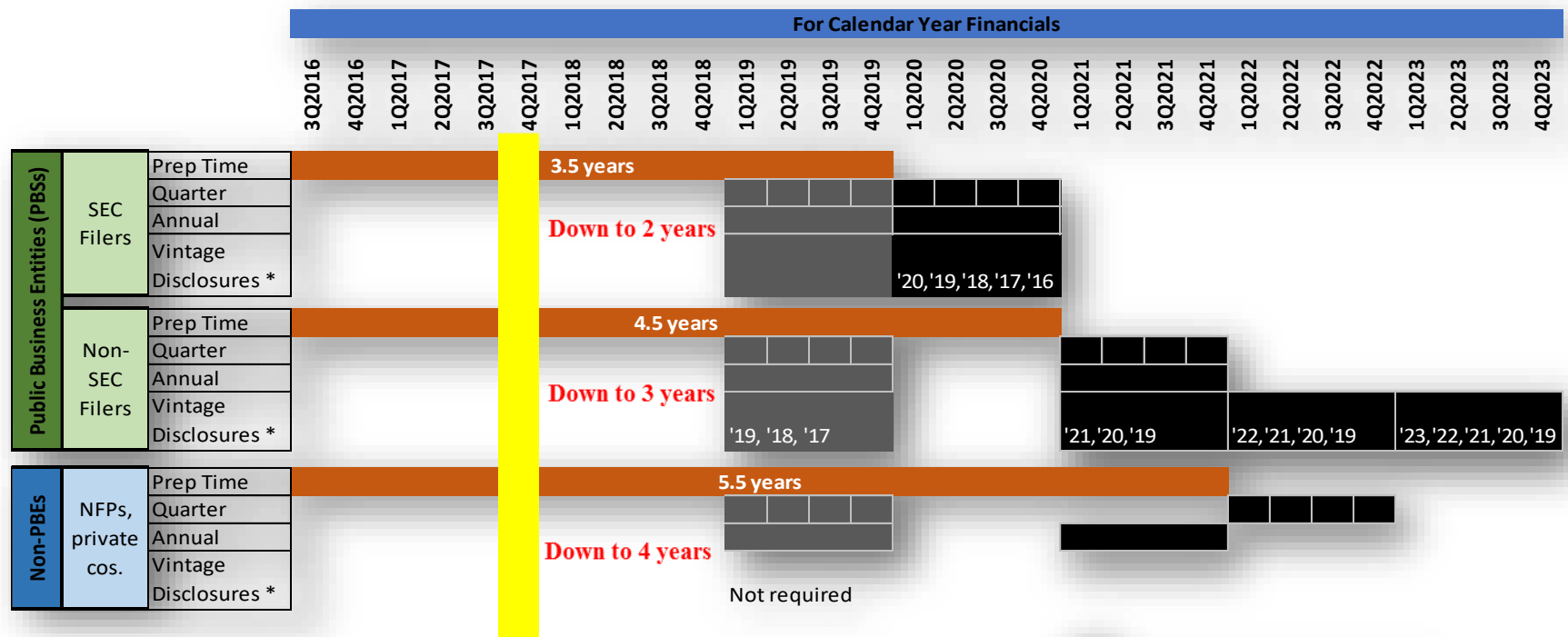
Origination			Charge-offs (%)					Remaining Lifetime Charge-offs (%)	Remaining Lifetime Charge-offs (\$)
Amount	Date		Period 1	Period 2	Period 3	Period 4	Period 5		
\$ 5,500	2015		0.04%	0.35%	0.25%	0.15%	0.04%	N/A	N/A
\$ 5,000	2016		0.04%	0.70%	0.30%	0.16%	0.04%	0.04%	\$ 2
\$ 3,500	2017		0.00%	0.50%	0.23%	0.15%	0.04%	0.19%	\$ 7
\$ 3,100	2018		0.04%	0.45%	0.26%	0.15%	0.04%	0.45%	\$ 14
\$ 3,100	2019		0.02%	0.50%	0.26%	0.15%	0.04%	0.95%	\$ 30
\$ 2,940	2020		0.03%	0.50%	0.26%	0.15%	0.04%	0.98%	\$ 29

Unadjusted lifetime historical charge-offs \$ 81 **D = sum of C**
2020 Amort cost 10,000 **E**

Unadjusted lifetime historical charge-off rate 0.81% **D/E**
Qualitative adjustments 0.25%
Total allowance for credit losses rate as of 2020 1.06% **F**
Total allowance of credit losses as of 2020 \$ 106 **E x F**



Transition time – another look



**Non-PBEs:

Adoption as of 12/31/2021 = 12 months CECL ALLL at YE, but Qtrly incurred loss ALLL

For comparability, these entities may choose to adopt as of 1/1/2021.

Time available for implementation

Earliest date adoption permitted

First period adoption required

* For interim-periods, current year-to-date considered to be current-period originations.



