



c. myers

KEY DECISION INFORMATION

Book 1 of 2

PREPARED FOR
Sample Case Study

SIMULATION
Case Study Current



TABLE OF CONTENTS

Overview	1
Results Dashboard	2
Earnings Profile.....	4
Long-Term Net Worth at Risk	5
What If New Business Earns	7
Industry Statistics – Long-Term Risk	9
Other Analysis	10

OVERVIEW

Our ALM Purpose

- **Help decision-makers take control of their future** by linking strategy, desired financial performance, and risk tolerance.
- **Make it easier** to see sources of opportunities and risks by using a [multi-step approach](#).
- **Deliver ALM that is easy to actively use to support decision-making.** The speed with which decisions need to be made is increasing exponentially and we don't see this changing. Our "What-If" capability enables decision-makers to see profitability and risk tradeoffs in a matter of minutes. Just call us when you need help.
- **Provide ready access to consultants who can support your team with real-time visualization** of changes in your profitability profiles as your team discusses emerging trends. If desired, they can also evaluate options for optimizing your balance sheet and/or business model.

c. myers
EST 1991

HELPING FINANCIAL INSTITUTIONS
OPTIMIZE THEIR BUSINESS

200+
Strategic Engagements
Annually
strategic planning, strategic implementation, process improvement,
project management, and strategic leadership development

6,500+
Financial Simulations
& Strategic Financial
Plans Annually

OUR EXPERIENCE

600+ Financial Institutions

200+ over **\$1 Billion in Assets**

50+ c. myers Team Members

We help credit unions *think to differentiate* and *drive better decisions* through [Strategic Planning and Business Model Optimization](#), [Process Improvement](#), [Strategic Implementation & Project Management](#), [Strategic Leadership Development](#), [Real-Time ALM](#), and [Financial Planning and Earnings Optimization](#).

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%.

Results Dashboard		
Before		After
Prior Simulation Scenario Representing Current Market Rates: 0203		Current Simulation Scenario Representing Current Market Rates: 0001
Case 202B		
Beginning ROA What are we poised to earn?	First Negative ROA When could we start losing money from the decisions we have implemented?	Long-Term Net Worth at Risk at +300 How does our net worth hold up under our selected test environment?
NW Falls Below Minimum Based on a scan of every rate environment that has occurred, what is the lowest environment where our net worth could fall below our minimum?	If New Biz ROA is...at 0001 Vol Lock Base The future profitability will be a combination of future performance from the work we have done and the work we will be doing. What would be the average ROA over the next 4 years if we combine the existing and new business earnings?	New Biz ROA Required at Current What is the new business ROA needed to achieve our target net worth and asset growth goals over the next 4 years?
NEV Ratio at +300 What is our resulting NEV ratio in a shocked environment?	NEV Volatility at +300 What is our resulting NEV volatility in a shocked environment?	Static NII Volatility at +300 What is the Year 1 net interest income (NII) in a shocked environment?

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.

