NCUA
National Credit Union Administration

Office of Examination and Insurance

Share Insurance Fund

Normal Operating Level Briefing

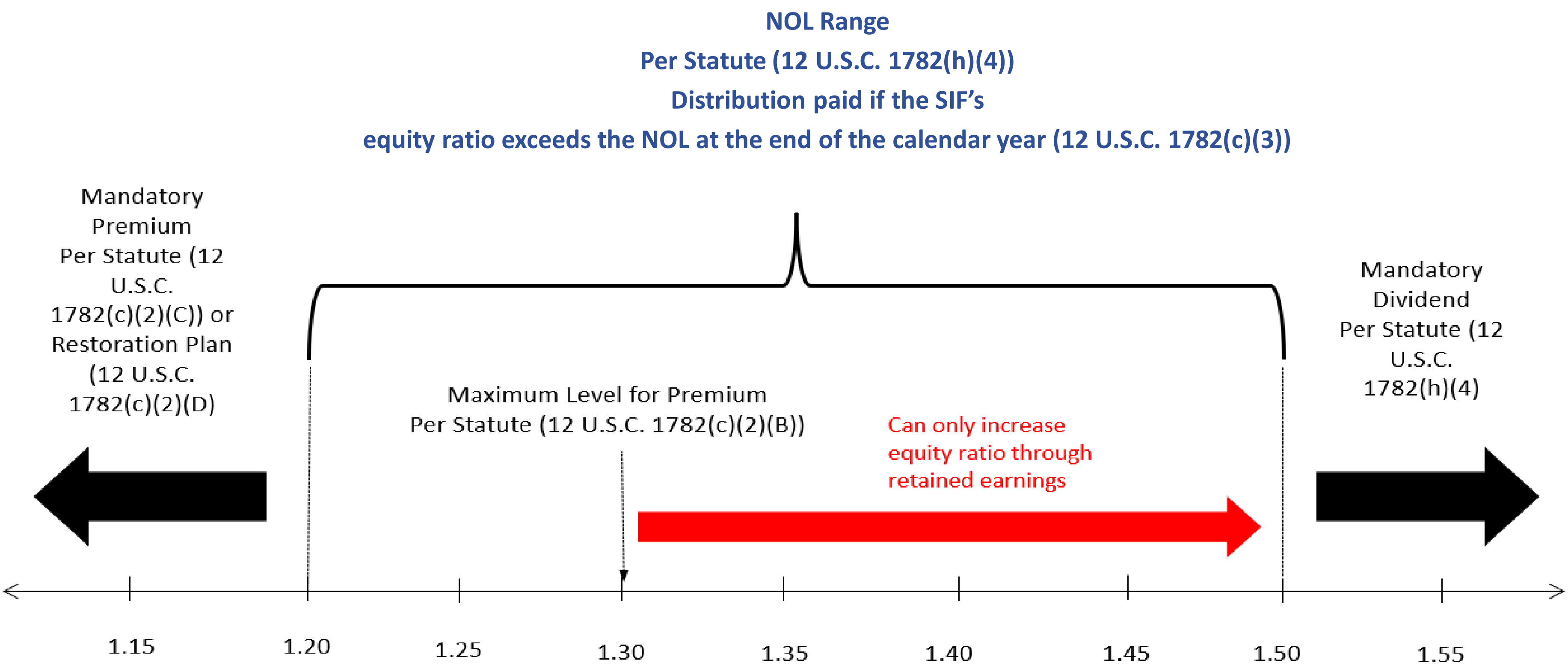
December 15, 2022

Normal Operating Level

Normal Operating Level (NOL) is the ***desired equity level*** of the Share Insurance Fund (SIF).

