



Building Success. Together.

# PORTFOLIO STRESS TESTING

Knowing your margin for error

# Today's Presenter



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Abrigo

## Portfolio Stress Testing - Agenda

- Regulatory Expectations & Guidance
- Defining Stress Testing
- Potential Pitfalls
- Leveraging Stress Testing Results
- Overview of Supplemental Teaching Materials
- Questions

## **ABA Advanced Commercial Lending School: Polling Question**

**What interest rate did you charge for an  
“acceptable” or “normal” deal from 2020 - 2022?**

## **ABA Advanced Commercial Lending School: Polling Question**

**What DSC (typically) do you need to get an approval  
in your bank?**

Please, give the *“real answer,”* especially if it differs from what your policy says.

# Regulatory Expectations & Guidance

"The Federal Reserve is focused on improving the speed, force and agility of supervision, as appropriate. This includes ensuring supervisory actions are commensurate with a banking organizations size, risk, and complexity. **The Federal Reserve continues to closely monitor risks to the banking sector, including credit, interest rate and liquidity risks.**"

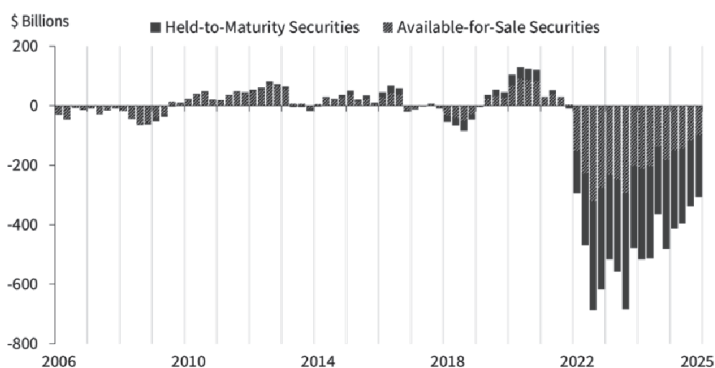
Source: Federal Reserve Bank Supervision and Regulation Report, May 2024

"....We are **modifying supervisory processes so that once issues are identified, they are addressed more quickly by both banks and supervisors.** For example, examiners have been **conducting additional supervisory activities for firms with large unrealized losses on securities, high CRE exposures,** or other material vulnerabilities. Where weaknesses in risk management have been identified, examiners are **requiring firms to address these weaknesses promptly and encouraging them to bolster their capital and liquidity positions.**"

Source: Testimony by Vice Chair for Supervision Barr on supervision and regulation before the Committee on Financial Services, U.S. House of Representatives, Washington, D.C. May 15, 2024

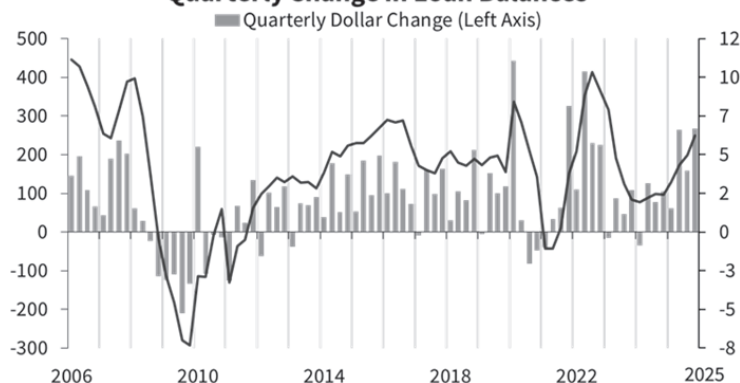
## Regulatory Expectations & Guidance

Unrealized Gains (Losses) on Investment Securities



Note: Insured Call Report filers only. Unrealized losses on securities solely reflect the difference between the market value and book value of non-equity securities as of quarter end. This chart does not reflect unrealized gains or losses in other parts of the balance sheet.

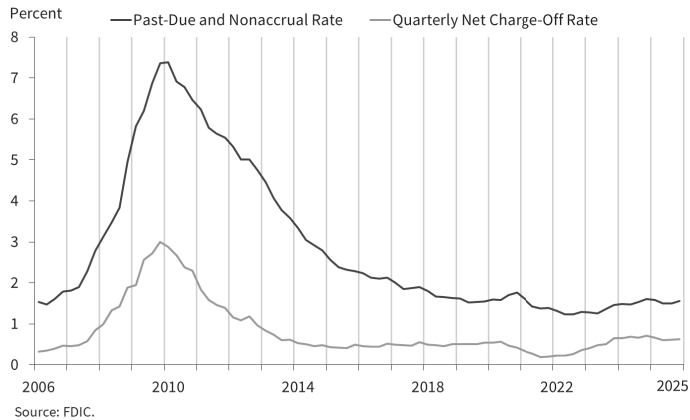
Quarterly Change in Loan Balances



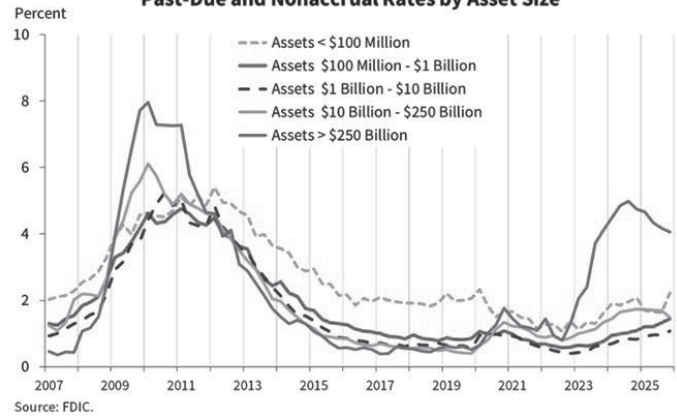
Note: ASC Topics 810 and 860 resulted in the consolidation of large amounts of securitized loan balances back onto banks' balance sheets in the first quarter 2010. Although the amount consolidated cannot be precisely

# Regulatory Expectations & Guidance

**Past-Due and Nonaccrual Rate and Quarterly Net Charge-Off Rate**



**Bank Non-Owner Occupied, Nonfarm Nonresidential Loan Past-Due and Nonaccrual Rates by Asset Size**



# Regulatory Expectations & Guidance

Observations 

2026-03-06: **6.75**

Updated: Mar 9, 2026 3:17 PM CDT

Next Release Date: Mar 10, 2026

Units:

Percent,

Not Seasonally Adjusted

Frequency:

Daily

1Y

5Y

10Y

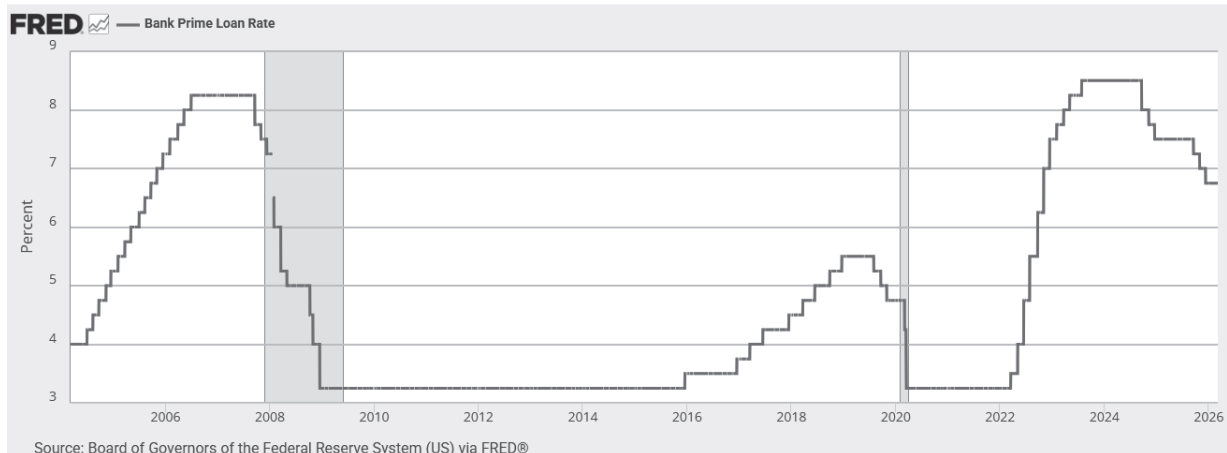
Max

Edit Graph 

2004-03-06

to 2026-03-06

Download 



# Regulatory Expectations & Guidance

Observations ▾

Q4 2025: **1.58**

Updated: Feb 24, 2026 1:19 PM CST

Next Release Date: Not Available

Units:

Percent,

Seasonally Adjusted

Frequency:

Quarterly,

End of Period

1Y

5Y

10Y

Max

Edit Graph 

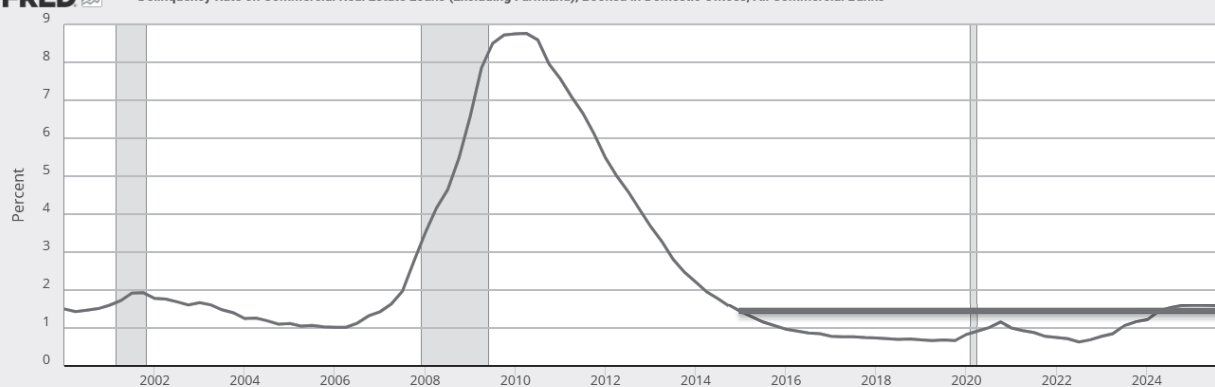
Download 

2000-01-01

to

2025-10-01

**FRED**  — Delinquency Rate on Commercial Real Estate Loans (Excluding Farmland), Booked in Domestic Offices, All Commercial Banks