Results Dashboard

Sample Case Study

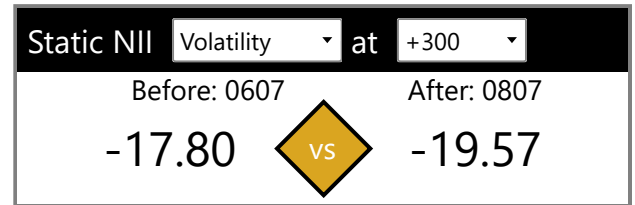
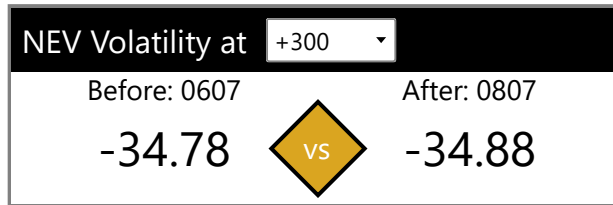
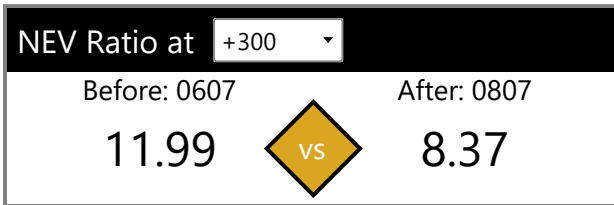
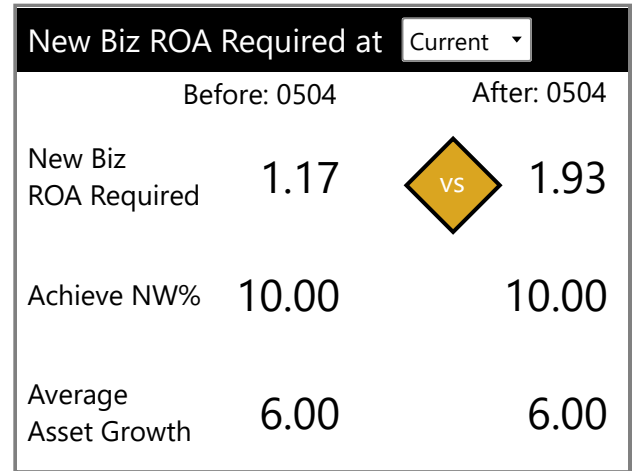
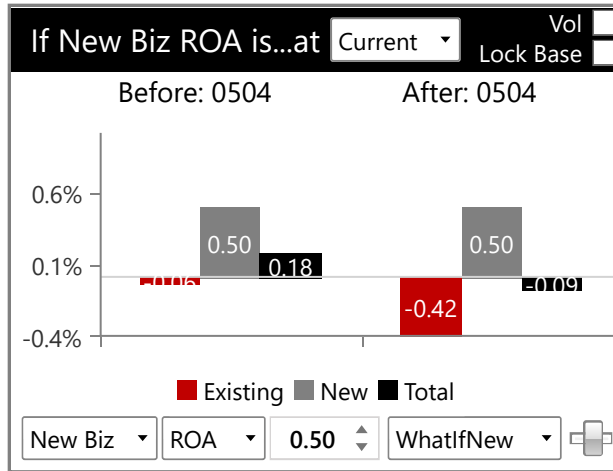
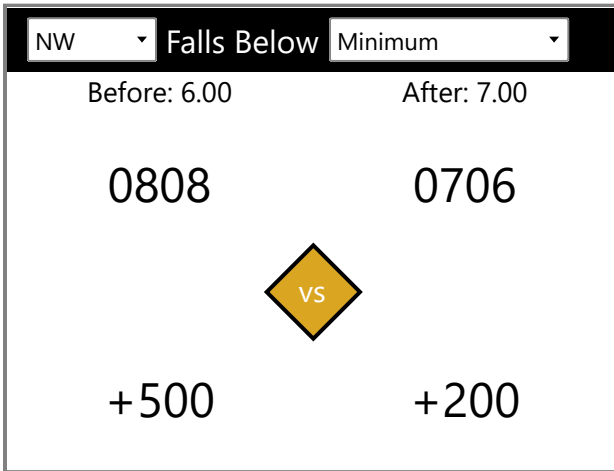
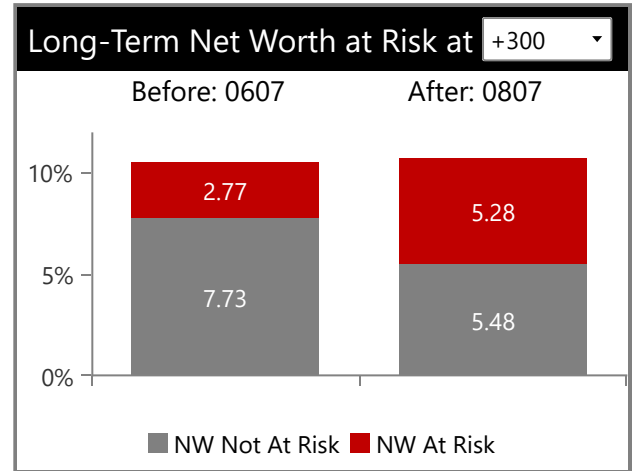
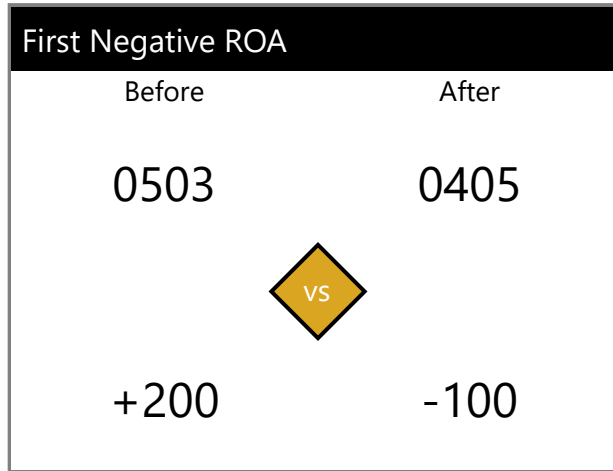
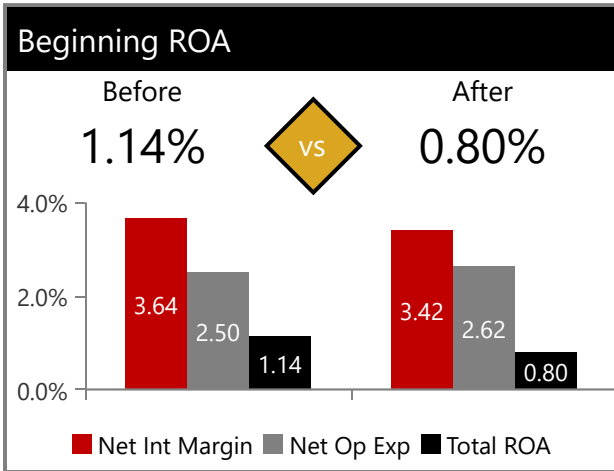
Before

