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

NOL Range
Per Statute (12 U.S.C. 1782(h)(4))
Distribution paid if the SIF’s equity ratio exceeds the NOL at the end of the calendar year (12 U.S.C. 1782(c)(3))

- 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.
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

Unemployment Rate

Nominal Income Growth

7-Year Treasury

SIF Normal Operating Level
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.
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

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th></th>
<th>Adverse</th>
<th></th>
<th>Severely Adverse</th>
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<td>3-month</td>
<td>7-Year</td>
<td>Insured</td>
<td>3-month</td>
<td>7-Year</td>
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<td>Share</td>
<td>Treasury Rate</td>
<td>Treasury (Imputed)</td>
<td>Share Growth</td>
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<td></td>
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<td>Growth</td>
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<td>(Imputed)</td>
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<td>3.595</td>
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<td>$25.35</td>
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<td>1.769</td>
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<td>4.263</td>
<td>$25.35</td>
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<td>1.769</td>
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<td>1.874</td>
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<td>3.374</td>
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<td></td>
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<td>5 Year Losses</td>
<td>$253.52</td>
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Economic Stress Analysis

Change of 0.139% in Adverse Scenario

<table>
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<tr>
<th></th>
<th>2022Q4</th>
<th>2023Q4</th>
<th>2024Q4</th>
<th>2025Q4</th>
<th>2026Q4</th>
<th>2027Q4</th>
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<tr>
<td>Baseline</td>
<td>1.305%</td>
<td>1.244%</td>
<td>1.223%</td>
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<td>1.221%</td>
<td>1.219%</td>
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<tr>
<td>Adverse</td>
<td>1.307%</td>
<td>1.214%</td>
<td>1.207%</td>
<td>1.196%</td>
<td>1.181%</td>
<td>1.168%</td>
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<tr>
<td>Severely Adverse</td>
<td>1.307%</td>
<td>1.184%</td>
<td>1.194%</td>
<td>1.173%</td>
<td>1.151%</td>
<td>1.134%</td>
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</table>
## NOL Calculation

### Maintain the NOL at 1.33%

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

* 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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