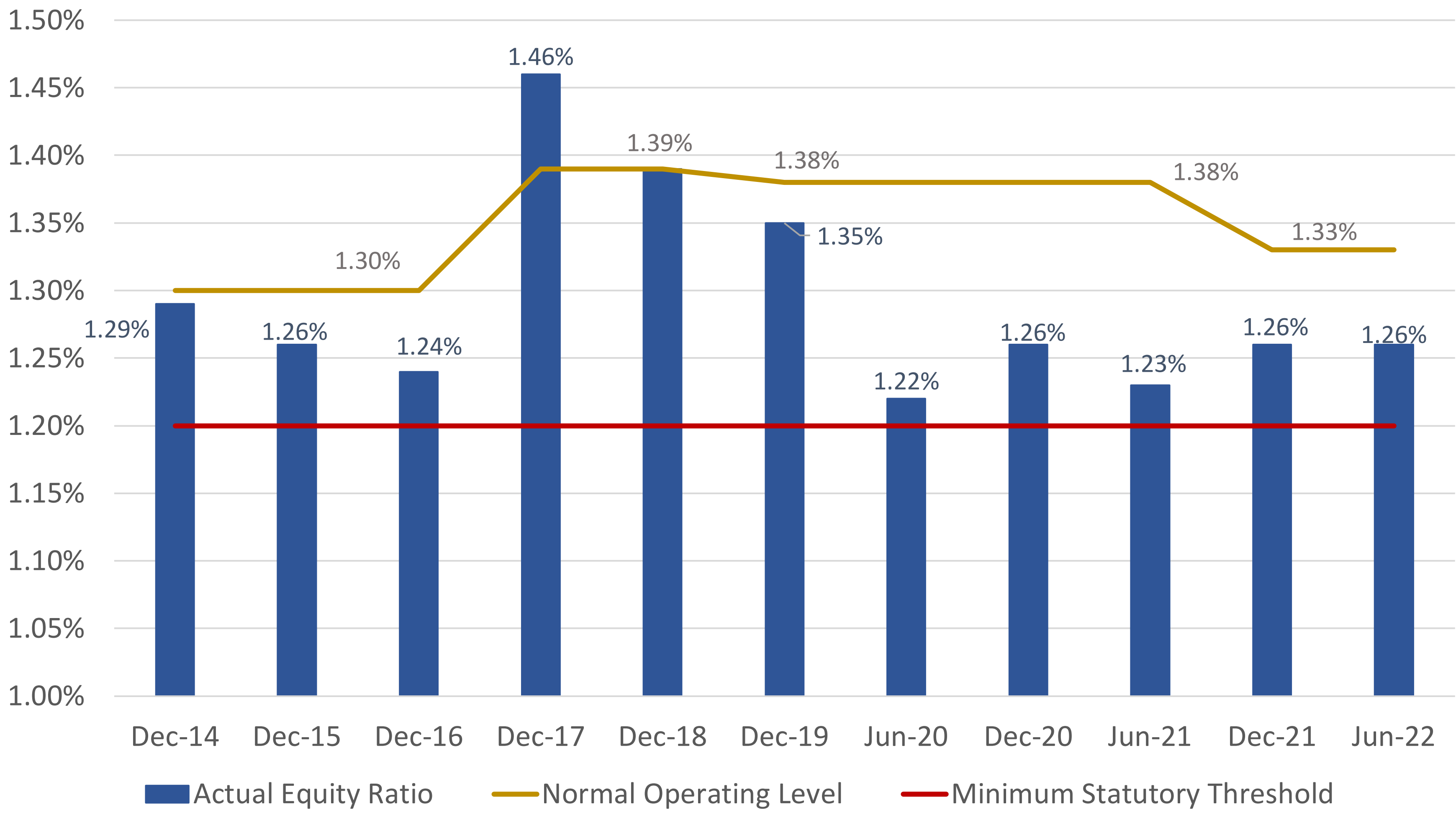
- **Under the Federal Credit Union Act, the NOL:**
  - Can be set from 1.20 to 1.50 percent (12 U.S.C. 1782(h)(4))
  - Distribution to credit unions required if equity ratio exceeds NOL at the end of the calendar year and other statutory conditions are met (12 U.S.C. 1782(c)(3))
- **The NCUA Board last set the NOL at 1.33% in December 2021**

Equity Ratio



- Distribution occurs when the equity in the SIF exceeds the NOL.
- Premium may be assessed if the equity ratio is below 1.3 percent. The premium may only be enough to bring the equity ratio back to 1.3 percent.
- Equity ratio growth above 1.3 percent may only occur through increases in retained earnings.
- Board Restoration Plan must be implemented if the equity ratio falls below 1.2 percent.