After

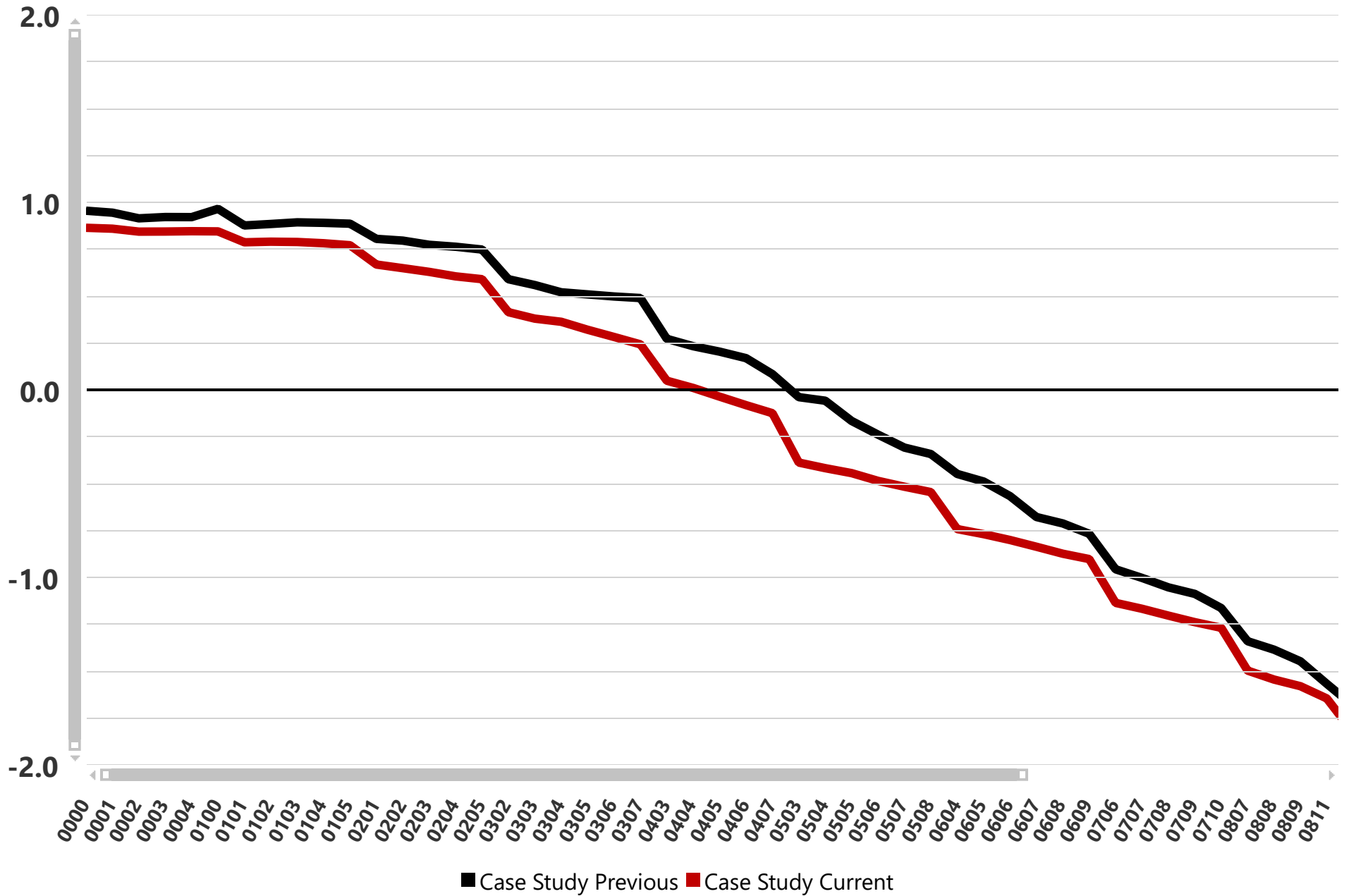
Case Study Previous
Scenario Representing Current Market Rates: 0304