Source: Board of Governors of the Federal Reserve System (US) via FRED®

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11



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# Regulatory Expectations & Guidance

## Who is expected to do what?

formal annual testing applies to some institutions; risk-appropriate analysis applies broadly

Institution	What is formally required?	Minimum scenario expectation	What examiners will look for
Community banks ≤\$10B	No large-bank style enterprise-wide stress test requirement	Annual stress testing or sensitivity analysis of key loan portfolios	Can management quantify adverse outcomes, set risk appetite, and connect results to strategy/capital?

aba.com | 1-800-BANKERS a formal rule does not apply, examiners still expect stress testing depth to rise with concentration, growth, and complexity.

12



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# Regulatory Expectations & Guidance

## What examiners will look for in the program itself

- 1 Board & governance** Board reviews capital adequacy, remediates process gaps, and approves the capital plan annually.
- 2 Complete scope** Testing captures all relevant exposures and produces quarter-by-quarter estimates of losses, provisions, earnings, and capital.
- 3 Scenario relevance** Scenario design is anchored in the official macro path but also tailored to institution-specific concentrations and market conditions.
- 4 Conservative mechanics** Formal supervisory testing does not assume future risk-mitigating actions beyond positions already on the balance sheet.
- 5 Management use** Results feed capital planning, concentration limits, ACL review, liquidity contingency planning, and watch-list actions.

# Regulatory Expectations & Guidance

## Commercial portfolio focus areas in 2026

### Refinance & maturity wall

Maturing credits, balloon risk, DSCR resets, and borrower liquidity under higher-for-longer funding costs.

### CRE segment hotspots

Office, construction, land, investor CRE, and concentrations that could transmit the official -39% CRE shock unevenly.

### Global cash flow & guarantors

Dependence on guarantor support, affiliate debt, contingent obligations, and spillover risk across related borrowers.

### Collateral & valuation freshness

Current rent rolls, cash flows, lease rollover, updated appraisals/evaluations, and policy triggers for refresh.

### Risk ratings & accommodations

Do downgrades, interest reserves, extensions, and exceptions show up quickly enough in the scenario design?

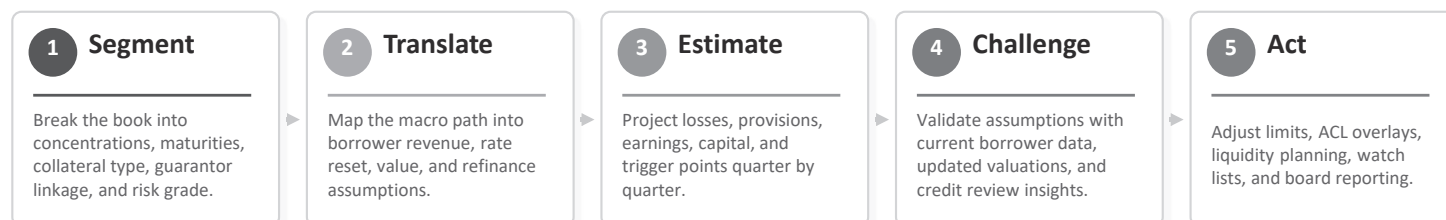
### Funding and liquidity feedback loop

How CRE stress could pressure deposits, collateral values, contingency funding, and overall ability to hold versus sell.

# Regulatory Expectations & Guidance

## Regulator-ready stress testing workflow

Examiners are looking for a repeatable process, not a one-time model run.



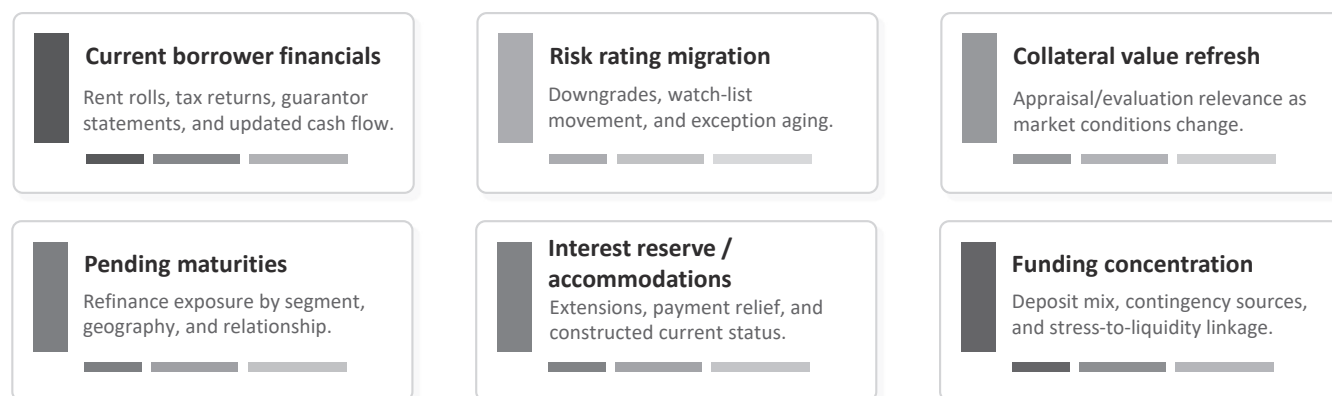
the best programs translate macro scenarios into specific portfolio decisions

**A clean workflow improves explainability: management can show how a macro shock flows into borrower behavior, collateral value, capital pressure, and specific decisions.**

# Regulatory Expectations & Guidance

## What should be monitored between test cycles?

The model matters less if the monitoring inputs are stale.



a strong stress testing program becomes a monitoring dashboard



# Regulatory Update

## Stress Testing



Identified concentrations in CRE



Office Space & Healthcare / Senior Living facilities



Impact on Earnings and Capital



Sticker shock to customers on rate resets

17



## Regulatory Expectations & Guidance

### Questions examiners are likely to ask in 2026

if your team can answer these clearly, the program is usually in good shape

1 Which segments would create the largest capital or ACL pressure under the 2026 severe path?

4 How do downgrades, exceptions, accommodations, and interest reserves feed into the model?

2 What assumptions are specific to your footprint, borrower base, and CRE concentrations?

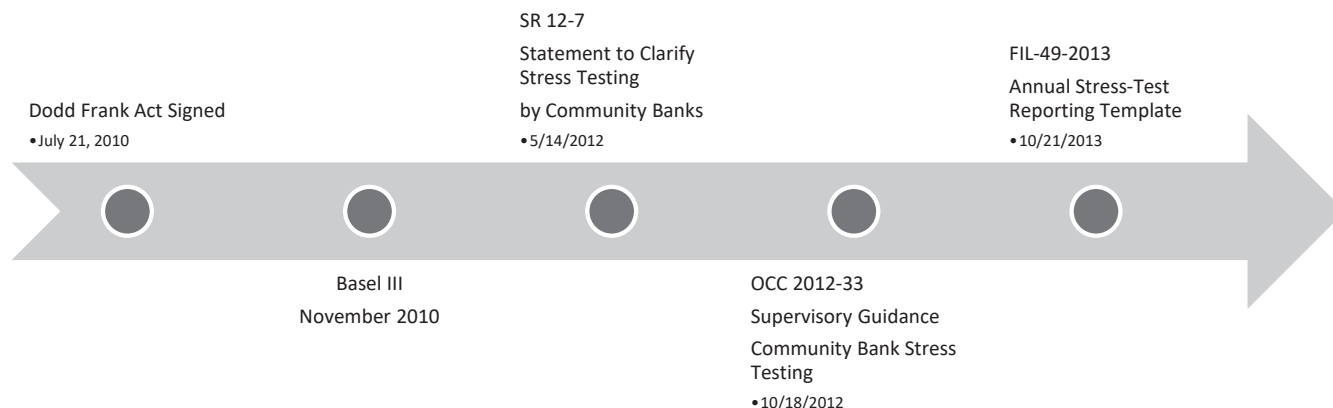
5 What changes in the results would trigger board action, limit changes, or liquidity contingency steps?

3 How current are the financials, rent rolls, guarantor statements, and valuations behind the stress test?

6 How does management know the process is not just compliant, but actually influencing decisions?

# Regulatory Expectations & Guidance

## Guidelines Issued to Community banks on Stress Testing



# Regulatory Expectations & Guidance

## Highly Concentrated CRE

- Total loans reported on the Report of Condition for construction, land development, and other land represent 100 percent or more of the institution's total capital; or
- Total CRE loans as defined in the CRE guidance represent 300 percent or more of the institution's total capital, and the outstanding balance of the institution's CRE loan portfolio has increased by 50 percent or more during the prior 36 months.

