PREPARED FOR
CASE STUDY CURRENT

FINANCIAL STRUCTURE AS OF
9/30/2023

RESULTS SUMMARY

c. myers

Background

C. myers has simulated long-term risks to earnings and net worth embedded in your October 31, 2023 financial structure. This executive summary provides highlights of your credit union's profitability profile as well as changes in the profile.

To provide you with an ***Early Warning System***, we have simulated risks to earnings and net worth against the backdrop of history-based rate conditions. These conditions include those shown in the table to the right.

This comprehensive view covers every combination of rate environments (including yield curve twists) that have occurred in the US. This provides decision-makers with a view of probable, improbable, and extreme environments.

	Short-Term Rates	Long-Term Rates	Yield Curves
Minimum	0%	0%	-2%
Maximum	16%	14%	4%

What Are People Testing?

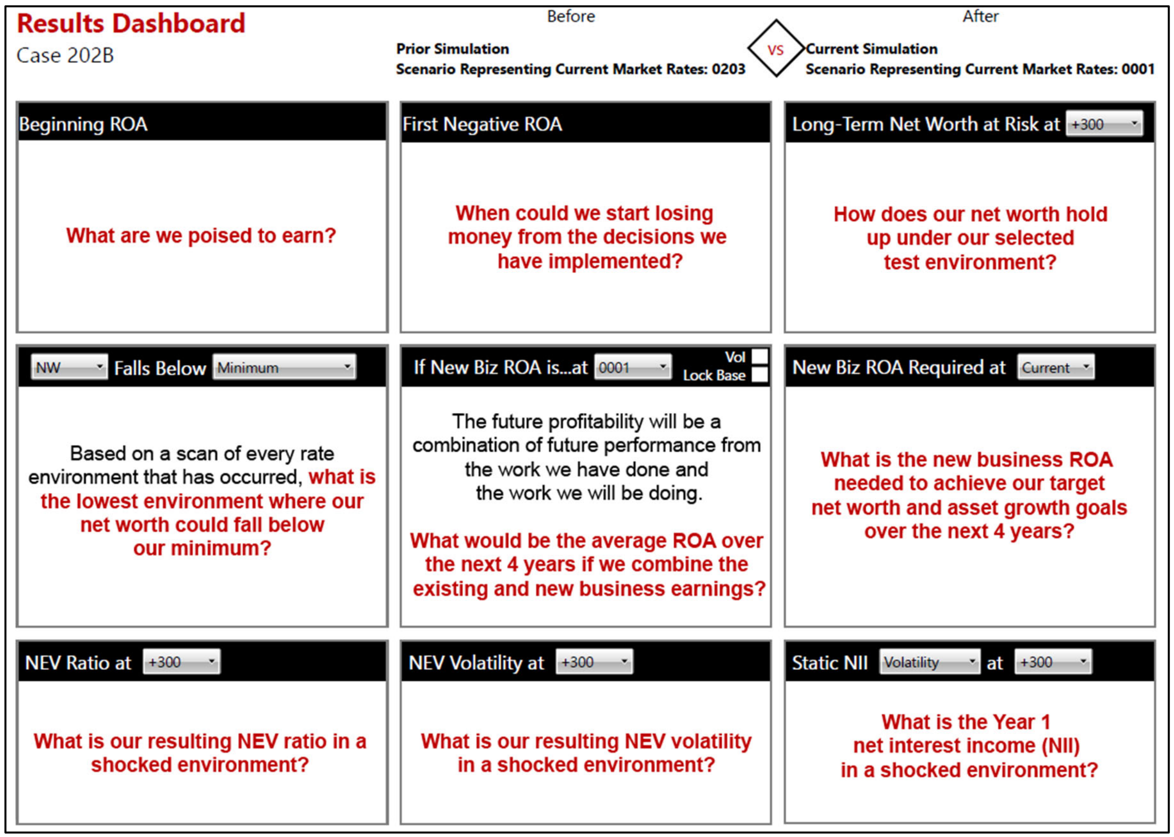
Over the last quarter, the most common what-ifs being tested in the c. myers model include:

- Assessing the impacts of deposit migration (i.e., disintermediation) and how a changing liability structure can impact risks to earnings and net worth
- Simulating various levels of new business earnings needs in conjunction with different levels of asset growth to better understand the potential timing of earnings and future levels of net worth
- Testing options to solve liquidity risk pressures, interest rate risk pressures, or both. (For example: Selling investments, selling loans, adding borrowings, adding CDs, allowing loan runoff, adding derivatives, etc.)

As many institutions have crossed policy limits or tripped triggers, they are evaluating ways to keep their team on top of the credit union's position. Many institutions have found value in increasing the ALM frequency to monthly, allowing them to identify trends and areas of opportunity quickly until being back within policy.