Case Study Current
Scenario Representing Current Market Rates: 0504

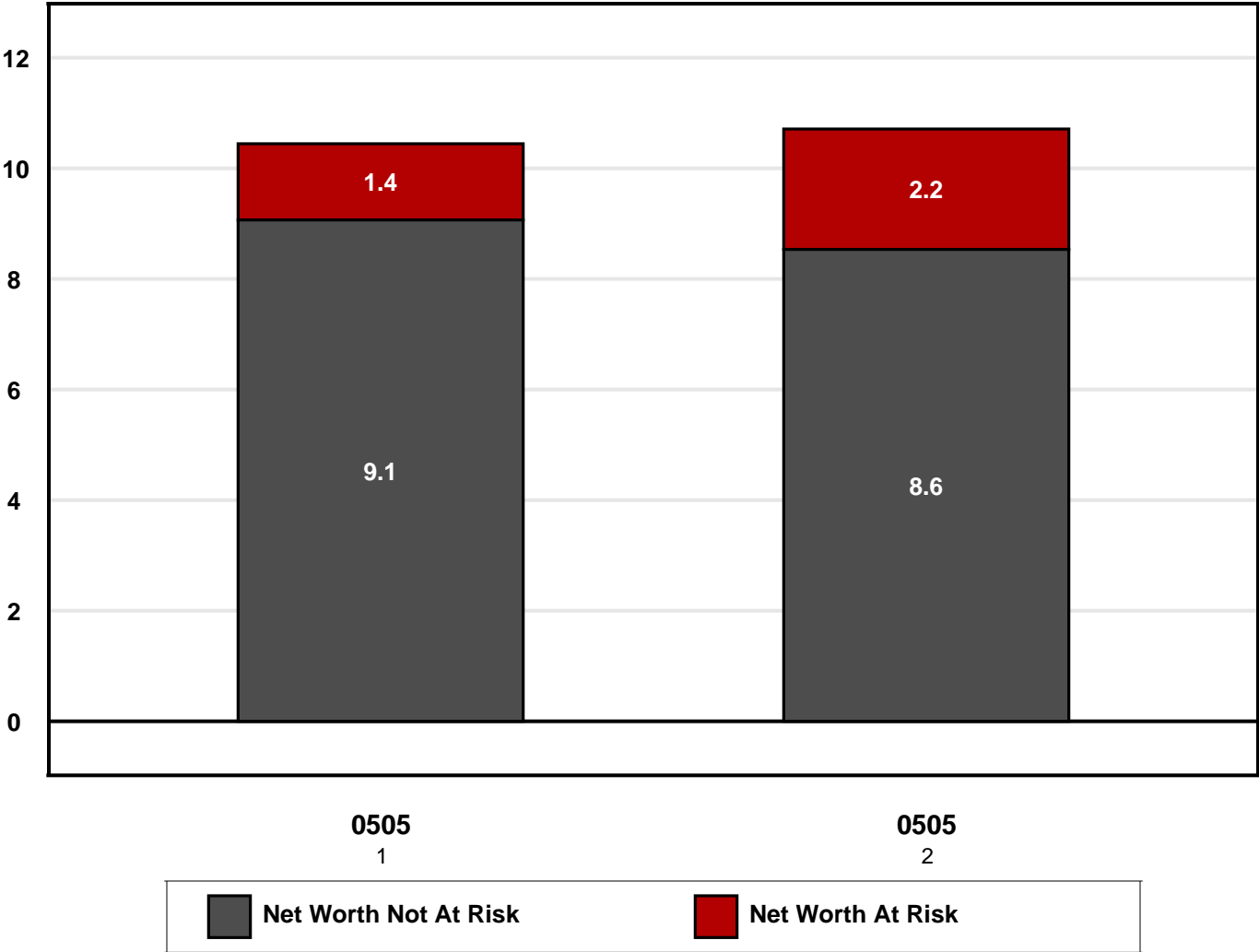


Comparison of Average ROA - Over 4 Years



Comparison of Long-Term Net Worth At Risk - Rate Scenario 0505

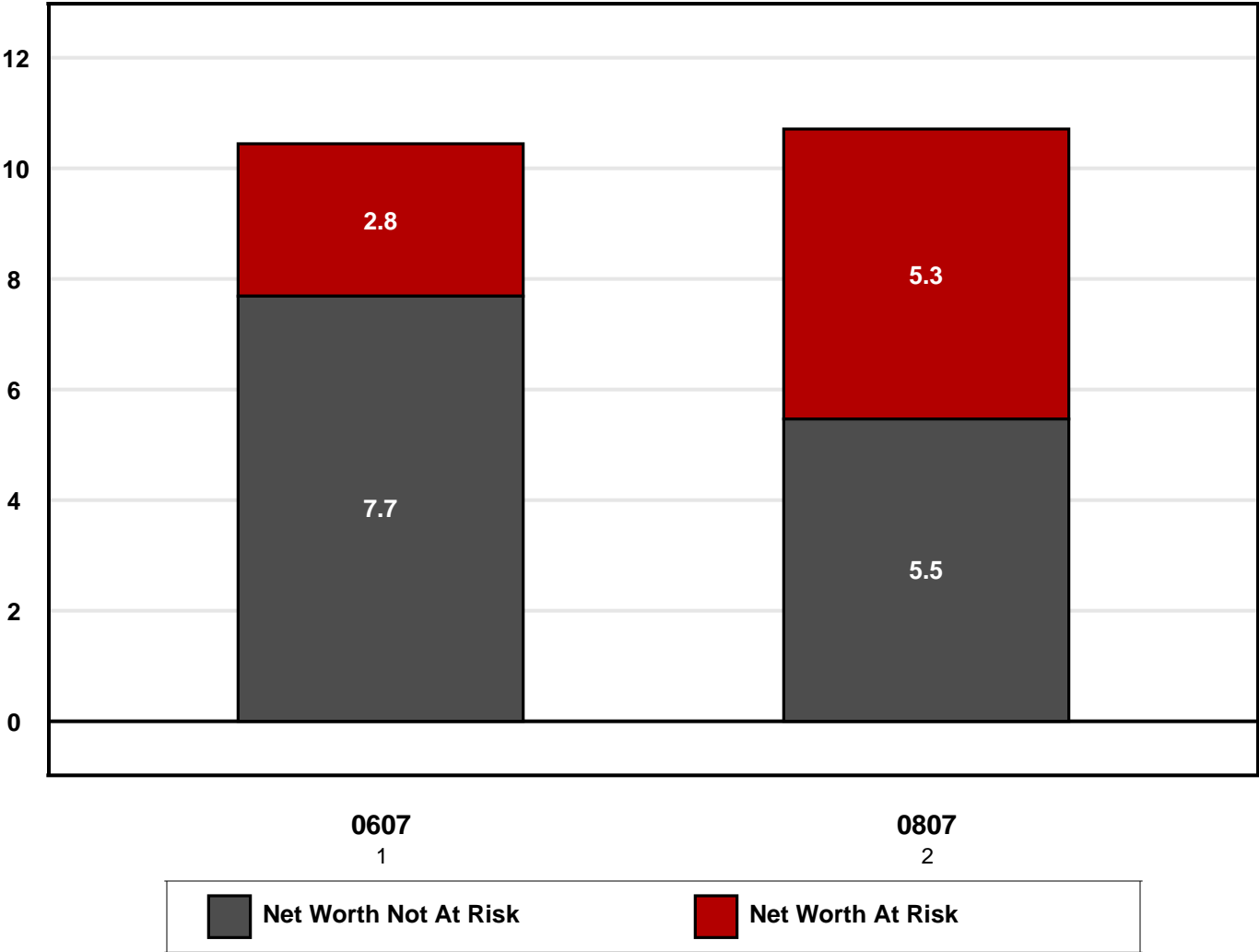
Percent



- 1. Case Study Previous
- 2. Case Study Current

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

Percent



- 1. Case Study Previous
- 2. Case Study Current

- Show Volatility
- Lock Base

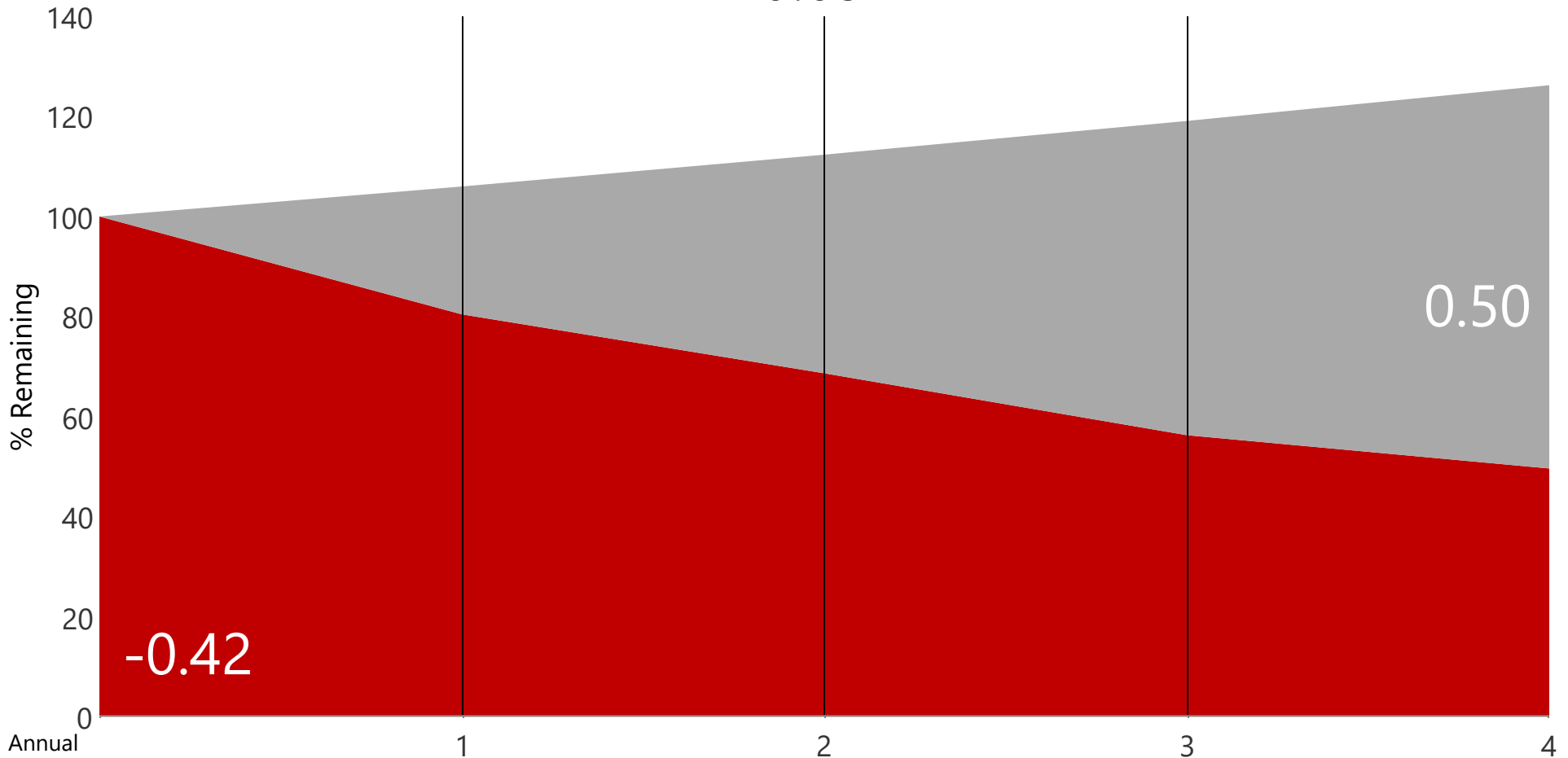
Total ROA Performance

Current

Case Study Current

Existing New

= -0.09



Annual Growth, %	1	2	3	4
Use targets <input checked="" type="checkbox"/>	6.00	6.00	6.00	6.00

ROA	0.36	-0.19	-0.27	-0.23
NW	10.5	9.7	8.9	8.2

Rate Scenario

New Business

What if New Business Earns

Sample Case Study, Case Study Current, \$ in Thousands
Beginning Net Worth: 10.76 %

Rate Scenarios	ROA Existing Commitments	0.00%	If New Business Earns... 0.50%	1.00%