# Regulatory Expectations & Guidance

## Stress Testing and Capital Planning

The OCC expects every bank, regardless of size or risk profile, to have an effective internal process to (1) assess its capital adequacy in relation to its overall risks, *and* (2) to plan for maintaining appropriate capital levels. Stress testing can be a prudent way for a community bank to identify its key vulnerabilities to market forces and assess how to effectively manage those risks should they emerge.

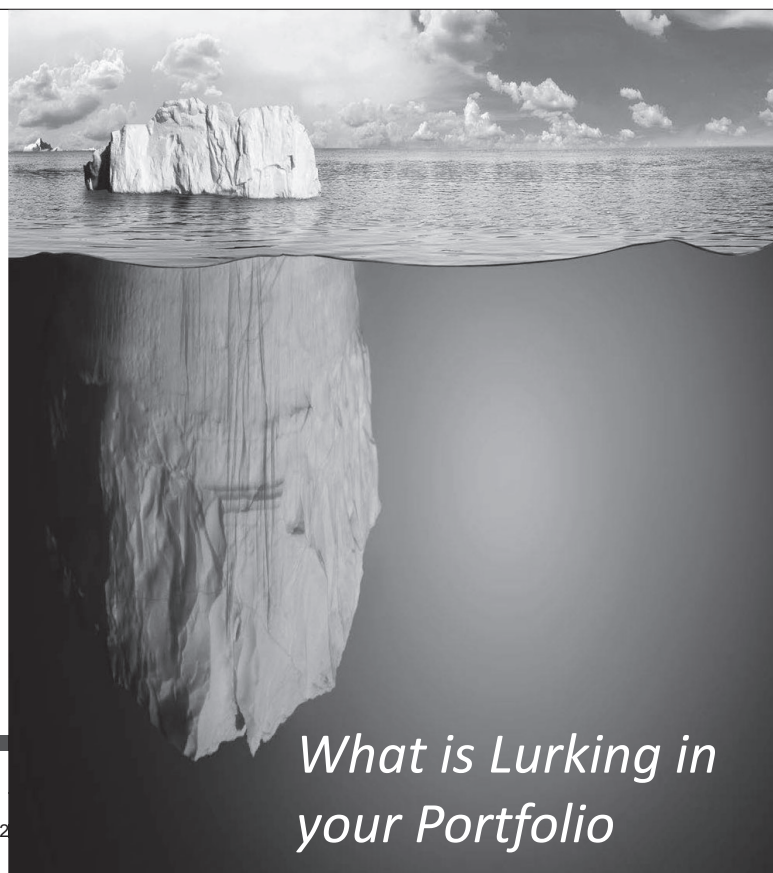
If the results of a stress test indicate that capital ratios could fall below the level needed to adequately support the bank's overall risk profile, the bank's board and management should take appropriate steps to protect the bank from such an occurrence. This may include establishing a plan that requires closer monitoring of market information, adjusting strategic and capital plans to mitigate risk, changing risk appetite and risk tolerance levels, limiting or stopping loan growth or adjusting the portfolio mix, adjusting underwriting standards, raising more capital, and selling or hedging loans to reduce the potential impact from such stress events.

John C. Lyons Jr.  
Senior Deputy Comptroller and Chief National Bank Examiner

## Stress Testing

The term stress testing describes a range of techniques used to assess the vulnerability of a portfolio to major changes in the economic environment or to exceptional but plausible events.

Blaschke, Jones, Majnoni, and Peria, 2001, "Stress Testing of Financial Systems: An Overview of Issues, Methodologies, and FSAP Experiences," IMF Working Paper WP/01/88.



# Defining Stress Testing

## Preparing for Mayhem

We need to understand some of the common events that can derail our customers ability to meet their payment obligations.



# Defining Stress Testing

What is the risk if you are wrong or slip up



What is your margin for error?

# Defining Stress Testing

## Stress Testing Methods and Approaches

**Transaction stress testing** is a method that estimates potential losses at the loan level by assessing the impact of changing economic conditions on a borrower's ability to service debt.

**Portfolio stress testing** is a method that helps identify current and emerging risks and vulnerabilities within the loan portfolio by assessing the impact of changing economic<sup>2</sup> conditions on borrower performance, identifying credit concentrations, measuring the resulting change in overall portfolio credit quality, and ultimately determining the potential financial impact on earnings and capital.

# Defining Stress Testing

## Stress Testing Methods and Approaches

**Enterprise-level stress testing** is a method that considers multiple types of risk and their interrelated effects on the overall financial impact under a given economic scenario. These risks include, but are not limited to, credit risk within loan and security portfolios, counter-party credit risk, interest rate risk, and changes in the bank's liquidity position.

**Reverse stress testing** is a method under which the bank assumes a specific adverse outcome, such as suffering credit losses sufficient to cause a breach in regulatory capital ratios, and then deduces the types of events that could lead to such an outcome. This type of analysis (e.g. a "break the bank" scenario) can help a bank consider scenarios beyond normal business expectations and challenge common assumptions about performance and risk mitigation strategies.

# Defining Stress Testing

- **Sensitivity Analysis**: refers to assessment of risk when certain variables, parameters, and inputs are "stressed" or "shocked."  
Unlike scenario analysis, this is performed without an explicit underlying reason or narrative in order to explore what occurs under a range of inputs and at extreme or highly adverse levels.
- **Scenario Analysis**: apply a historical or hypothetical scenario to assess the impact of various events and circumstances, including the most extreme situations.  
Examples include severe recession, failure of a major counterparty, loss of major clients, localized economic downturn, or a sudden change in interest rates brought about by unfavorable inflation developments.

## Defining Stress Testing – Loan Portfolio (Top Down)

New Guidance on Stress Testing – 10/18/2012

**Appendix B - Constructing a Basic Portfolio Level Stress Test into three sections:**

### **Section 1 Estimated Loan Portfolio Stress Losses**

**Objective:** This section estimates the potential loan losses over a two-year stress test horizon for the entire loan portfolio. There are four components in this section.

- ✓ Loan Portfolio Categories
- ✓ Quarter-End Loan Portfolio Balances
- ✓ Stress Period Loss Rates
- ✓ Stress Period Losses

# Defining Stress Testing – Loan Portfolio (Top Down)

## Section 2 Estimated Impact on Earnings

**Objective:** This section estimates the potential impact to net income from the stress scenario over the two-year period. There are five components in this section.

- ✓ Pre-provision Net Income
- ✓ Provision Expense to Cover Stress Losses
- ✓ Provision to Maintain an Adequate ALLL
- ✓ Income Tax Expense (Benefit)
- ✓ Net Income

# Defining Stress Testing – Loan Portfolio (Top Down)

## Section 3 Estimated Impact of Stress on Capital

**Objective:** This section estimates the hypothetical impact on capital of the stressed environment. The example uses Tier 1 capital and the Tier 1 leverage ratios to help analyze the potential change in capital caused by a stress scenario. Banks can also review the changes in other relevant capital measures, such as the potential change in the common equity ratio, to assess the results of the stress test. This section has five components.

- ✓ Tier 1 Capital
- ✓ Net Change in Tier 1 Capital
- ✓ Adjusted Tier 1 Capital
- ✓ Quarterly Average Assets
- ✓ Tier 1 Leverage Ratio



### 1. Estimated Loan Portfolio Stress Losses

Loan Portfolios from Call Report Schedule RC-G	Quarter End as of Date \$ Balances	Two – Year Stress Period Loss Rate %	Two – Year Stress Period \$ Losses
Loans Secured by type of Real Estate			
a. Construction and Development	100	20%	20
b. Farmland	50	8%	4
c. 1 – 4 Family Housing	100	4%	4
d. Multifamily Housing	75	16%	12
e. Nonfarm Nonresidential Property	100	8%	8
Agriculture Production and Farmer Loans	40	6%	2.4
Consumer Loans	60	14%	8.4
Commercial and Industrial	50	4%	2
All Other Loans	25	4%	1
<b>Total</b>	<b>600</b>		<b>61.8</b>

### 2. Estimated Impact of Stress on Earnings

Descriptions	Previous Two Years Actual	Pro Forma Stress Period
Pre-Provision Net Income	34.5	30
Less Provision to Cover Two-Year Losses	12	61.8
Less Provision to Maintain Adequate ALLL	0	10
Income Tax Expenses (Benefit)	5.5	(14.6)
<b>Net Income</b>	<b>16.5</b>	<b>(27.2)</b>

### 3. Estimated Impact of Stress on Capital

Descriptions	Previous Two Years Actual	Pro Forma Stress Period
Tier 1 Capital \$	88	88
Net Change in Tier 1 Capital from Stress Period (Net Income from Step 2)	N/A	(27.2)
Adjusted Tier 1 Capital \$	88	60.8
Quarterly Average Assets \$	800	738
Tier 1 Leverage Ratio %	11%	8.2%



# Defining Stress Testing – Loan Portfolio (Reverse)

Is there a plausible event that could create losses sufficient to create capital concerns for your Financial Institution

What total losses could your loan portfolio withstand before it drops you below your targeted Tier 1 Leverage Ratio

