Realities in the ALCO Process

Is Your ALCO Making a Difference?

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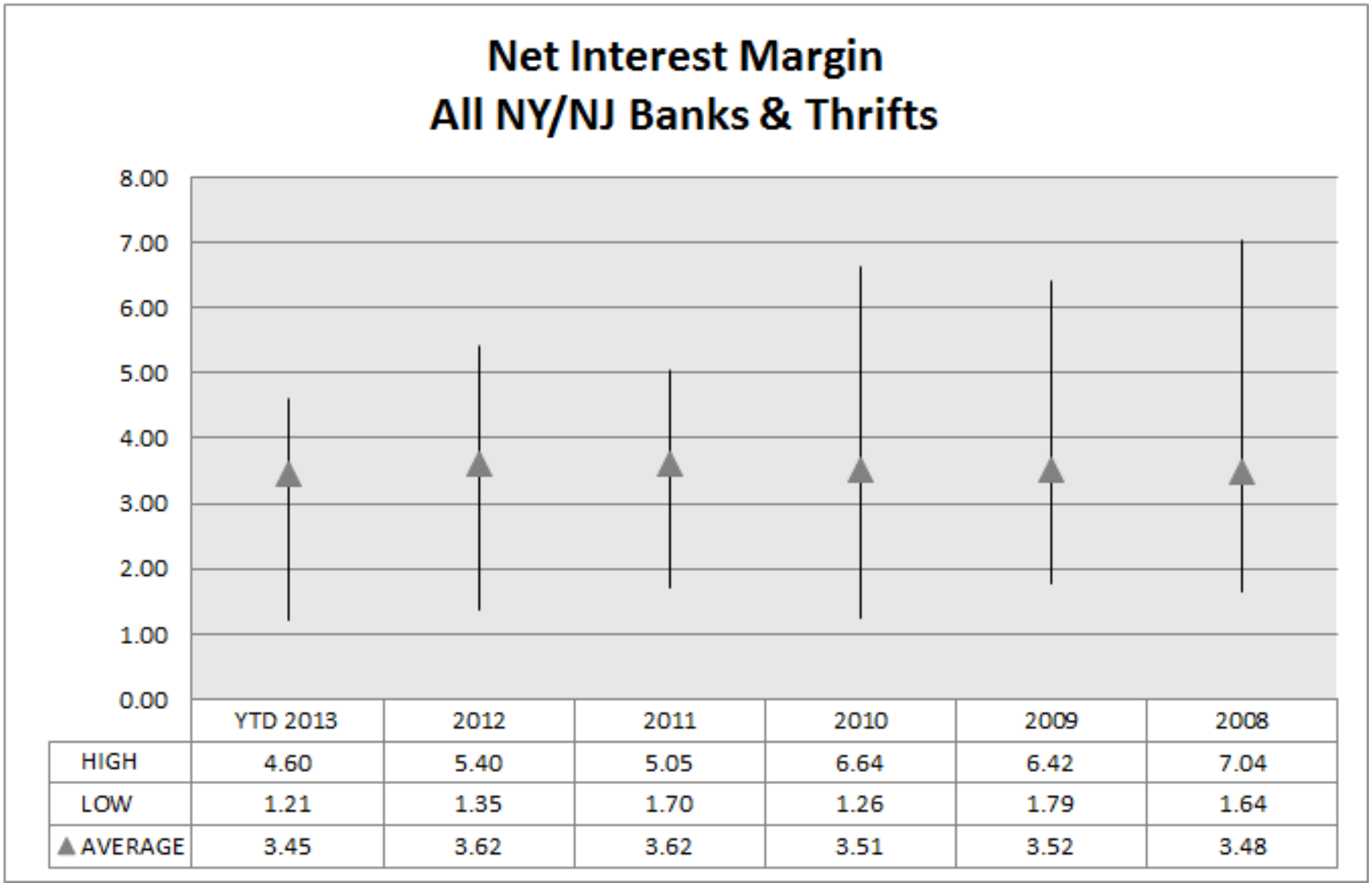
Top Issues in ALCO Today