Total 4-Year Return on Assets				
0000	0.86%	0.55%	0.73%	0.92%
-300 0201	0.67%	0.43%	0.61%	0.79%
-100 0403	0.05%	0.03%	0.21%	0.39%
Current 0504	(0.42%)	(0.27%)	(0.09%)	0.08%
0505	(0.44%)	(0.29%)	(0.11%)	0.06%
+300 0807	(1.50%)	(0.98%)	(0.80%)	(0.63%)
0909	(1.94%)	(1.27%)	(1.09%)	(0.92%)
Net Worth After 4 Years				
0000	0.86%	10.48%	11.14%	11.80%
-300 0201	0.67%	10.06%	10.70%	11.33%
-100 0403	0.05%	8.64%	9.27%	9.90%
Current 0504	(0.42%)	7.56%	8.19%	8.82%
0505	(0.44%)	7.50%	8.12%	8.75%
+300 0807	(1.50%)	5.04%	5.67%	6.29%
0909	(1.94%)	4.01%	4.63%	5.25%

Target Asset Size Year 4: \$ 1,451,849

Note: The Net Worth on this report does not factor in the impact of Additional Event Risk Losses. A separate report incorporating Additional Event Risk Losses can be produced.

Industry Statistics – Long-Term Risk

	CUs with assets of \$1 billion or more		CUs with assets of less than \$1 billion	
	Range	Average	Range	Average
FIRST NEGATIVE ROA ...				
Short-Term Rates at:	0% to 13%	4%	0% to 11%	3%
FALL BELOW WELL CAPITALIZED¹ ...				
Short-Term Rates at:	1% to 16%	7%	0% to 16%	6%
NET WORTH NOT AT RISK ...				
Last Economic Cycle Peak experienced summer 2007; short- and long-term rates at 5%.	3.0% to 14.4%	9.4%	3.0% to 15.1%	8.4%
Worst Sustained Conditions our financial markets have ever seen—1980-82—short- and long-term rates at 13%.	-11.7% to 14.0%	0.2%	-12.6% to 13.8%	-1.0%

¹ Credit unions run the gamut—some could fall below Well Capitalized with short-term rates at 0%, while others may not fall below Well Capitalized until rates reach 16%. The “Fall Below Well Capitalized” range begins at short-term rates at 0% because at least one credit union has a starting net worth ratio below Well Capitalized or is pushed below the threshold by negative earnings or their incremental assumption regarding additional event risk losses.