Step 1. Estimated Loan Portfolio Stress Losses (000)		
Loan Portfolios from Call Report Schedule RC-C	Quarter End Dec-17	2 Yr Stress Reverse
Total Losses	\$1,172,736.0	\$89,000.0
Step 2. Estimated Impact of Stress on Earnings		
Descriptions	2 Yr Actual	Pro forma Reverse
Pre-Provision Net Income	44,033.0	27,056.5
Less Provision to Cover Two-Year Losses	0.0	89,000.0
Less Provision to Maintain Adequate ALLL	5,805.0	10,640.0
Net Income before Tax	38,228.0	(72,583.5)
Income Tax Expense (Benefit)	13,352.0	(25,404.2)
Net Income after Taxes	24,876.0	(47,179.3)
Step 3. Estimated Impact of Stress on Capital		
Descriptions	2 Yr Actual	Pro forma Reverse
Tier 1 Capital \$	159,097.0	159,097.0
Net Change in Tier 1 Capital - (NI From Step 2)	NA	(47,179.3)
Adjusted Tier 1 Capital \$	159,097.0	111,917.7
Tier 2 Capital \$	10,362.0	10,640.0
Total Adjusted Risk-Based Capital	169,536.0	122,557.7
Quarterly Avg Assets \$ - (Less Losses Step 1)	1,488,220.0	1,399,220.0
Risk Weighted Assets - (Less Losses Step 1)	1,192,257.0	1,103,257.0
Tier 1 Leverage Ratio %	10.69%	8.00%
Tier 1 Risk Based Capital Ratio	13.34%	10.14%
Total Risk Based Capital Ratio	14.22%	11.11%

# Defining Stress Testing – Loan Level (Bottoms Up)

## Most Common Variables

- Collateral value depreciation (regional and local)
- Cash Flow Available for Debt Service (EBITDA, NOI, CADA, etc.)
- Interest Rates

## Commercial Real Estate

- Debt-service coverage
- LTV ratios
- Capitalization Rates
- Occupancy status
- Lease rates or ADR
- Net operating income
- CRE sector performance (office, retail, multi-family, warehouse/industrial, lodging)
- Interest-rate levels on variable-rate loans
- Economic factors such as changes in local employment and house prices

## AG Lending

- Input Costs
- Yields
- Commodity Price Crash
- Birth Rates
- Diseases
- Weather Conditions
- Loss of entire crop
- Loss of contract(s)

# Defining Stress Testing – Loan Level (Bottoms Up)

As part of this detailed Loan Level Stress test two different scenarios were tested; an Adverse scenario, and a Severely Adverse scenario. Below are the assumptions that were used for each scenario in the model.

	Current	Adverse	Severely Adverse
<b>DSCR (Debt Service Coverage Ratio)</b>			
<b>Commercial –</b>	Used current DSCR	Assumed a 10% reduction in the current DSCR	Assumed a 25% reduction in the current DSCR
<b>CRE –</b>	Used current DSCR	Assumed a 20% reduction in the current DSCR	Assumed a 40% reduction in the current DSCR
<b>A&amp;D –</b>	Used current DSCR	Assumed a 10% reduction in the current DSCR	Assumed a 25% reduction in the current DSCR
<b>LTV (Loan to Value)</b>			
<b>Commercial –</b>	Used current outstanding balance / Collateral Value	Used current outstanding balance / (Collateral Value reduced by 15%)	Used current outstanding balance / (Collateral Value reduced by 25%)
<b>CRE –</b>	Used current outstanding balance / Collateral Value	Used current outstanding balance / (Collateral Value reduced by 15%)	Used current outstanding balance / (Collateral Value reduced by 25%)
<b>A&amp;D –</b>	Construction/Development Loans, used committed amount / Collateral Value	Used total committed amount / (Collateral Value reduced by 25%)	Used total committed amount / (Collateral Value reduced by 50%)

Examples of key assumptions used in a Loan Level stress test

Scenario and Sensitivity are often included

# Defining Stress Testing – Loan Level (Bottoms Up)

## Dodd-Frank Act Stress Test = DFAST

- Annual required stress tests for \$10-\$50 billion banks
- Projects multiple variables
  - GDP
  - Interest rates
  - Housing growth
  - Employment
- Sets baseline forecast for comparison
- Establishes potential stress events
  - Baseline Scenario
  - Severely adverse event

## Defining Stress Testing – Loan Level (Bottoms Up)

### Dodd-Frank Act Stress Test = DFAST 2025

#### Base Line Scenario:

- The unemployment rate moves up to 4.6 percent in the first quarter of 2026, and stays at that level through the third quarter of 2026, before gradually declining to 4.2 percent by the end of the scenario.
- Nominal house prices increase gradually for the duration of the scenario, while commercial real estate prices increase between about 4 and 5 percent per year.
- The 3-month Treasury rate decreases from 3.7 percent at the end of 2025 to 3.1 percent in the fourth quarter of 2026, and hovers around that level through the remainder of the scenario. The 10-year Treasury yield hovers around 4.1 percent, its value in the fourth quarter of 2025, for the duration of the scenario.
- Consumer price inflation in the euro area increases from 1.6 percent in the fourth quarter of 2025 to 2 percent in the second quarter of 2027 and then hovers around that level for the rest of the scenario.

## Defining Stress Testing – Loan Level (Bottoms Up)

### Dodd-Frank Act Stress Test = DFAST 2025

#### Severely Adverse Scenario:

- The U.S. unemployment rate climbs to a peak of 10 percent in the third quarter of 2027, a 5.5 percentage point increase relative to its fourth-quarter 2025 level.
- House prices fall steadily through the fourth quarter of 2027, reaching a trough that is about 30 percent below their level in the fourth quarter of 2025.
- Commercial real estate prices reach a trough in the fourth quarter of 2027 that is 39 percent below their level at the end of 2025.
- The 3-month Treasury rate falls significantly from 3.7 percent in the fourth quarter of 2025 to 0.1 percent by the second quarter of 2026 and remains there for the remainder of the scenario.
- The spread between mortgage rates and 10-year Treasury yields widens 1.3 percentage points to reach a level of 3.4 percentage points by the third quarter of 2026 before narrowing to a level of about 2.4 percentage points at the end of the severely adverse scenario.

# Defining Stress Testing – Loan Level (Bottoms Up)

Bottom Up Testing Scenario - Top 25 CRE Exposures											
		Cash Flow down	20%								
		Collateral Values down	30%								
		Selling Costs	6%								
		Marketing Discount	10%								
Borrower ID	Loan Amount	Starting Collateral Value	CFADS (or NOI)	ADS	Current DSC	Initial LTV	Baseline Impairment	Stressed Collateral Value	Stressed DSC	Stressed LTV	Potential Impairment
235560	11,366,100	15,570,000	1,322,839	1,023,000	1.29x	73.0%	-	10,899,000	1.03x	104.3%	0
235486	9,051,000	12,930,000	1,380,307	850,000	1.62x	70.0%	-	9,051,000	1.30x	100.0%	0
235412	8,942,400	12,420,000	1,112,425	816,000	1.36x	72.0%	-	8,694,000	1.09x	102.9%	0
234895	8,316,000	10,800,000	767,720	710,000	1.08x	77.0%	-	7,560,000	0.87x	110.0%	(1,965,600)
235116	7,752,000	10,200,000	1,086,702	670,000	1.62x	76.0%	-	7,140,000	1.30x	108.6%	0
235042	7,110,200	9,740,000	871,444	640,000	1.36x	73.0%	-	6,818,000	1.09x	104.3%	0
234968	6,997,500	9,330,000	693,521	613,000	1.13x	75.0%	-	6,531,000	0.91x	107.1%	(1,511,460)
234821	6,234,000	10,390,000	881,070	683,000	1.29x	60.0%	-	7,273,000	1.03x	85.7%	0
234600	6,201,600	8,160,000	605,680	536,000	1.13x	76.0%	-	5,712,000	0.90x	108.6%	(1,403,520)
234526	4,001,400	5,130,000	363,960	337,000	1.08x	78.0%	-	3,591,000	0.86x	111.4%	(984,960)
235190	3,861,300	6,330,000	537,284	416,000	1.29x	61.0%	-	4,431,000	1.03x	87.1%	0
235264	3,727,800	6,540,000	465,515	430,000	1.08x	57.0%	-	4,578,000	0.87x	81.4%	0
234452	3,664,000	4,580,000	358,190	301,000	1.19x	80.0%	-	3,206,000	0.95x	114.3%	(970,960)
234379	2,257,000	3,700,000	279,450	243,000	1.15x	61.0%	-	2,590,000	0.92x	87.1%	0
235930	1,628,100	2,430,000	207,144	160,000	1.29x	67.0%	-	1,701,000	1.04x	95.7%	0
235856	1,573,200	2,280,000	243,876	150,000	1.63x	69.0%	-	1,596,000	1.30x	98.6%	0
235782	1,547,800	2,180,000	195,863	143,500	1.36x	71.0%	-	1,526,000	1.09x	101.4%	0
235338	1,398,600	1,890,000	140,456	124,000	1.13x	74.0%	-	1,323,000	0.91x	105.7%	(287,280)
234158	1,250,000	1,575,000	256,324	127,358	2.01x	79.4%	-	1,102,500	1.61x	113.4%	0
234305	1,013,200	1,490,000	120,540	98,000	1.23x	68.0%	-	1,043,000	0.98x	97.1%	0
234747	908,800	1,420,000	151,470	93,500	1.62x	64.0%	-	994,000	1.30x	91.4%	0
234232	836,400	1,020,000	85,746	67,000	1.28x	82.0%	-	714,000	1.02x	117.1%	0
235708	739,800	1,370,000	102,067	90,000	1.13x	54.0%	-	959,000	0.91x	77.1%	0
235634	730,800	1,260,000	89,963	83,000	1.08x	58.0%	-	882,000	0.87x	82.9%	0
234673	576,700	730,000	65,280	48,000	1.36x	79.0%	-	511,000	1.09x	112.9%	0
101,685,700		143,465,000	12,384,838	9,452,358	1.31x	70.9%	-	100,425,500	101.3%	(7,123,780)	

# Defining Stress Testing – Loan Level (Bottoms Up)

## Top 25 NOO CRE testing suggests:

- Over 60% of balances tested may experience cash flow issues; and 38% would be below a 1.00x DSC.
- The bank may experience a significant increase in Classified Assets; especially given 30.1% of balances tested resulted in cash flow below 1.00x DSC with LTVs in excess of 100%.
- Approximately 25% of the balances tested demonstrated significant cash flow stress with DSC ratios between 1.00 and 1.05x.
- Nearly 80% of balances tested saw collateral equity decline to less than 10%.