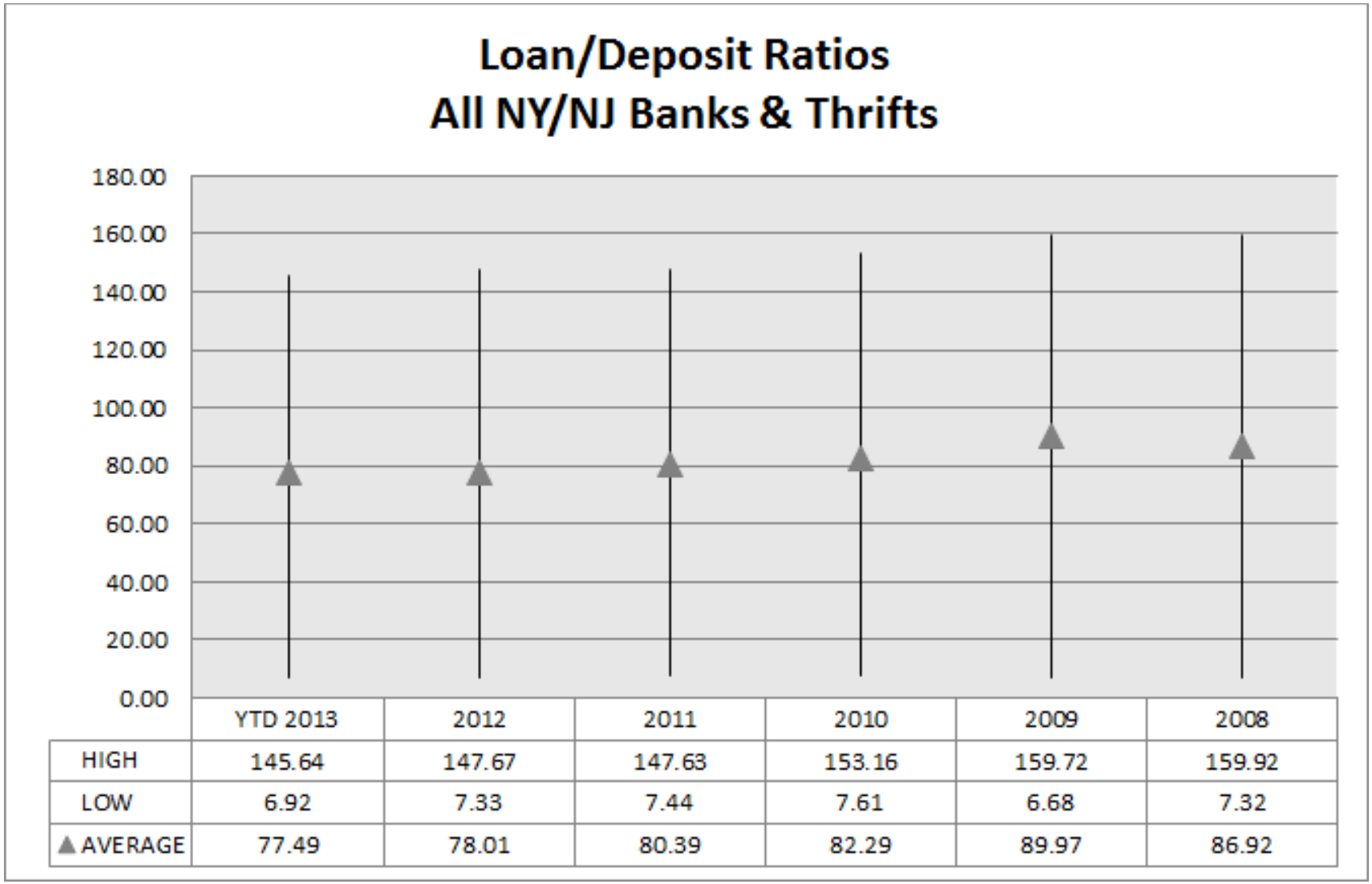
- Margin Compression
- Capital Regulations
- Long-term, fixed rate loan demand
- Regulatory Pressure – Unknown
- Consolidation
- Controlling Funding Costs when Rates Risk
- Future credit risk
- Loan/Asset ratio falling
- Future Interest Rates
- Small pool of quality borrowers
- Concentration risks
- Need for more meaningful analysis