Historical Trends – NOL and Equity Ratio



Setting the NOL

- **Board policy objectives:**
  - Retain public confidence in federal share insurance
  - Prevent impairment of the 1 percent contributed capital deposit
  - Ensure SIF can withstand moderate recession without equity ratio declining below 1.20 percent over a five-year period

Setting the NOL

- **Calculation based on projections related to:**
  - Modeled SIF performance over five-year period assuming moderate recession
    - Stress scenario entails estimating three primary drivers of outcomes:
      - Insurance losses
      - Insured share growth
      - Yield on investments

Approximating Moderate Recession

- **At the beginning of each year, the Federal Reserve publishes economic scenarios to support bank stress testing required by the Dodd-Frank Act.**
    - These scenarios are hypothetical economic developments and not forecasts.

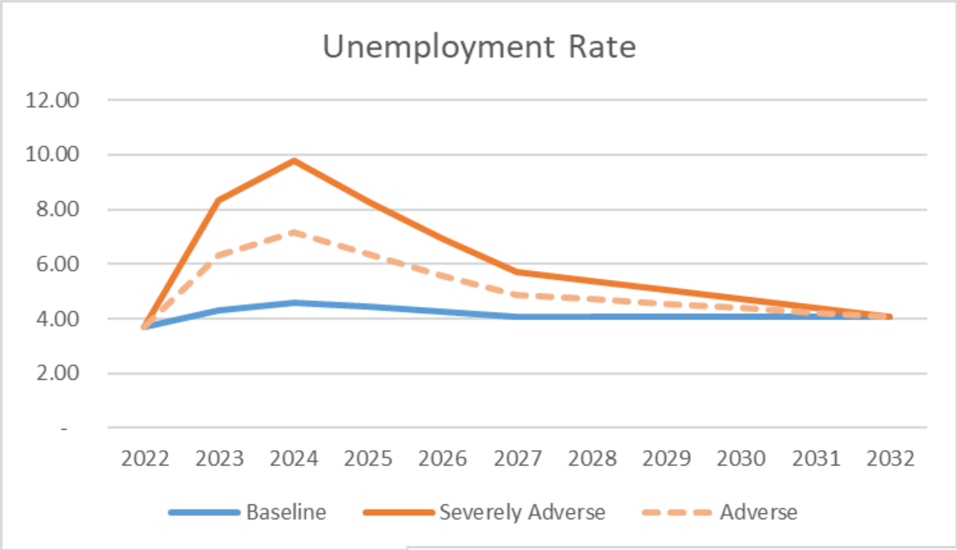
- **In the past, the Federal Reserve published a Baseline scenario and two stress scenarios: Adverse and Severely Adverse. The Adverse scenario was a reasonable approximation for a Moderate Recession.**

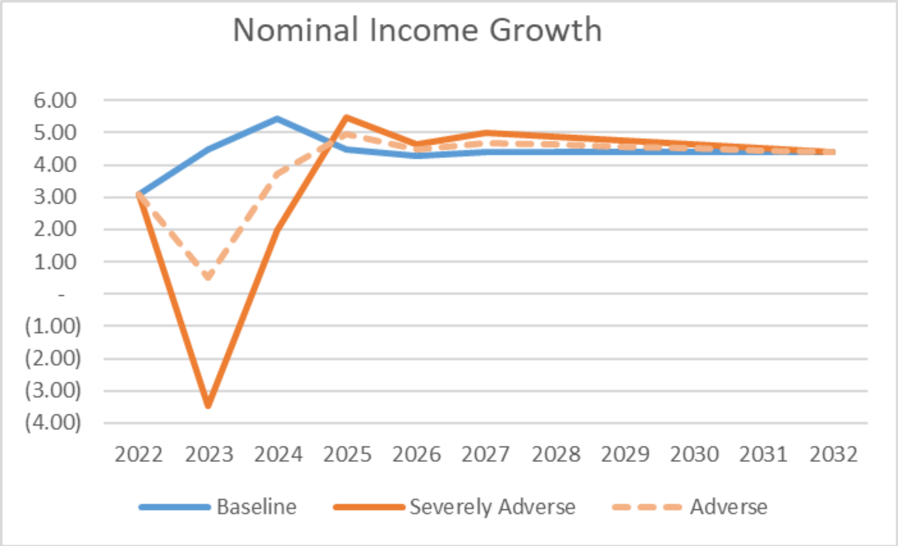
- **As the Adverse scenario was discontinued in 2020, NCUA has since used the mid-point of the Baseline and Severely Adverse Scenarios. The result provides a reasonable approximation for a Moderate Recession.**