CRE Loan to Value - Pre Test						
DSCR	60%	70%	80%	90%	100%	100.01%
>= 1.75x	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%
1.51x	0.0%	11.3%	7.6%	0.0%	0.0%	0.0%
1.25x	6.1%	5.4%	29.1%	0.8%	0.0%	0.0%
1.15x	0.0%	3.2%	3.6%	0.0%	0.0%	0.0%
1.05x	5.1%	0.0%	26.5%	0.0%	0.0%	0.0%
1.00x	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<= 0.99x	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

CRE Loan to Value - Under Stress						
DSCR	60%	70%	80%	90%	100%	100.01%
>= 1.75x	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.51x	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%
1.25x	0.0%	0.0%	0.0%	0.0%	11.3%	7.6%
1.15x	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.05x	0.0%	0.0%	0.0%	0.0%	0.0%	17.9%
1.00x	0.0%	0.0%	0.0%	9.9%	1.6%	12.0%
<= 0.99x	0.0%	0.0%	0.7%	6.6%	1.0%	30.1%

# Defining Stress Testing – Loan Level (Bottoms Up) Loan Migration

## Loan Grade Assumptions

### Commercial

Risk Grade Assignment	Risk Grades									Weighing
	1	2	3	4	5	6	7	8	9	
Repayment (DSCR)	>= 2.50	2.49 - 2.00	1.99 - 1.50	1.49 - 1.20	1.19 - 1.00	0.99 - 0.90	.089 - 0.80	.079 - 0.70	<.70	50.00%
LTV	< 55%	56% - 65%	66% - 70%	71% - 75%	76% - 80%	81% - 85%	86% - 90%	90% - 99%	> 100%	25.00%

### Commercial RE

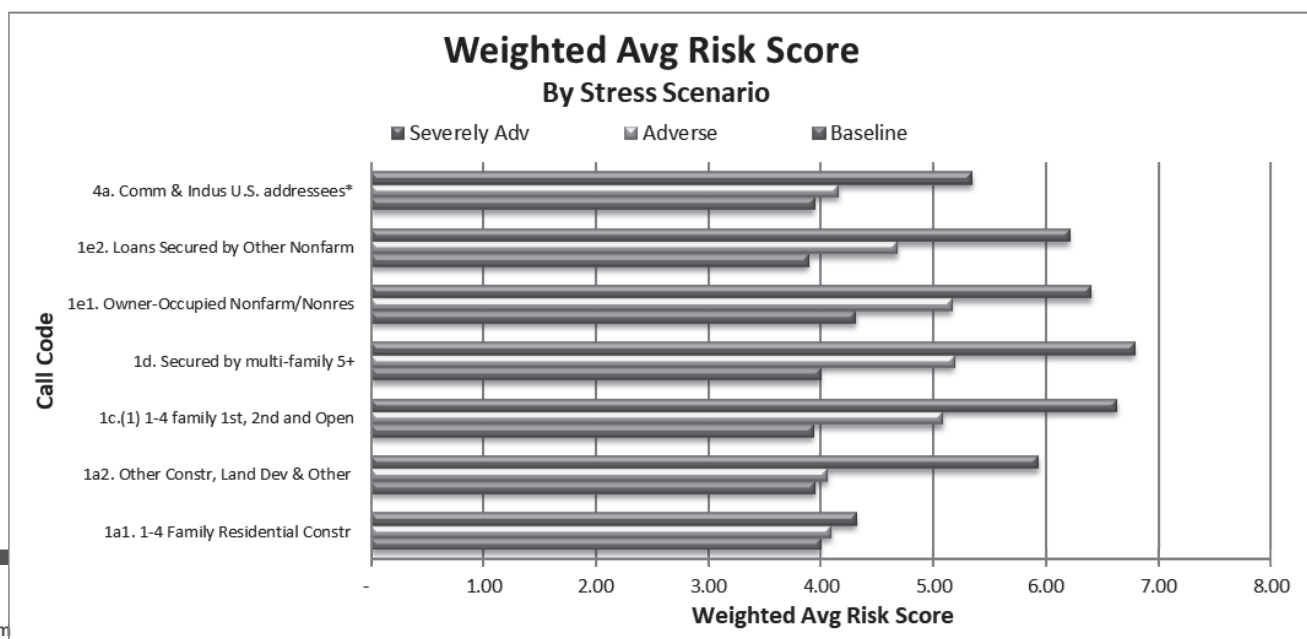
Risk Grade Assignment	Risk Grades									Weighing
	1	2	3	4	5	6	7	8	9	
Repayment (DSCR)	>= 2.00	1.99 - 1.76	1.75 - 1.51	1.50 - 1.36	1.35 - 1.16	1.15 - 1.06	1.05 - 1.01	1.00 - .85	<.85	50.00%
LTV	< 55%	56% - 65%	66% - 70%	71% - 75%	76% - 80%	81% - 85%	86% - 90%	90% - 99%	> 100%	35.00%

### A&D

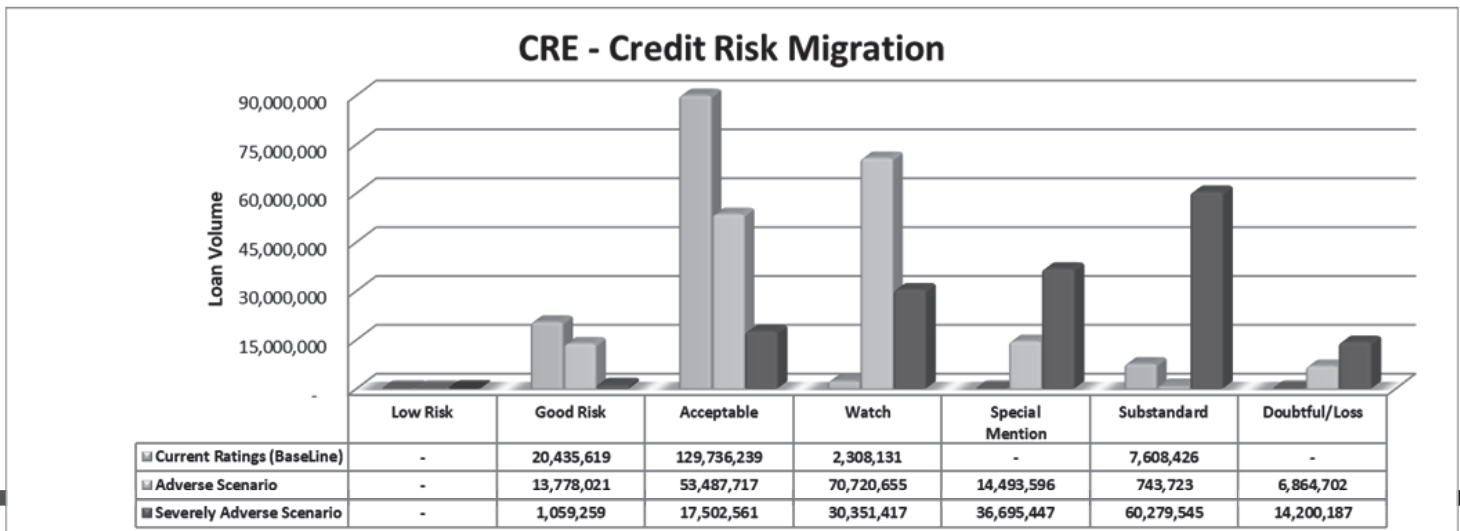
Risk Grade Assignment	Risk Grades									Weighing
	1	2	3	4	5	6	7	8	9	
CLTV	< 55%	56% - 65%	66% - 70%	71% - 75%	76% - 80%	81% - 85%	86% - 90%	90% - 99%	> 100%	55.00%

The impact of changes to both the DSCR and LTV were used in the analysis based on the grading assumptions above.