Trends Net Interest Margin – NY/NJ



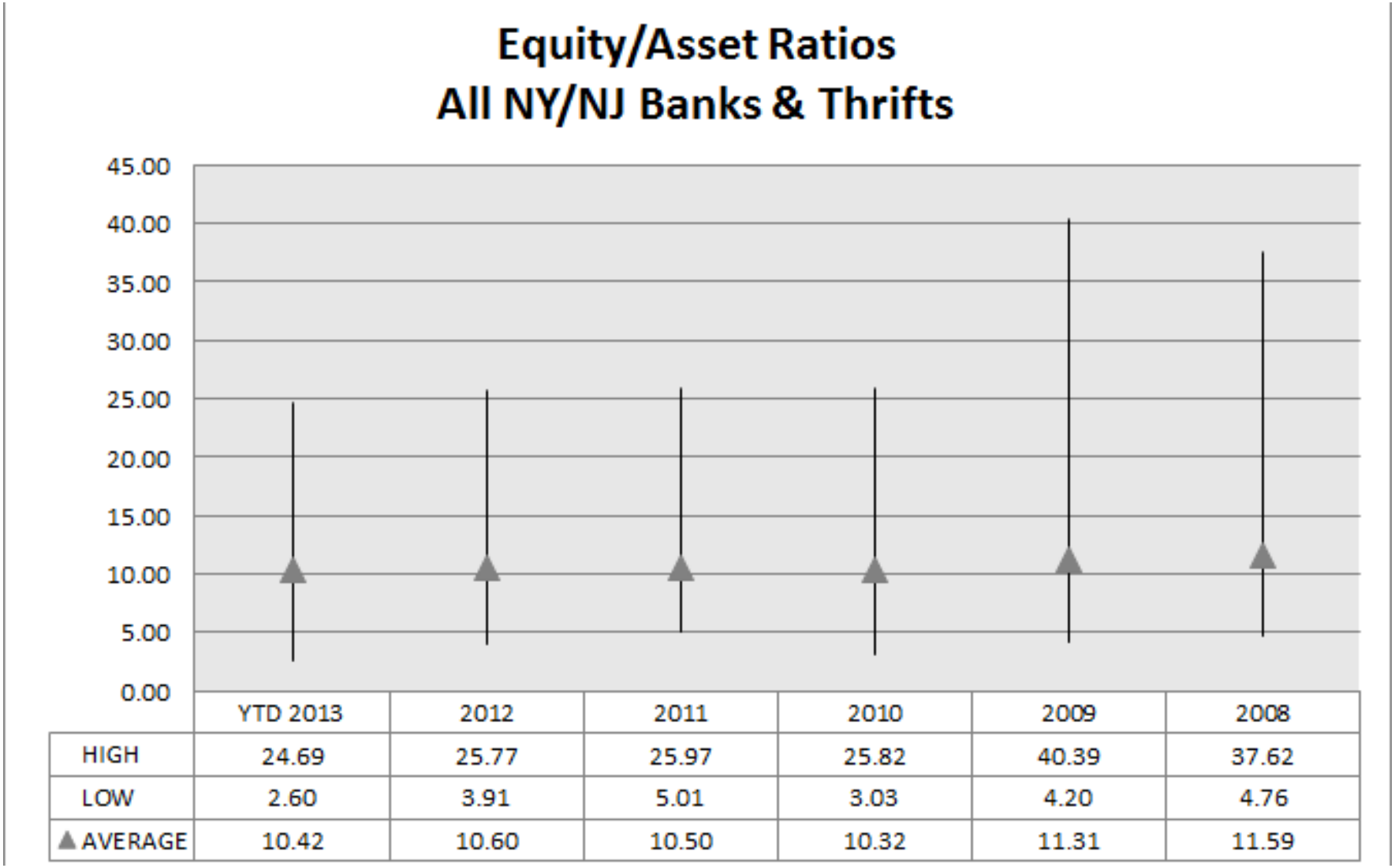
	YTD 2013	2012	2011	2010	2009	2008
HIGH	4.60	5.40	5.05	6.64	6.42	7.04
LOW	1.21	1.35	1.70	1.26	1.79	1.64
▲AVERAGE	3.45	3.62	3.62	3.51	3.52	3.48

Loan/Deposit Trends– NY/NJ



	YTD 2013	2012	2011	2010	2009	2008
HIGH	145.64	147.67	147.63	153.16	159.72	159.92
LOW	6.92	7.33	7.44	7.61	6.68	7.32
▲AVERAGE	77.49	78.01	80.39	82.29	89.97	86.92

Equity/Asset Trends– NY/NJ



	YTD 2013	2012	2011	2010	2009	2008
HIGH	24.69	25.77	25.97	25.82	40.39	37.62
LOW	2.60	3.91	5.01	3.03	4.20	4.76
▲ AVERAGE	10.42	10.60	10.50	10.32	11.31	11.59

Starting Questions

- Does your ALCO Reporting Indicate you are Asset Sensitive?
- Do You Run a Dynamic Balance Sheet for Interest Rate Risk Analysis?
- Do You Use A Loan Pricing Model to Determine Rate/Term Mix for Market Needs?
- Do You ***Believe*** Your ALM Model Results?

ALCO Concerns

- Continued Margin Compression
- Loan/Asset Ratios Sliding
- Current IRR Exposure
- How are your Non-maturity deposits going to behave as rates rise?
- When to Use of FHLB/SWAP options?