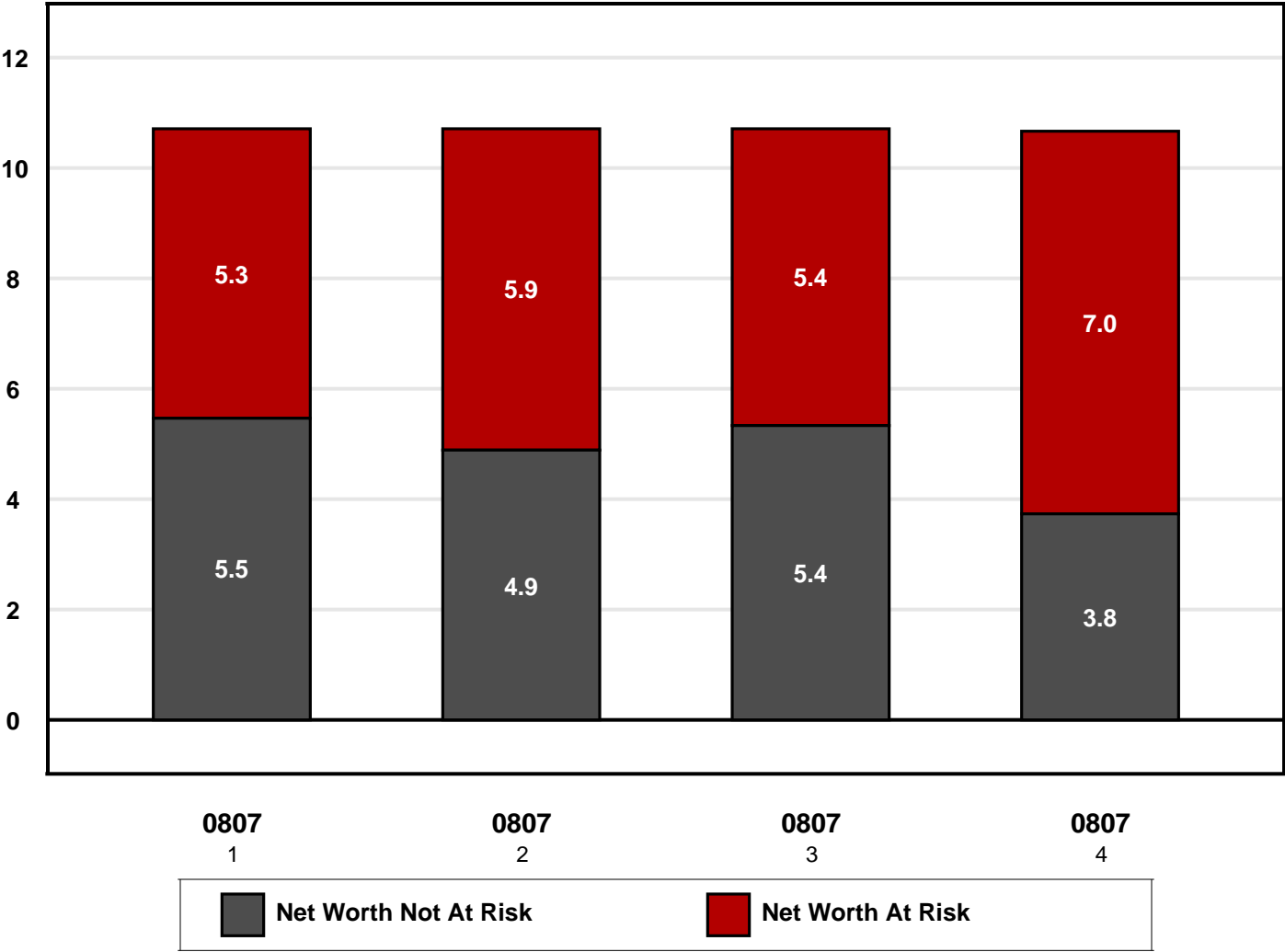
A3KDI



OTHER ANALYSIS

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

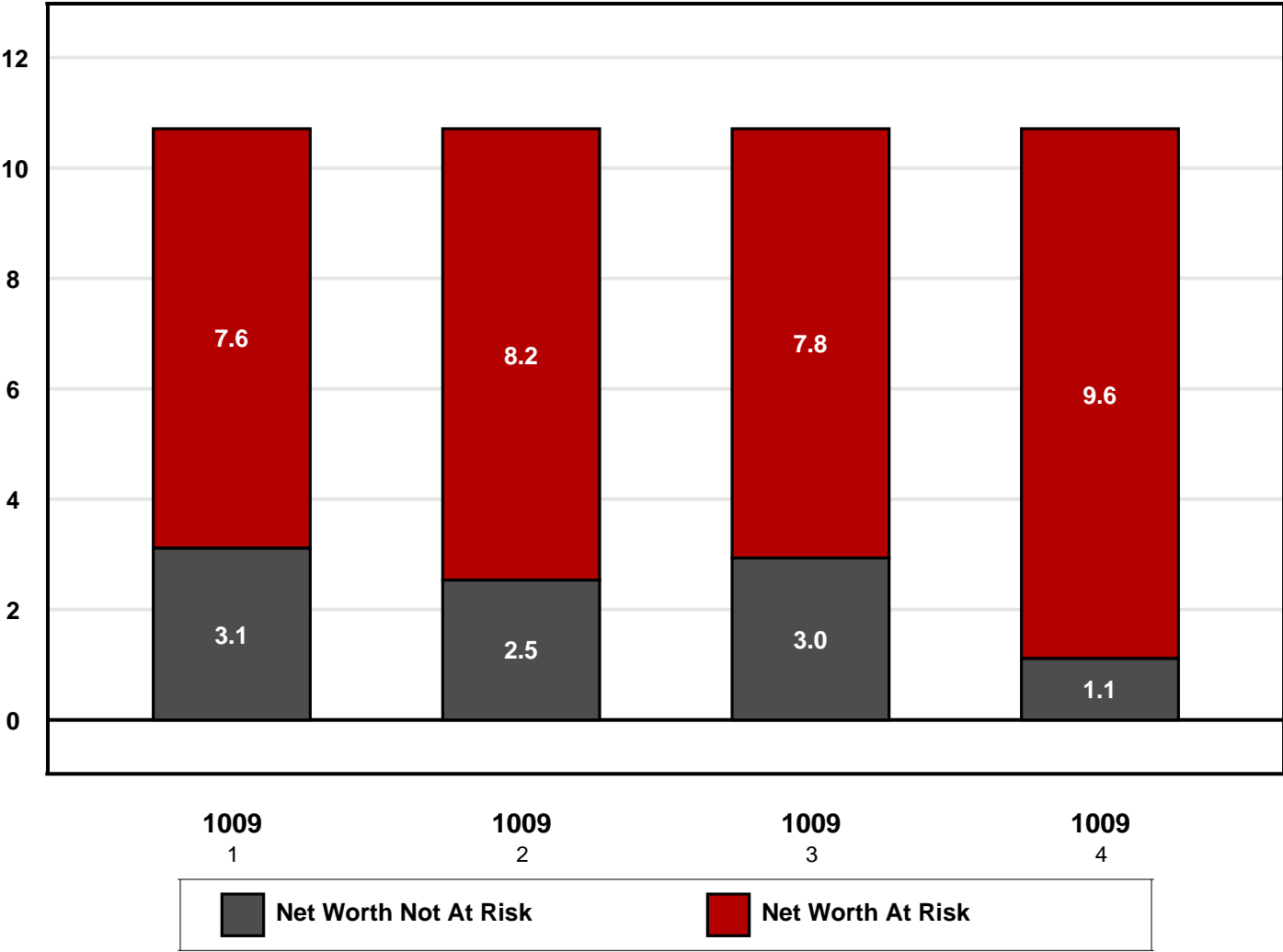
Percent



- 1. Case Study Current
- 2. Case Study Current: What if ECL Increases to 0.54% (2x Base)
- 3. Case Study Current: What if Loan Prepayment Speeds
- 4. Case Study Current: What if NMD Withdrawal Speeds Increase 50%

Comparison of Long-Term Net Worth At Risk - Rate Change +500 Basis Points

Percent



- 1. Case Study Current
- 2. Case Study Current: What if ECL Increases to 0.54% (2x Base)
- 3. Case Study Current: What if Loan Prepayment Speeds
- 4. Case Study Current: What if NMD Withdrawal Speeds Increase 50%

Net Economic Value (+-300)

Sample Case Study, Existing Commitments, Case Study Current, \$ in Thousands
 Scenario Representing Current Market Rates = 0504
 Net Worth \$123,750 = 10.8%, Min Net Worth \$80,500 = 7.0%

	Interest Rate Scenario	NEV	\$ Change	% Change	NEV %
Case Study Current					
-300	0201	180,159	56,858	46.11%	15.29%
-200	0302	167,249	43,949	35.64%	14.76%
-100	0403	147,506	24,206	19.63%	13.50%
Current	0504	123,301			11.68%
+100	0605	107,379	(15,921)	(12.91%)	10.51%
+200	0706	92,395	(30,906)	(25.07%)	9.34%
+300	0807	80,297	(43,003)	(34.88%)	8.37%

Case Study Current: NEV with NCUA NMS Values					
-300	0201	156,350	116,794	295.26%	13.27%
-200	0302	113,103	73,548	185.93%	9.98%