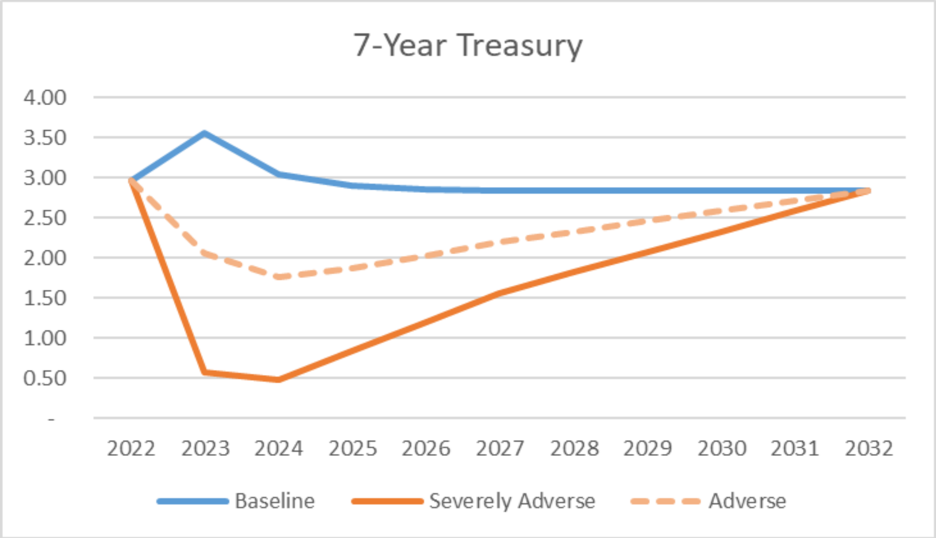
Approximating Moderate Recession

- **Timing Issues**
  - The Fed's scenarios begin in 2022. As such it's necessary to "shift forward" the beginning of the hypothetical stresses.
  - Macroeconomic Advisors LLC provides time-shifted scenarios that incorporate recent macroeconomic data but are consistent with the essence of the Fed's scenarios.
  - NCUA employs Macroeconomic Advisors' October release and further shifts the stress so that it begins at the start of 2023.
  - This means that the decline in the equity ratio is calculated between 2022Q4 and 2027Q4.
- **Calculations**
  - Some of NCUA's models employ annual data. In some such cases, NCUA averages quarterly numbers to produce annual averages.

Scenarios Employed







Modeling Specifics – Primary Drivers

Insurance Losses

- **Assumptions**
  - Econometric model relates share growth and insured share losses to macroeconomic indicators.
  - Allows NCUA to forecast during a hypothetical moderate recession.
- **Strategy**
  - Use equation to project share of federally insured credit union deposits in CAMELS 4/5-rated credit unions.
  - Produce preliminary estimate of actual dollar losses by multiplying insured shares at CAMELS 4/5 institutions by a benchmark loss rate.
  - Refine the preliminary estimate with a scaling factor. The factor—which measures any systematic deviation between the model estimates and likely results in a Baseline scenario—adjusts for any systematic upward bias in model estimates.

Modeling Specifics – Primary Drivers

Insured Share Growth

- **Assumptions**
  - Econometric model relates quarterly share growth to various macroeconomic indicators for the period between 2005Q1 and 2022Q2. Specifically, quarterly share growth is estimated to be a function of unemployment rates, Treasury rates, and various seasonal factors.
- **Strategy**
  - Using the relationships found in the regression and the macroeconomic conditions during the hypothetical moderate recession, share growth is calculated during the stress period.