Recently Observed ALCO Events

- **Client #1**: Losing "A" Credit Loans to competitors
  - Our offer: 5/20 CRE @ 3.75% - 4.25%
  - Their Offer: 15-20 Year Fixed Rate @ 4.25% - 4.5%
- **Client #2**: Beginning to offer longer term fixed rate loans and using SWAPS to offset Interest Rate Risk
  - Swap the fixed rate for floating rate

What do these 2 scenarios have in common?

Concern over Margin Compression from Funding Cost Increases

Recently Observed ALCO Events

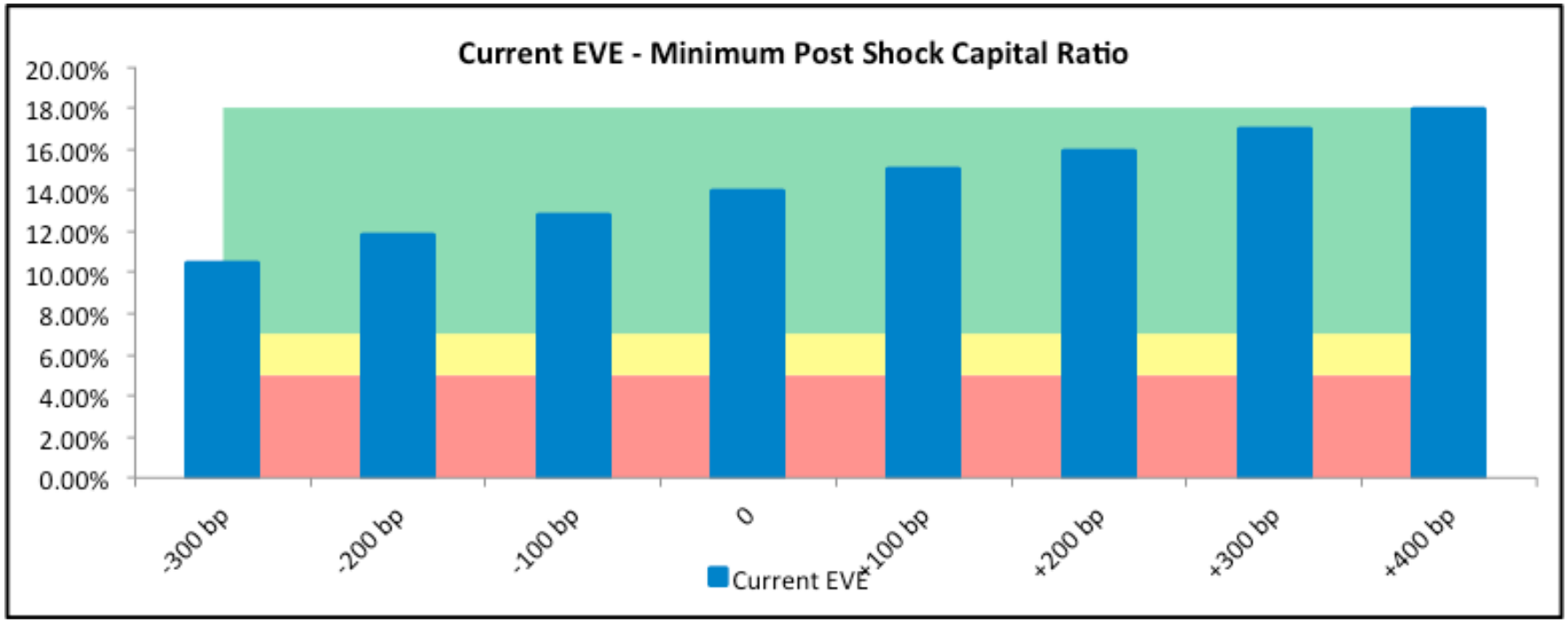
- Decisions made based upon preconceived notions of risk
- No reliance/belief of internal ALM modeling results
- The last guy in the ALCO Conversation wins the assumption game…
  - Validations
  - Core Deposit Behaviors

Do your ALCO Results tell a real story about your risk?