-100	0403	74,871	35,316	89.28%	6.85%
Current	0504	39,556			3.75%
+100	0605	17,466	(22,090)	(55.84%)	1.71%
+200	0706	(2,643)	(42,199)	(106.68%)	(0.27%)
+300	0807	(20,118)	(59,673)	(150.86%)	(2.10%)

Note: Fair value may not be indicative of actual price and price changes.

Net Economic Value (+-300)

Sample Case Study, Existing Commitments, Case Study Current, \$ in Thousands
 Scenario Representing Current Market Rates = 0504
 Net Worth \$123,750 = 10.8%, Min Net Worth \$80,500 = 7.0%

	Interest Rate Scenario	NEV	\$ Change	% Change	NEV %
Case Study Current					
-300	0201	180,159	56,858	46.11%	15.29%
-200	0302	167,249	43,949	35.64%	14.76%
-100	0403	147,506	24,206	19.63%	13.50%
Current	0504	123,301			11.68%
+100	0605	107,379	(15,921)	(12.91%)	10.51%
+200	0706	92,395	(30,906)	(25.07%)	9.34%
+300	0807	80,297	(43,003)	(34.88%)	8.37%
Case Study Current: What if Loan Discount Rates Increased 100 bps					
-300	0201	131,261	45,371	52.82%	11.62%
-200	0302	122,805	36,914	42.98%	11.28%
-100	0403	106,816	20,926	24.36%	10.15%
Current	0504	85,890			8.43%
+100	0605	72,856	(13,034)	(15.18%)	7.38%
+200	0706	60,379	(25,511)	(29.70%)	6.31%
+300	0807	50,456	(35,434)	(41.25%)	5.43%

Note: Fair value may not be indicative of actual price and price changes.

c. myers corporation

cmyers.com

8222 south 48th street, suite 275

phoenix, arizona 85044

phone

800.238.7475