CECL Tips and Reminders

- CECL does not increase the amount of estimated loss over the life of the loan, but moves recognition forward in time
- Retains concepts of Troubled Debt Restructuring,
- Retains many other financial reporting concepts for loans:
 - loan write-offs,
 - nonaccrual, and
 - loans held for sale



CECL Tips and Reminders

- CECL retains concept of 'collateral dependent expediency' impairment analysis but with slightly altered definition
- Modifies rules for loss accounting on AFS debt securities by requiring write-off through an allowance with a fair value floor applied to the carrying value of the asset
- Off-balance sheet exposure requires an allowance unless contract is *unconditionally cancellable by lender* (different from today's guidance)
- Pools should be organized by **risk**



CECL Tips and Reminders

Data collection considerations:

- What historical data can be retrieved?
 - Are all loans on the same system?
 - Any data missing due to conversions/mergers/system changes?
 - Are there any distortions due to renewals?
 - Data gaps and how can they be filled?
 - How are risk ratings handled?
- How can the data be organized and analyzed?
 - What queries can be run?
 - Can you sort by Call Report code/risk rating/GL account, etc...
 - Don't forget securities

➤ **Start retaining data now!**



CECL – Fed Supervisory Strategies

What is the Fed doing?

- Reserve Bank Implementation Team to address supervisory issues across districts and
 - promote consistency among agencies and State examiners
 - examiner training in phases beginning 1H2018
- Issue updated supervisory guidance every 6-9 months
- Conduct outreach
- Fact finding questions with bank management



CECL – Fed Supervisory Strategies

What is the Fed doing?

- Looking for effort appropriate to size, complexity and resources
- Supervisory interest will increase as we get closer to transition
- Updating Call Reports, manuals, procedures, etc...
- Ongoing input regarding technical questions
 - TDRs
 - Credit cards
 - Use of peer data

CECL Implementation

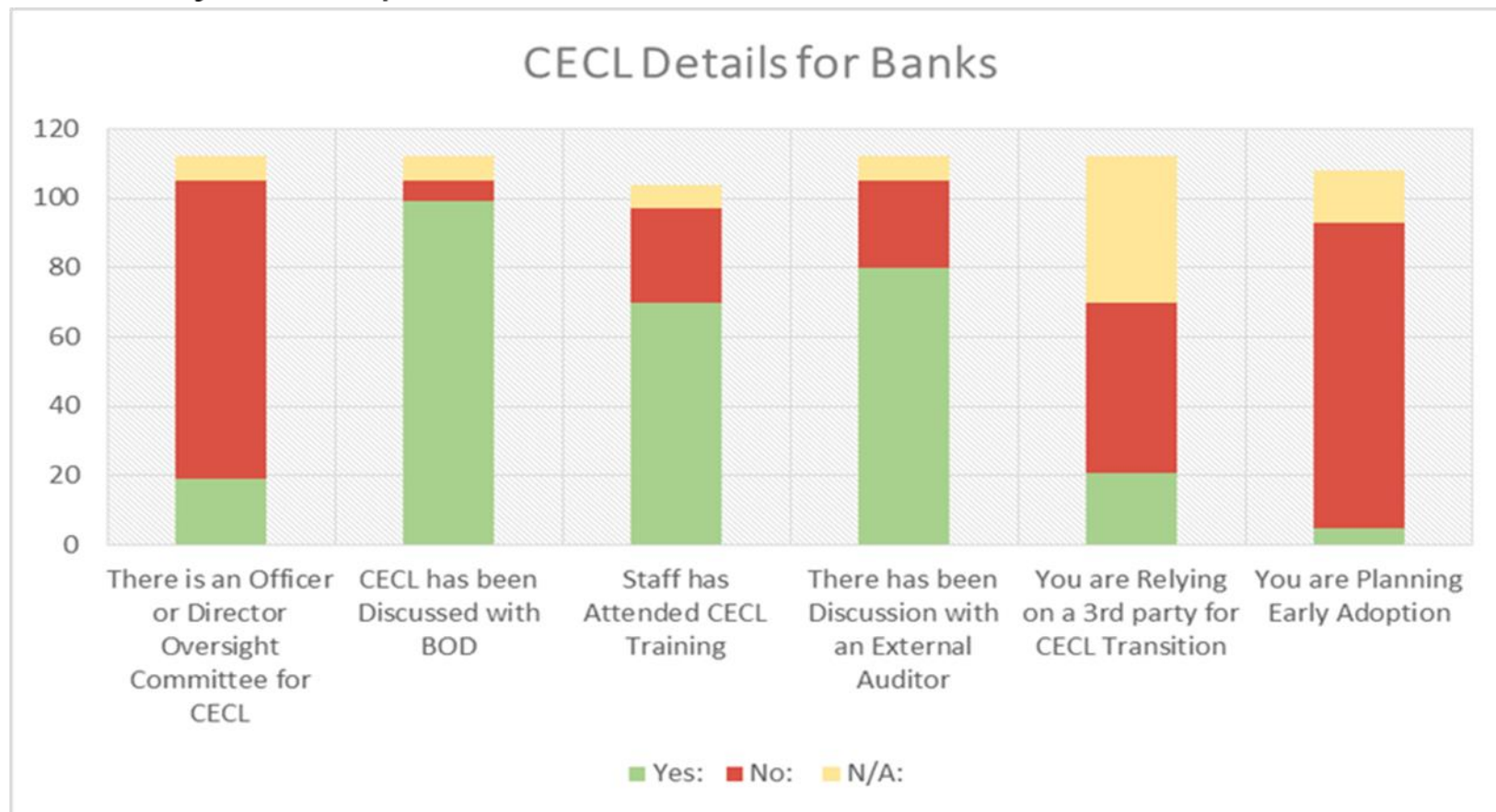
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How do you compare?:



Survey of 8th district SMBs