Client #1 ALCO Scenario

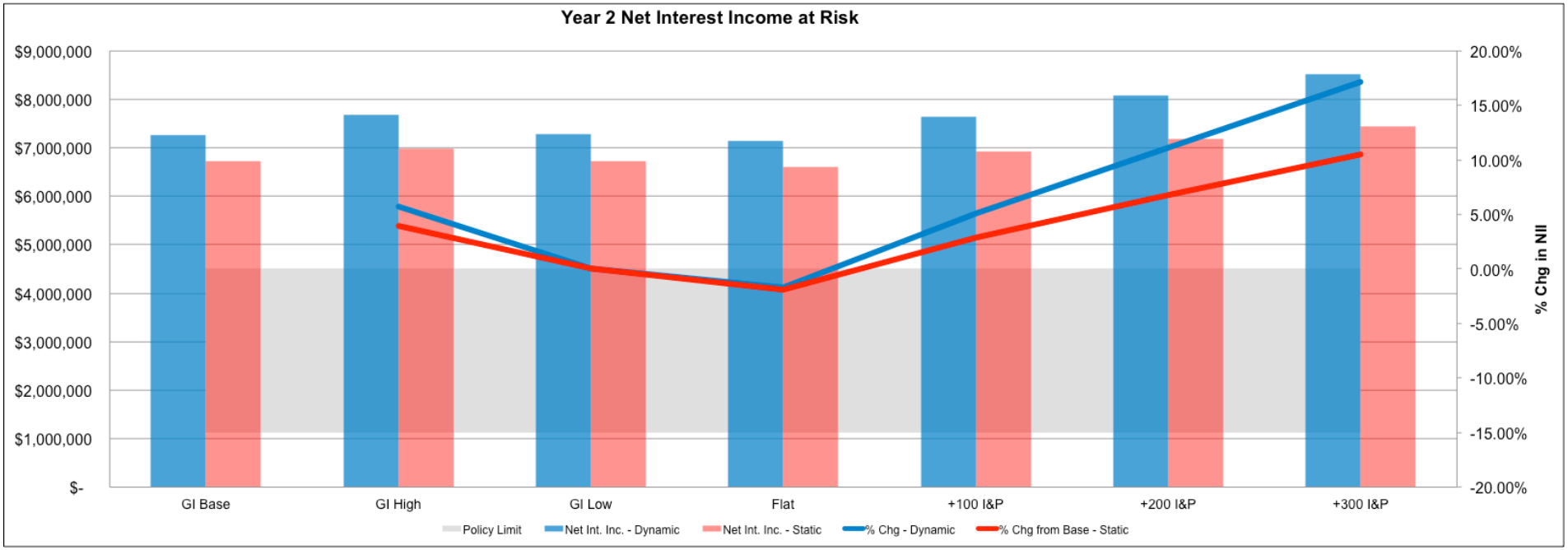
- $200 million Bank
  - Shrinking (down 25%) over past 2-3 years
  - 14% Capital/Asset Ratio
  - Regulatory Agreement due to credit risk
- Asset Mix
  - 75% Loans/Asset Ratio
    - Recovering from CRE/RE Crash
  - 6.5% Investments/Asset
  - 12.5% in NIB Assets
    - OREO >4% of Assets
    - High Cash Balances (Liquidity)
- Funding Mix (% of Assets)
  - 32% CDs
  - 21% DDA
  - 10% MMDA
  - 11% Savings
  - Historically used Brokered CDs
- Historical Loans
  - 5/20 CRE or 10-12 Yr. VR Loans
  - Minimal 1st Mtg Exposure
- Quality Borrowers Pressing for Longer term, fixed rates
- Culture Shock!