Modeling Specifics – Primary Drivers

Yield on Investments

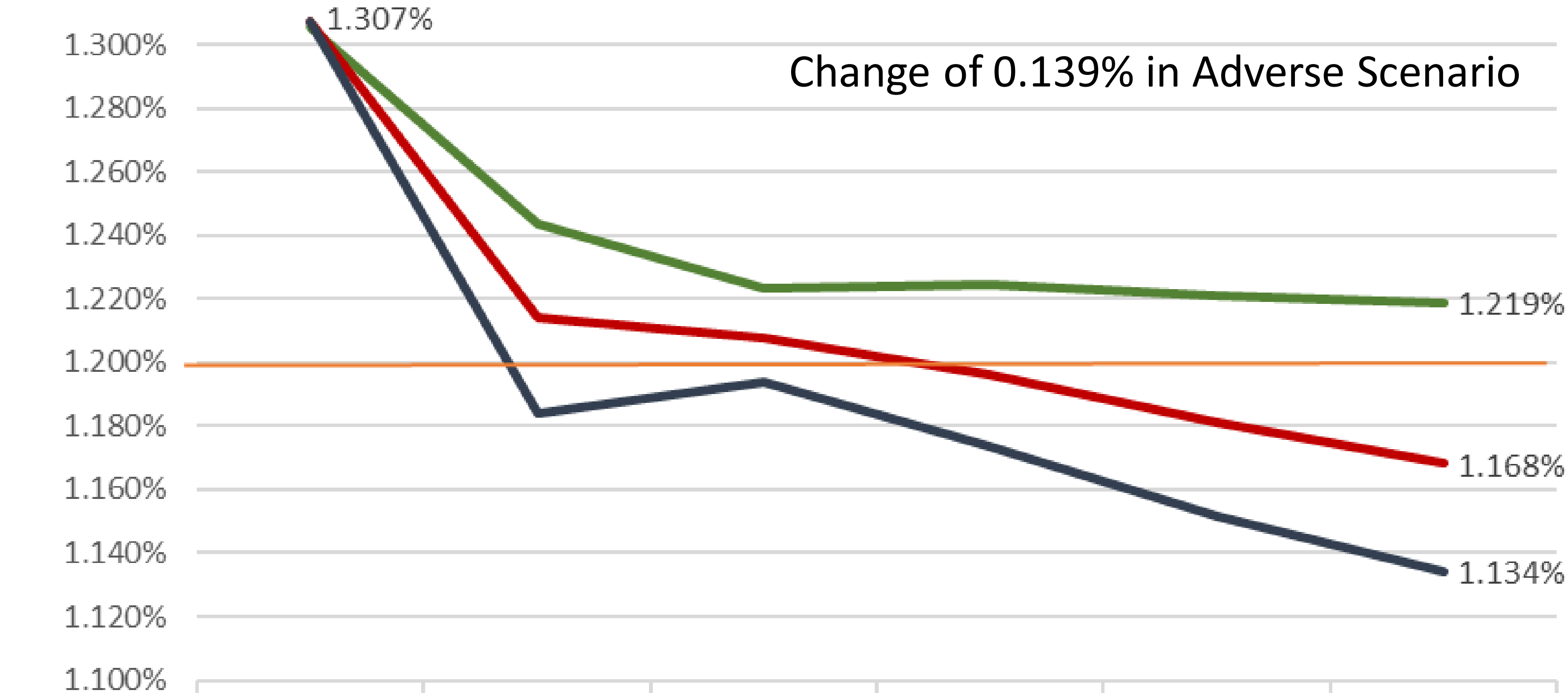
- **Assumptions**
  - With time adjustments,* we employ the interest rates provided in Macroeconomic Advisors’ implementation of the Fed Scenarios.
  - The 3-Month and 7-Year Treasury Rates during the duration of the stress scenarios are used in estimating SIF investment returns.