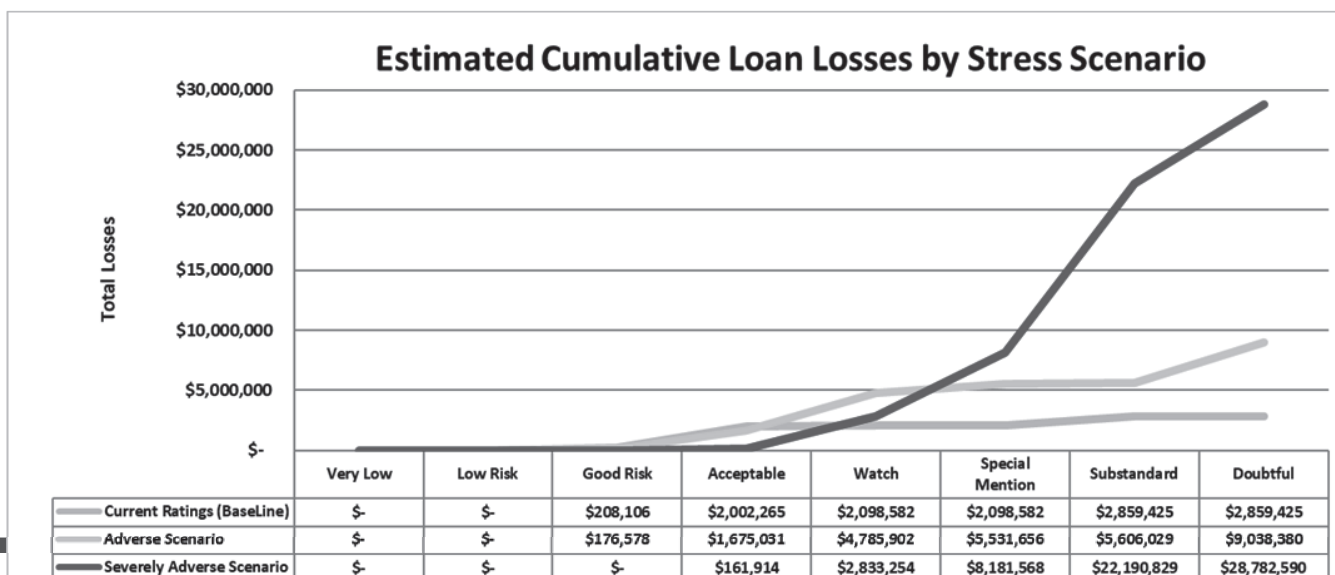
# Defining Stress Testing – Loan Level (Bottoms Up) Loan Migration



## Defining Stress Testing – Loan Level (Bottoms Up) Loan Migration



## Defining Stress Testing – Loan Level (Bottoms Up) Loan Migration



# Assigning Credit Risk

## Pay Strategies

Assess borrower's ability to make agreed upon payments

- Debt Service Coverage Ratio
- Debt Leverage Ratios
  - Debt to Income
  - Debt to Net Worth

## Save Strategies

Limits losses if the borrower stops making payments

- LTV
- Collateral type
- Guarantors

# Assigning Credit Risk

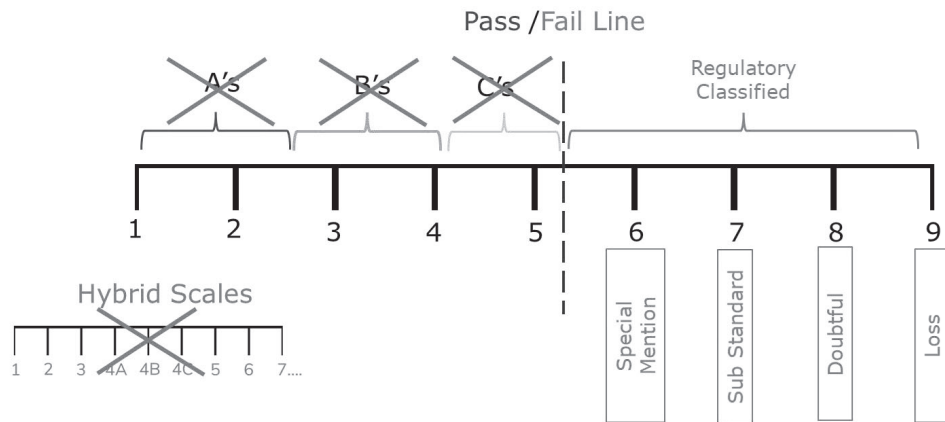
## Definition of Global Cash Flow Analysis

The three most common use cases of when Global Cash Flow Analysis should be completed by a lender:

1. Complex Credits with multiple related business entities
2. Assess the real value of personal guarantees on Commercial loans
3. When we have concerns with the commingling of funds within a Single Entity and personal financials.

# Stress Testing – Loan Level (Pitfalls)

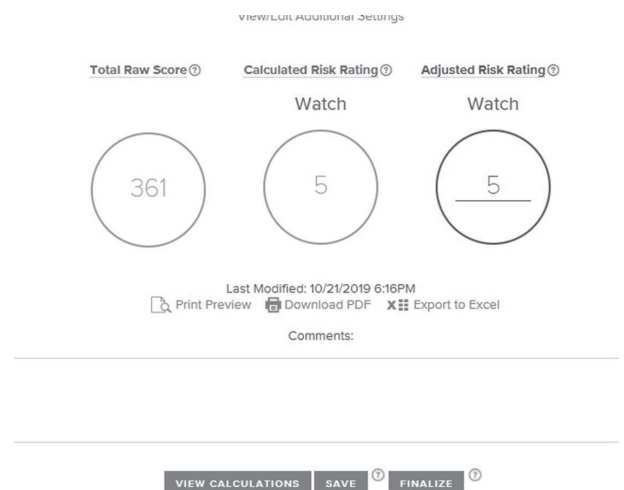
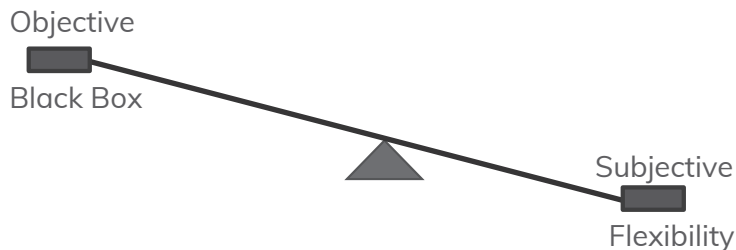
How to convert to a useful **numeric** loan quality scale



# Stress Testing – Loan Level (Pitfalls)

## Subjective Loan Grading

The Key is Finding Balance





# Stress Testing – Loan Level (Pitfalls)

- Data Limitations
- Technology Limitations
- Resource Limitations

"Boiling the ocean" to attempt an impossible task or project, or to make a task unnecessarily difficult and overly complex. It's often used to criticize someone for taking on too much or trying to solve a problem with a scope that is too large and unwieldy.

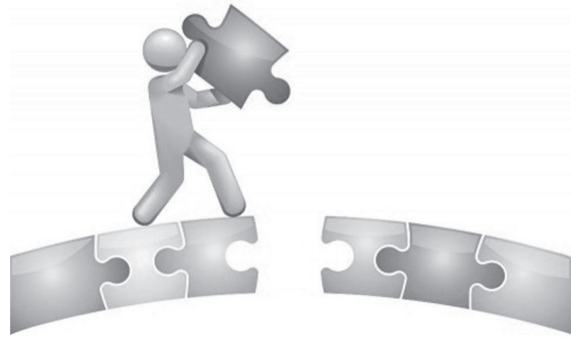


## Leveraging Stress Testing Results

- The test was only your Top 25 NOO CRE borrowers, can you use these results to extrapolate results across the rest of the portfolio?
  - ✓ If the entire NOO CRE portfolio showed similar stress, how large of a potential impairment could you be faced with?
  - ✓ Does your Bank have appropriate Capital Contingency Plans to deal with this level of stress?
- Can the ACL reasonably absorb the potential impairments?
  - ✓ Would your Board of Directors and Shareholders be content with the ACL historic ratio to the loan portfolio?
  - ✓ Would the ACL be under pressure from other, correlated segments of the portfolio?

# Leveraging Stress Testing Results

- How do you create common stress test scenarios that can bridge the gaps?
- Impact to the Capital Plan
- Growth Strategies
- Loan pricing



# How is AI impacting Commercial Lending Monitoring

- What AI is:
  - Automation
  - Pattern recognition
  - Prediction
- What AI is not:
  - Replacement for credit judgement
  - Relationship builder



# How is AI impacting Commercial Lending Monitoring



- Knowledge retrieval (Policy)
- Machine Learning (Automation)
  - Workflow (agentic AI)
  - Financial statement spreading
  - Exception detection
  - Covenant tracking & ticklers
  - Generative Credit Memos
- Portfolio Monitoring (Prediction)
  - Watchlists triggered by KPIs
  - Early warning for renewals and downgrades
  - Concentration monitoring

# How is AI impacting Stress Testing

AI is impacting commercial loan portfolio monitoring for community banks by:

- 1. Increasing frequency and quality of risk insights** via real-time, AI-driven monitoring.
- 2. Enabling predictive risk analytics** that anticipate issues before they surface.
- 3. Enhancing stress testing and scenario analysis** for more robust risk planning.
- 4. Automating data aggregation** to reduce manual effort and error.
- 5. Supporting smarter portfolio decisioning** including pricing and rebalancing

# How is AI impacting Stress Testing

AI isn't a silver bullet. Some real-world considerations include:

1. Ensuring data quality and governance so models produce reliable outputs
2. Addressing compliance, explainability, and auditability concerns, particularly with generative AI
3. Avoiding over-reliance on algorithms without human oversight

Regulatory expectations and prudent risk management still require human expertise in interpretation and judgment

## Takeaways

- 1 Delinquencies and charge offs are trending up for several CRE sectors.
- 2 Regular loan portfolio stress testing should be included in your enterprise risk management program.
- 3 One of the major objectives of a loan portfolio stress test is understanding how the results impact income and capital.
- 4 A stress testing program should include multiple stress test scenarios and sensitivity analysis on major assumptions.