Client #1 Current EVE Profile



Strong EVE Ratios with INCREASING EVE in Rising Rate Shocks

Client #1 Earnings At Risk

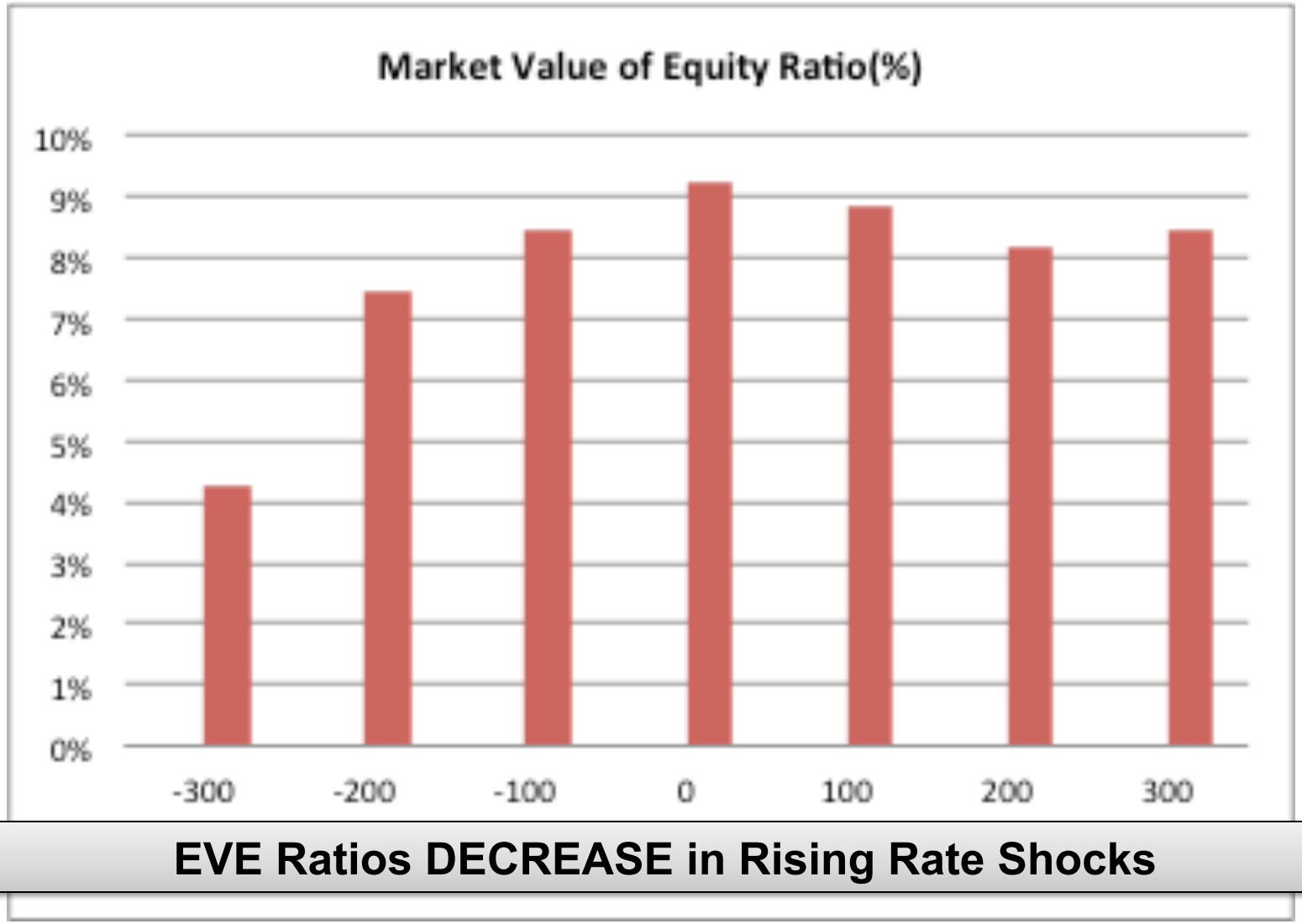


Earnings Increase in Yrs. 1 & 2 if Rates Rise
Conclusion – Current Plan has NO Interest Rate Risk

Client #2 ALCO Scenario

- $450 million Bank
  - Shrinking (down 15%)
  - 9.75% Capital/Asset Ratio
- Asset Mix
  - 66% Loans/Asset Ratio
    - Movement into longer duration investments
  - 25% Investments/Asset
    - Buying MBS & CMO Pools
  - 9% in NIB Assets
    - NPA's >4% of Assets
- Earnings: 0.2% ROA
- Funding Mix (% of Assets)
  - 12% CDs
  - 22% DDA
  - 35% MMDA
  - 20% Savings
  - Historically used FHLB for risk mitigation
- Historical Loan Mix
  - 1-4 Family Balloon Mtgs (27%)
  - 5/20 & VR CRE (62%)
- Quality Borrowers Pressing for Longer term, fixed rates

Client #2 Current EVE Profile



EVE Ratios DECREASE in Rising Rate Shocks

Client #2 Earnings At Risk

1 Year Forecast of Net Interest Margin, Net Income & 2 Yr Component Comparison

Global Insight Rate Forecasts

Next 12 Months Net Interest Margin b4 PLL

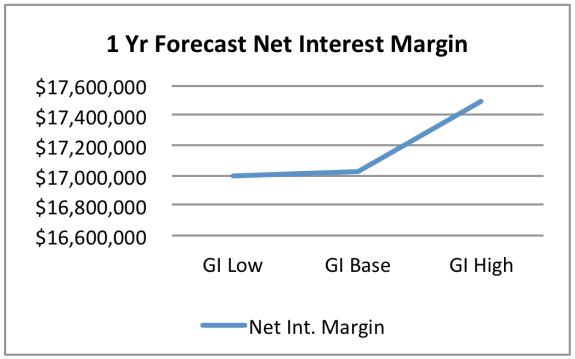
Rate Change (bp)	Net Int. Margin	% Chg
GI Low	$ 16,993,094	-0.17%
GI Base	$ 17,021,631	0.00%
GI High	$ 17,488,922	2.75%