High-Level Results

The Results Dashboard provides the following information for the current or base simulation. To communicate results, we use 4-digit scenario codes to represent potential external market interest rates. The first two digits represent short-term rates (3-month Treasury), and the last two digits represent long-term rates (10-year Treasury). In the example below of rate scenario 0203, “02” represents short-term rates of 2% and “03” represents long-term rates of 3%.



The long-term risks to earnings and net worth cover a 4-year period of time and help decision-makers understand the credit union’s profitability profile from the existing structure. Keep in mind, these views automatically incorporate potential shifts in deposit mix to represent changes in consumer behavior as rates move.

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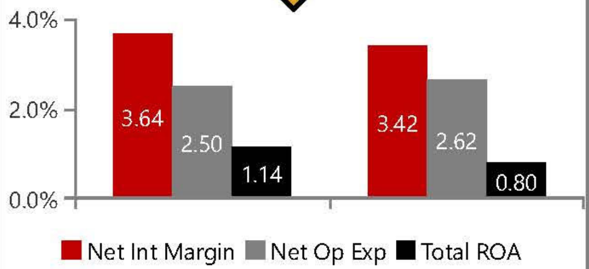
Results Dashboard

Sample Case Study

Before		After
Case Study Previous	VS	**Case Study Current**
Scenario Representing Current Market Rates: 0304		**Scenario Representing Current Market Rates: 0504**

Beginning ROA

Before		After
1.14%	VS	0.80%

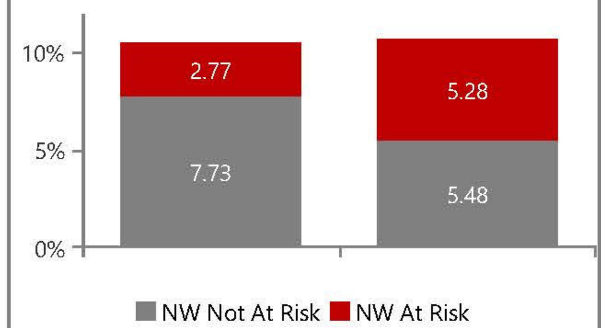


First Negative ROA

Before		After
0503	VS	0405
+200		-100

Long-Term Net Worth at Risk at +300

Before: 0607	After: 0807



NW Falls Below Minimum

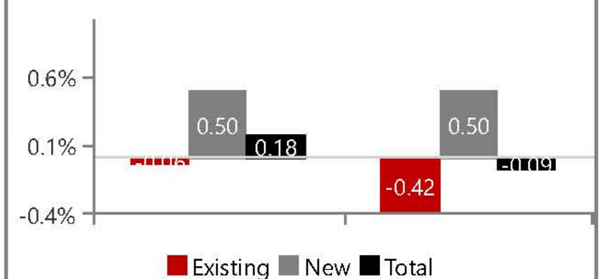
Before: 6.00		After: 7.00
0808	VS	0706
+500		+200

If New Biz ROA is...at Current

Vol

Lock Base

Before: 0504	After: 0504



New Biz | ROA | 0.50 | WhatIfNew

New Biz ROA Required at Current

	Before: 0504		After: 0504
New Biz ROA Required	1.17	VS	1.93
Achieve NW%	10.00		10.00
Average Asset Growth	6.00		6.00

NEV Ratio at +300

Before: 0607		After: 0807
11.99	VS	8.37

NEV Volatility at +300

Before: 0607		After: 0807
-34.78	VS	-34.88

Static NII Volatility at +300

Before: 0607		After: 0807
-17.80	VS	-19.57

Changes in Risk Profile

Compared to your September 2022 simulation, long-term risks to earnings and net worth have increased in every rate environment. The primary reasons for the change in risk profile include:

- An increase in the operating expense ratio
- A decrease in fee and other income ratio
- An increase in certificate balances at higher costs
- An increase in deposit rates

Risk Guidelines and Supervisory Test

GUIDELINE – NII Volatility

Maintain an NII volatility greater than -35% in a +300 bps rate scenario

LIMIT – NEV Ratio

Maintain an NEV Ratio greater than 6% in a +300 bps rate scenario

LIMIT – NEV Volatility

Maintain an NEV volatility greater than -40% in a +300 bps rate scenario

LIMIT – Net Worth

Maintain a 6% net worth not at-risk ratio in a +300 bps rate scenario

LIMIT – Earnings

Maintain positive earnings in a +300 bps rate scenario not counting on more than 50bps of earnings from new business

	Limit/Guideline (Trigger)	Within Policy	
NII Volatility	Guideline	Yes	
NEV Ratio +300	Limit	Yes	
NEV Volatility	Limit	Yes	
Net Worth Not at Risk +/- 300	Limit	No	
Earnings	Limit	No	

SUPERVISORY TEST

The credit union's specific +300 bp rate environment results for the NCUA NEV Supervisory Test are included in the table below for reference purposes. For more information regarding the NCUA NEV Supervisory Test results, please see the c. myers June 1, 2022 blog "NCUA NEV Supervisory Test: Heads Up Now".