# Questions ???

## Portfolio Stress Testing

### Supplemental Material Overview

# Supplemental Materials – Top Down & Reverse Stress Test

- Download Sample Reverse Stress Test .xls
- Will need to look up last Quarters RC-C and RC-R
- Will need 2 Yr Forecast of Summary Income Statement

Call Report Data - FDIC

- <https://cdr.ffiec.gov/public/ManageFacsimiles.aspx>
- RC-C Loans and Leases
- RC-R Capital Ratios

# Supplemental Materials – Top Down & Reverse Stress Test

Loan Portfolios	To Base Line Scenario														2.00		6.00	
	Calculated					Input					Copy		Copy					
															1.00			
															2 Yr Projected Losses		Stress Test Scenario	
Dec-24	2 Yr Avg Balance	3 Yr Avg Balance	Net Losses Prev 8 Qtrs	Net Losses Prev 12 Qtrs	Losses Prev 8 Qtrs %	Losses Prev 12 Qtrs %	Current ALLL %	Stress Ad	Rolling 8 Qtrs	Rolling 12 Qtrs	Based on ALLL %	Base Line	Adverse	Severely Adverse				
1 Loans Secured by type of Real Estate	\$ 905,265	\$ 916,444	\$ 836,336	\$ 2,170	\$ 3,413	0.24%	0.41%	100%	100%	0.24%	0.41%	0.00%	0.00%	0.00%	0.00%			
a. Construction Loans	\$ 217,524	\$ 207,180	\$ 169,352	\$ 872	\$ 1,947	0.42%	1.15%	100%	100%	0.42%	1.15%	0.00%	0.00%	0.00%	0.00%			
1-4 Construction Loans	\$ 118,499	\$ 112,933	\$ 93,326	\$ -	\$ -	0.00%	0.00%	0.30%	100%	0.00%	0.00%	0.30%	0.60%	1.80%	5.40%			
Other Con, Dev, & Land Loans	\$ 99,025	\$ 94,247	\$ 76,026	\$ 872	\$ 1,947	0.93%	2.56%	100%	100%	0.93%	2.56%	2.56%	5.12%	15.36%	46.08%			
b. Farmland	\$ 484	\$ 1,446	\$ 964	\$ -	\$ -	0.00%	0.26%	100%	100%	0.00%	0.26%	0.26%	0.51%	1.54%	4.62%			
c. 1 - 4 Family Housing	\$ 276,520	\$ 275,615	\$ 253,480	\$ 353	\$ 484	0.13%	0.19%	0.76%	100%	0.13%	0.19%	0.76%	1.53%	4.58%	13.74%			
HE Lines	\$ 65,777	\$ 63,384	\$ 55,577	\$ 105	\$ 105	0.17%	0.19%	1.11%	100%	0.17%	0.19%	1.11%	2.22%	6.66%	19.98%			
Cl-end First Lien	\$ 201,340	\$ 202,518	\$ 188,314	\$ 248	\$ 349	0.12%	0.19%	0.30%	100%	0.12%	0.19%	0.30%	0.60%	1.80%	5.40%			
Cl-end Jr Lien	\$ 9,401	\$ 9,713	\$ 9,589	\$ -	\$ 30	0.00%	0.31%	0.30%	100%	0.00%	0.31%	0.30%	0.60%	1.80%	5.40%			
d. Multifamily Housing	\$ 43,533	\$ 49,355	\$ 48,657	\$ -	\$ -	0.00%	0.00%	0.84%	100%	0.00%	0.00%	0.84%	1.68%	5.04%	15.12%			
e. Nonfarm Nonresidential Property	\$ 371,204	\$ 382,838	\$ 363,883	\$ 945	\$ 980	0.25%	0.27%	100%	100%	0.25%	0.27%	0.00%	0.00%	0.00%	0.00%			
Owner Occupied RE	\$ 153,177	\$ 142,202	\$ 131,988	\$ 86	\$ 121	0.06%	0.09%	0.63%	100%	0.06%	0.09%	0.63%	1.26%	3.78%	11.34%			
Other Property Loans	\$ 218,027	\$ 240,636	\$ 231,895	\$ 859	\$ 859	0.36%	0.37%	1.00%	100%	0.36%	0.37%	1.00%	2.00%	6.00%	18.00%			
2 Loans to Depository	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%	0.00%	0.00%	100%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
3 Agriculture Production and Farmer Loans	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%	0.00%	0.00%	100%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
4 Commercial and Industrial	\$ 203,175	\$ 165,937	\$ 139,569	\$ 776	\$ 776	0.47%	0.56%	0.66%	100%	0.47%	0.56%	0.66%	1.32%	3.96%	11.88%			
6 Consumer Loans	\$ 14,525	\$ 18,792	\$ 18,295	\$ 358	\$ 425	1.91%	2.32%	1.39%	100%	1.91%	2.32%	1.39%	2.78%	8.34%	25.02%			
8 State & Political	\$ 15,707	\$ 14,174	\$ 17,293	\$ -	\$ -	0.00%	0.00%	6.30%	100%	0.00%	0.00%	6.30%	12.60%	37.80%	113.40%			
9 All Other Loans	\$ 58	\$ 156	\$ 219	\$ -	\$ -	0.00%	0.00%	4.83%	100%	0.00%	0.00%	4.83%	9.66%	28.98%	86.94%			
	\$ 1,142,730	\$ 1,115,503	\$ 1,011,712	\$ 3,304	\$ 4,612	0.30%	0.46%											

Step 1. Estimated Loan Portfolio Stress Losses										(Dollar Amounts in Thousands)				Static		
Loan Portfolios from Call Report Schedule RC-C										Quarter End	2 Yr Stress Losses		2 Yr Stress Losses		2 Yr Stress Losses	
										Dec-24	%	\$	%	\$	%	\$
Loans Secured by type of Real Estate																
a. Construction Loans										\$227,524						
1 - 4 Construction Lns										\$18,499	0.30%	355.5	0.60%	711.0	1.80%	2,133.0
Other Con, Dev, & Land Lns										\$99,025	2.56%	2,335.0	5.12%	5,070.1	15.36%	15,210.2
b. Farmland										\$44	0.26%	1.2	0.51%	2.5	1.54%	7.4
c. 1 - 4 Family Housing										\$276,520						
HE Lines										\$65,777	1.11%	730.1	2.22%	1,460.2	6.66%	4,380.7
Cl-end First Lien (Reduced for LHS)										\$201,340	0.30%	604.0	0.60%	1,208.0	1.80%	3,624.1
Cl-end Jr Lien										\$5,403	0.30%	28.2	0.60%	56.4	1.80%	169.3
d. Multifamily Housing										\$43,533	0.84%	365.7	1.68%	731.4	5.04%	2,194.1
e. Nonfarm Nonresidential Property										\$371,204						
Owner Occupied RE										\$153,177	0.63%	965.0	1.26%	1,930.0	3.78%	5,790.1
Other Property Loans										\$218,027	1.00%	2,180.3	2.00%	4,360.5	6.00%	12,081.6
Agriculture Production and Farmer loans										\$0	0.00%	0.0	0.00%	0.0	0.00%	0.0
Commercial and Industrial										\$203,175	0.66%	1,341.0	1.32%	2,681.9	3.96%	9,045.7
Consumer Loans										\$14,525	1.39%	203.9	2.78%	403.8	8.34%	1,211.4
State & Political										\$15,707	6.30%	989.5	12.60%	1,979.1	37.80%	5,937.2
All Other Loans										\$58	4.83%	2.8	9.66%	5.6	28.98%	16.8
Totals										\$1,142,730		\$10,300.3		\$20,600.6		\$61,801.7

Step 2. Estimated Impact of Stress on Earnings					(Dollar Amounts in Thousands)			
Descriptions					2 Yr Actual	Pro forma Baseline	Pro forma Adverse	Pro forma Severely Adverse
Pre-Provision Net Income					\$9,882.0	\$4,390.0	\$0,792.5	\$2,195.0
Less Provision to Cover Two-Year Losses					\$0.0	\$10,300.3	\$20,600.6	\$61,801.7
Less Provision to Maintain Adequate ALLL					\$6,125.0	\$2,400.0	\$9,360.0	\$2,480.0
Net Income before Tax					\$3,757.0	\$1,349.7	\$10,888.9	\$67,086.7
Income Tax Expense (benefit)					\$1,020.0	\$2,347.4	\$,791.2	\$16,480.4
Net Income after Taxes					\$2,737.0	\$4,602.3	\$7,040.8	\$50,606.4

Step 3. Estimated Impact of Stress on Capital					(Dollar Amounts in Thousands)			
Descriptions					2 Yr Actual	Pro forma Baseline	Pro forma Adverse	Pro forma Severely Adverse
Tier 1 Capital \$					\$153,737.0	\$153,737.0	\$153,737.0	\$153,737.0
Net Change in Tier 1 Capital: (Nil From Step 2)					NA	\$24,602.3	\$7,040.8	\$(30,606.4)
Adjusted Tier 1 Capital \$					\$153,737.0	\$178,339.3	\$160,777.8	\$123,130.6
Tier 2 Capital \$					\$5,885.0	\$5,885.0	\$5,885.0	\$5,885.0
Total Adjusted Risk-Based Capital					\$163,322.0	\$184,224.3	\$166,662.8	\$129,015.6
Quarterly Avg Assets \$ - (Less Losses Step 1)					\$1,413,013.0	\$1,402,712.7	\$1,392,412.4	\$1,351,211.3
Risk Weighted Assets - (Less Losses Step 1)					\$1,136,271.0	\$1,119,970.7	\$1,109,670.4	\$1,068,469.3
Tier 1 Leverage Ratio %					10.88%	12.71%	11.56%	9.11%
Tier 1 Risk Based Capital Ratio					13.60%	15.92%	14.49%	11.52%
Total Risk Based Capital Ratio					14.45%	16.78%	15.35%	12.42%