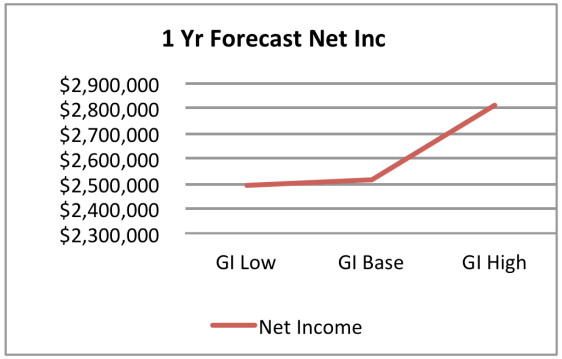
Next 12 Months Net Income

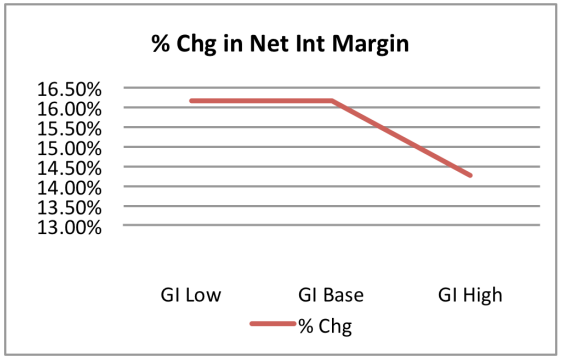
Rate Change (bp)	Net Income	% Chg
GI Low	$ 2,491,003	-0.72%
GI Base	$ 2,509,178	0.00%
GI High	$ 2,806,834	11.86%

Yr 2 - Yr 1 Net Interest Margin b4 PLL

Rate Change (bp)	Change in Net Int. Margin	% Chg
GI Low	$ 2,748,029	16.17%
GI Base	$ 2,747,665	16.14%
GI High	$ 2,490,954	14.24%





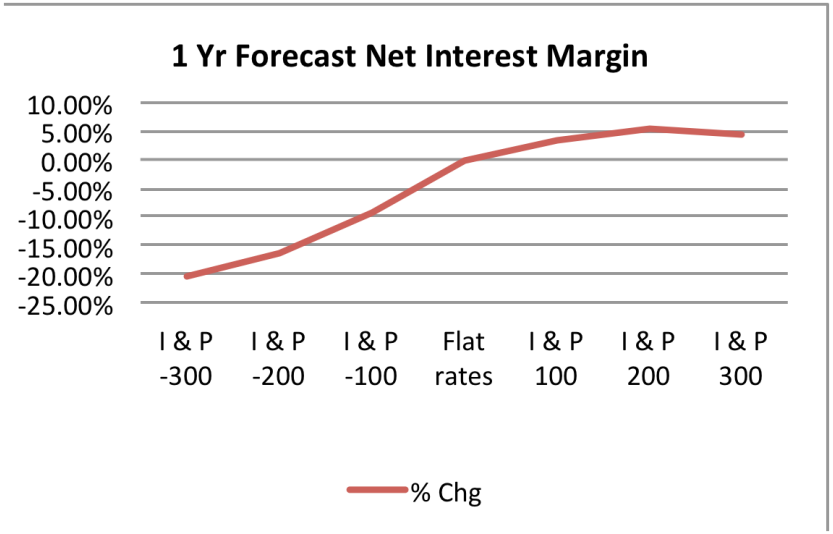


Earnings Increase in Yrs. 1 & 2 if Rates Rise
Conclusion – Current Plan has NO Interest Rate Risk

Institution #2 – Rate Shocks

Yr 1 Net Interest Margin b4 PLL

Rate Change (bp)	Net Int. Margin	% Chg
I & P -300	$ 13,388,763	-20.43%
I & P -200	$ 14,057,433	-16.46%
I & P -100	$ 15,228,429	-9.50%
Flat rates	$ 16,826,647	0.00%
I & P 100	$ 17,393,565	3.37%
I & P 200	$ 17,725,968	5.34%
I & P 300	$ 17,561,242	4.37%