* The stress is set to begin in 2023Q1

Final Values for Macroeconomic Variables During Stress

	Baseline				Adverse				Severely Adverse			
	3-month Treasury Rate	7-Year Treasury (Imputed)	Insured Share Growth	Insured Losses	3-month Treasury Rate	7-Year Treasury (Imputed)	Insured Share Growth	Insured Losses	3-month Treasury Rate	7-Year Treasury (Imputed)	Insured Share Growth	Insured Losses
2022H2	3.188	3.489	-1.306	$25.35	3.188	3.489	-1.306	$25.35	3.188	3.489	-1.306	$25.35
2023H1	4.033	3.560	3.595	$25.35	2.130	2.066	5.198	$73.41	0.227	0.572	6.814	$124.24
2023H2	4.033	3.560	3.595	$25.35	2.130	2.066	5.198	$73.41	0.227	0.572	6.814	$124.24
2024H1	2.875	3.048	4.263	$25.35	1.467	1.769	3.639	$70.23	0.059	0.490	3.021	$116.66
2024H2	2.875	3.048	4.263	$25.35	1.467	1.769	3.639	$70.23	0.059	0.490	3.021	$116.66
2025H1	2.298	2.900	3.374	$25.35	1.178	1.874	3.154	$50.28	0.059	0.849	2.934	$75.84
2025H2	2.298	2.900	3.374	$25.35	1.178	1.874	3.154	$50.28	0.059	0.849	2.934	$75.84
2026H1	2.298	2.854	3.312	$25.35	1.178	2.024	3.214	$43.66	0.059	1.195	3.115	$62.38
2026H2	2.298	2.854	3.312	$25.35	1.178	2.024	3.214	$43.66	0.059	1.195	3.115	$62.38
2027H1	2.298	2.845	3.336	$25.35	1.178	2.204	3.220	$31.73	0.059	1.563	3.104	$38.21
2027H2	2.298	2.845	3.336	$25.35	1.178	2.204	3.220	$31.73	0.059	1.563	3.104	$38.21
			5 Year Losses	$253.52			5 Year Losses	$538.62			5 Year Losses	$834.66

Economic Stress Analysis



	2022Q4	2023Q4	2024Q4	2025Q4	2026Q4	2027Q4
Baseline	1.305%	1.244%	1.223%	1.224%	1.221%	1.219%
Adverse	1.307%	1.214%	1.207%	1.196%	1.181%	1.168%
Severely Adverse	1.307%	1.184%	1.194%	1.173%	1.151%	1.134%

NOL Calculation

Maintain the NOL at 1.33%

Component	Actual 2019/2020	Actual 2021	Dec-22
Statutory Minimum	1.200%	1.200%	1.200%
Plus: Equity for Potential Decline in Insurance Fund Performance	0.151%	0.134%	0.139%
Plus: Equity for Potential Decline of Value in Claims on Corporate Estates *	0.015%		
Plus: Projected Equity Ratio decline 2020 to 2021 **	0.012%		
Equals: Normal Operating Level	1.378%	1.334%	1.339%

* Potential decline of value in claims on Corporate Estates was removed from the calculation in 2021Q4.

** Projected equity ratio decline through the end of the following year without an economic downturn was removed from the calculation in 2021Q4.

Actual Results May Vary Due to Various Factors

- Projected declines in the equity ratio, even under no economic stress
- Extraordinary losses and/or failures in credit unions that are not market-related, such as those from fraud or other asset "bubbles"
- Unusual or abnormally high insured share growth materially different from the historical correlation
- Economic conditions that involve greater volatility in one or more market indicators as compared to the stress scenarios modeled

Next Steps

- **Update the public website with the 2022 NOL**
- **Calculate the actual equity ratio as of December 31, 2022**
  - The SIF's equity position as of December 31, 2022, will be available by February 15, 2023, when the audited year-end financial statements are published.
  - Insured shares as of December 31, 2022, will be determined once all year-end Call Reports are submitted and the data is validated.
- **Determine whether a SIF distribution is required**

Office Contact Page

Contact our office with questions or comments.

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