NEV Using NCUA Non-Maturity Share Values (Supervisory Test)				
NEV Results	NEV Ratio	-2.10%	NEV Volatility	-150.86%

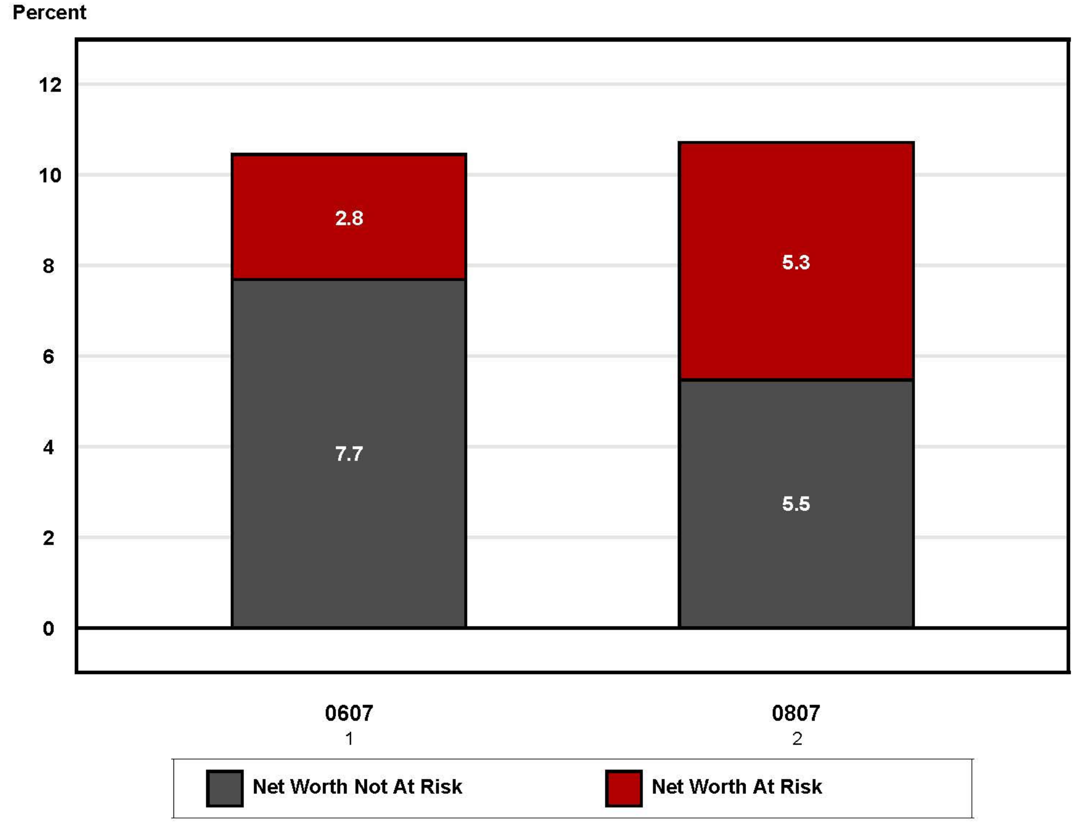
NCUA Standard		
Risk Level	**Post-shock NEV Ratio**	**Base to Shock NEV Ratio Sensitivity (%)**
Low	Above 7%	Below 40%
Moderate	4% up to 7%	40% to 65%
High	Below 4%	Above 65%

What Are Our Trends in Long-Term Risks to Net Worth?

Information provided includes:

- The ***height*** of the columns indicates your net worth ratio as of each simulation
- ***Long-Term Net Worth At Risk*, ** which is represented by the red portion of the column
- ***Long-Term Net Worth Not At Risk*, ** which is represented by the gray portion of the column

Comparison of Long-Term Net Worth At Risk - Rate Change +300 Basis Points



1. Case Study Previous
2. Case Study Current

Model Assumptions

Deposit pricing, member's sensitivity to withdraw, and consumer loan prepayment speeds are based on the credit union's expectations. Mortgage prepayment assumptions are provided by Mortgage Industry Advisory Corporation (MIAC) prepayment speed tables for fixed-rate mortgages and Intercontinental Exchange for variable-rate mortgages. New volume rates and discount rates were updated based on recent experience. Operating expense, Expected Credit Loss (ECL), and non-interest income assumptions are based on the credit union's budget. The assumption methodologies are reviewed with the credit union on at least an annual basis.

Stress Tests

ECL, prepayment speed, and withdrawal speed stress tests are designed to answer the question, *"What if our assumptions are wrong?"* Stress tests have been included this time in the Key Decision Information book and are standard at least annually.

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