# Supplemental Materials –

## Top Down & Reverse Stress Test

	Income Provisions		Adverse		Severely Adverse									
			75.0%	150.0%	50.0%	250.0%								
	Previous 2 Year Actuals		Projection											
			Base Line	Adverse	Severely Adverse									
Pre-Provision Net Income	\$	100,471	\$	137,208	\$	102,906	\$	68,604						
Less Provision to Cover Two-Year Losses	\$	-												
Less Provision to Maintain Adequate ALLL	\$	4,135	\$	1,000	\$	1,500	\$	2,500						
Income Tax Expense (Benefit)	\$	3,107												
Tier 1 Capital	\$	340,353												
Tier 2 Capital	\$	26,440												
LESS: Deductions for Total Risk-based Capital														
Total Risk-Based Capital	\$	366,793												
Average Assets for Leverage Capital Purposes	\$	3,306,094												
Risk Weighted Assets	\$	2,115,226												
			Actuals		Forecast Base Policy									
		2020	2021	2 Yr Actual	2022	2023	Total							
Total Interest Income	\$	110,528	\$	121,700	\$	232,218	\$	116,114	\$	128,563	\$	262,219	\$	277,083
Total Interest Expense	\$	34,367	\$	40,062	\$	74,429	\$	37,215	\$	25,376	\$	27,073	\$	53,289
Net Income before provisions	\$	76,161	\$	81,638	\$	157,799	\$	78,900	\$	104,187	\$	119,406	\$	218,793
Provision Expense	\$	925	\$	3,210	\$	4,135	\$	2,068	\$	500	\$	500	\$	1,000
Net Income after Provisions	\$	75,236	\$	78,428	\$	153,664	\$	76,832	\$	103,687	\$	118,306	\$	217,793
Total Non-Interest Income	\$	1,734	\$	864	\$	2,598	\$	1,299	\$	1,718	\$	1,362	\$	2,860
Total Non-Interest Expense	\$	22,780	\$	34,010	\$	61,790	\$	30,895	\$	40,088	\$	44,097	\$	84,185
Realized Gain/Loss on Securities	\$	-	\$	1,864	\$	3,864	\$	932	\$	-	\$	-	\$	-
Net Income before Taxes	\$	49,190	\$	47,146	\$	96,336	\$	48,168	\$	64,837	\$	73,371	\$	136,208
Taxes	\$	1,722	\$	1,385	\$	3,107	\$	1,554	\$	2,218	\$	2,439	\$	4,657
	\$	47,468	\$	45,761	\$	93,229	\$	46,615	\$	62,619	\$	68,932	\$	131,551

Step 1. Estimated Loan Portfolio Stress Losses (000)		
Loan Portfolios from Call Report Schedule RC-C	Quarter End Dec-24	2 Yr Stress Reverse
Total Losses	\$637,857	\$32,000

Step 2. Estimated Impact of Stress on Earnings		
Descriptions	2 Yr Actual	Severely Adverse
Pre-Provision Net Income	24,833	14,347
Less Provision to Cover Two-Year Losses	0	32,000
Less Provision to Maintain Adequate ALLL	2,975	4,679
Net Income before Tax	21,858	(22,332)
Income Tax Expense (Benefit)	3,719	(4,690)
Net Income after Taxes	18,139	(17,642)

Step 3. Estimated Impact of Stress on Capital		
Descriptions	2 Yr Actual	Pro forma Reverse Stress
Tier 1 Capital \$	76,229	76,229
Net Change in Tier 1 Capital - (NI From Step 2)	NA	(17,642)
Adjusted Tier 1 Capital \$	76,229	58,587
Tier 2 Capital \$	7,546	9,785
Total Adjusted Risk-Based Capital	83,775	68,372
Quarterly Avg Assets \$ - (Less Losses Step 1)	1,009,007	977,007
Risk Weighted Assets - (Less Losses Step 1)	684,340	652,340
Tier 1 Leverage Ratio %	7.55%	6.00%
Tier 1 Risk Based Capital Ratio	11.14%	8.98%
Total Risk Based Capital Ratio	12.24%	10.48%

Req Cap	Calc Difference
\$ 87,931	29,344.1

977,007.0
9.00%

# Supplemental Materials – Loan Level Stress Test

Student Provided					
Note ID	Balance Outstanding	Estimated DSC Ratio	Current LTV	Remaining Amort (years)	Apprx Rate
1	5,250,000	2.06x	78%	2.0	4.500%
2	5,110,714	1.71x	76%	4.3	4.550%
3	4,971,429	1.18x	77%	1.8	4.600%
4	4,832,143	1.00x	59%	0.3	4.800%
5	4,692,857	1.13x	60%	-0.3	4.900%
6	4,553,571	1.31x	80%	1.3	4.975%
7	4,414,286	1.26x	68%	-0.3	5.000%
8	4,275,000	1.75x	70%	4.0	5.050%
9	4,135,714	1.26x	65%	4.8	5.000%
10	3,996,429	1.10x	50%	5.0	5.150%
11	3,857,143	1.03x	60%	-5.3	5.000%
12	3,717,857	1.15x	45%	-11.0	5.250%
13	3,578,571	1.20x	50%	-8.0	5.500%
14	3,439,286	1.31x	62%	-5.0	5.250%
15	3,300,000	0.94x	49%	-9.0	5.500%
64,125,000					
Avg	4,275,000	1.29x	63.3%	-1.0 Years	5.00%
Wgt. Avg.		1.31x	64.5%	-5.5 Years	4.96%

Calculated from Student Input		
Cash Flow Available for Debt Service	Annual Debt Service	Collateral Values
\$5,782,192	\$2,803,487	\$6,731,000
\$2,311,201	\$1,349,607	\$6,725,000
\$3,550,272	\$3,021,508	\$6,425,000
\$19,905,030	\$19,905,030	\$8,256,000
-\$21,502,031	-\$19,112,916	\$7,779,000
\$5,049,392	\$3,847,156	\$5,709,000
-\$22,705,872	-\$17,984,849	\$6,505,000
\$2,112,252	\$1,207,001	\$6,090,000
\$1,262,058	\$999,650	\$6,324,000
\$1,019,596	\$926,905	\$7,956,000
-\$677,110	-\$660,595	\$6,403,000
-\$297,041	-\$258,297	\$8,262,000
-\$441,727	-\$368,106	\$7,157,000
-\$812,862	-\$619,324	\$5,547,000
-\$274,847	-\$293,170	\$6,735,000
-5,719,499	-5,236,914	102,604,000

Base Assumptions		Net Operating Income Decreases By:									
NOI	\$50,000	0%	-5%	-10%	-15%	-20%	-25%	-30%	-35%	-40%	
Cap Rate	4.00%	80.0%	84.2%	88.9%	94.1%	100.0%	106.6%	114.3%	123.0%	133.3%	
Initial Appraised Value	\$1,250,000	4.25%	85.0%	89.4%	94.4%	100.0%	106.3%	113.4%	121.4%	130.7%	141.6%
Initial LTV	80.00%	4.50%	90.0%	94.7%	100.0%	105.9%	112.5%	120.0%	128.5%	138.5%	149.9%
Initial Loan Amount	\$1,000,000	4.75%	95.0%	100.0%	105.6%	111.7%	118.6%	126.7%	135.7%	146.2%	158.2%
		5.00%	100.0%	105.3%	111.1%	117.6%	125.0%	133.3%	142.9%	153.8%	166.7%
		5.25%	105.0%	110.5%	116.7%	123.5%	131.2%	140.1%	149.9%	161.6%	175.1%
		5.50%	110.0%	115.7%	122.2%	129.4%	137.6%	146.6%	157.2%	169.2%	183.5%
		5.75%	114.9%	121.1%	127.7%	135.3%	143.7%	153.4%	164.2%	177.0%	191.6%

# Terms & Definitions

Term	Definition
<b>ADS</b>	Annual Debt Service; the dollar value of all scheduled principal and interest payments for the year.
<b>ALLL or ACL</b>	Allowance for Loan and Lease Losses or Allowance for Credit Losses (CECL adopters)
<b>Bottom-Up Stress Testing</b>	A method of testing where specific concentrations or sections of the loan portfolio are tested across a shared characteristic; i.e., collateral type, NAICS code, maturity date, portfolio ranking, etc.
<b>CADA</b>	Cash after debt amortization; any net cash generated by operations still available after paying all scheduled annual debt service.
<b>CFADS</b>	Cash flow available for debt service; the remaining cash generated by operations which is available to pay scheduled annual debt service. Many banks may use EBITDA or NOI for this figure.
<b>CLTV</b>	Combined (or Collective, or Cumulative) Loan to Value
<b>CRE</b>	Commercial Real Estate
<b>DSC</b>	Debt Service Coverage Ratio; a ratio which uses CFADS, EBITA or NOI as the numerator and ADS as the denominator. Most banks look for a ratio of 1.20x or 1.25x or higher in most commercial credits. This ratio means that there is \$1.20 (or \$1.25) of CFADS for each \$1.00 of ADS.
<b>EBITDA</b>	Earnings before Interest, Taxes, Depreciation, and Amortization
<b>Impairment</b>	The amount of loss if the result of the “net liquidation value of all collateral” minus the “loan amount” equals a negative number.
<b>LTV</b>	Loan to value
<b>NOI</b>	Net Operating Income; typically used in CRE circumstances and is functionally similar (or even identical in many cases) to EBITDA.
<b>NOO CRE</b>	Non-Owner Occupied Commercial Real Estate
<b>OO CRE</b>	Owner Occupied Commercial Real Estate
<b>Reverse Stress Testing</b>	requires the Bank to identify and assess circumstances that would lead its business model to become unviable or its counterparties to lose confidence to a critical point, such as failure.
<b>Top-Down Stress Testing</b>	A general method of testing macro, or systemic, assumptions or scenarios applicable to all loans in a segment or portfolio. Typically utilizes data aggregated to the highest level possible, commonly to the level reported in UBPR.