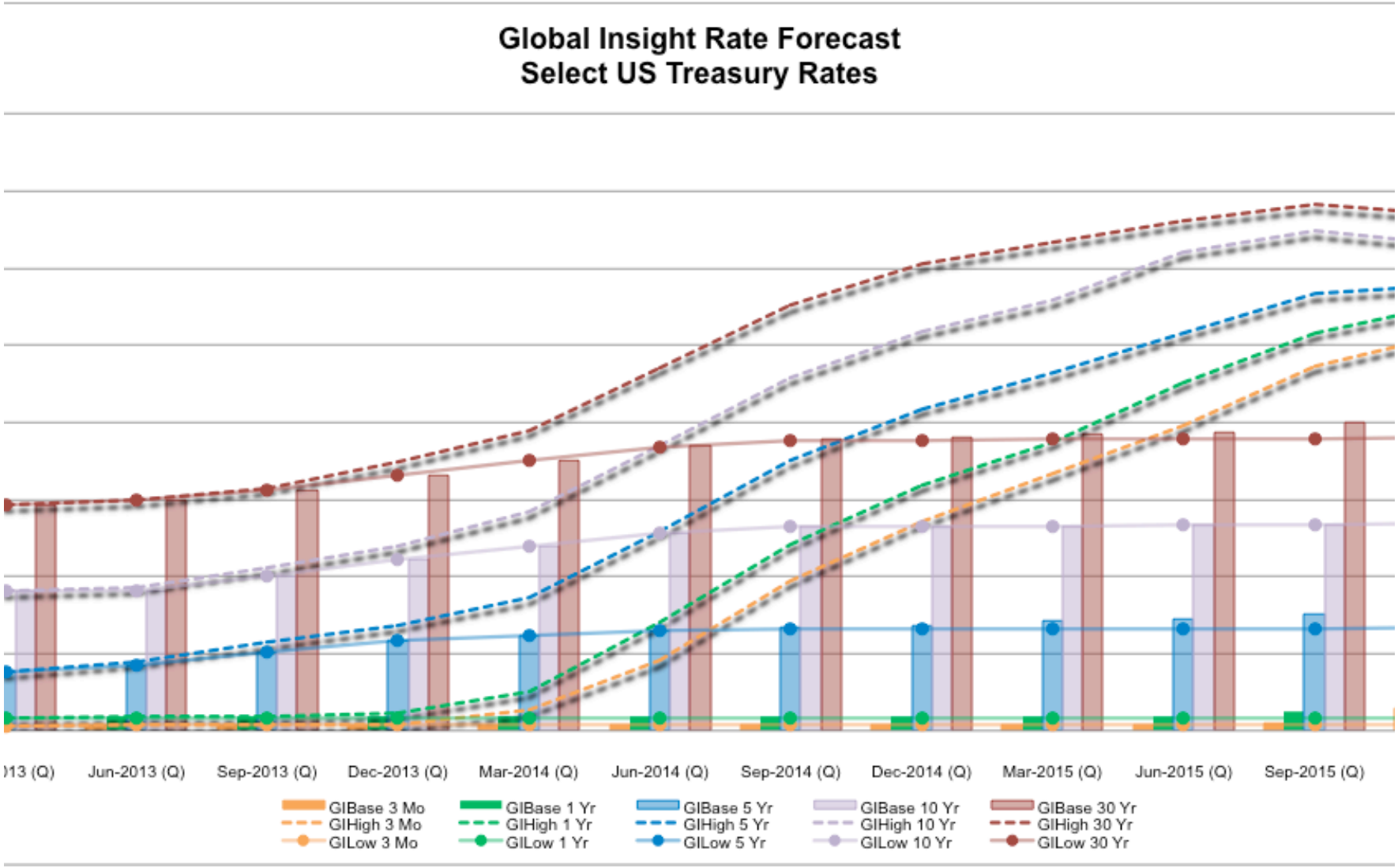
- When we look at Income under shocked rates, note that we still see income rising under rising rates
  - Not consistent with EVE
- How do the results from an immediate +300 bp shock lie to you?

Comparison

- What Conclusions do you draw about each institution given these reports?

- How can Institution #2 show earnings rising but value falling when rates rise?
  - What does EVE Really Tell Use
  - How does the timing of rate movements impact our analysis?
  - How does timing of rate movements effect our real earnings?

Projected Interest Rates



Issues

- What if Institution #1 is using a static forecast
  - We replace all cash flows from any instrument with the same instrument at today's market rate?
    - Variable Rate Loans replaced at bank offer rate of Prime = 0.5% and adjusting as rates rise
    - Long-term CD's are replaced with new long term CDs at really low rates
  - ***Is this reality? Can you manage this result?***

ALCO Requirements

- Use Dynamic and Static Balance Sheet Projections
  - Manage Reality
  - Show impact of plans on performance
- Use Real Rate Movements – no shocks
  - See next page
- Consistency in Assumptions with Liquidity Risk

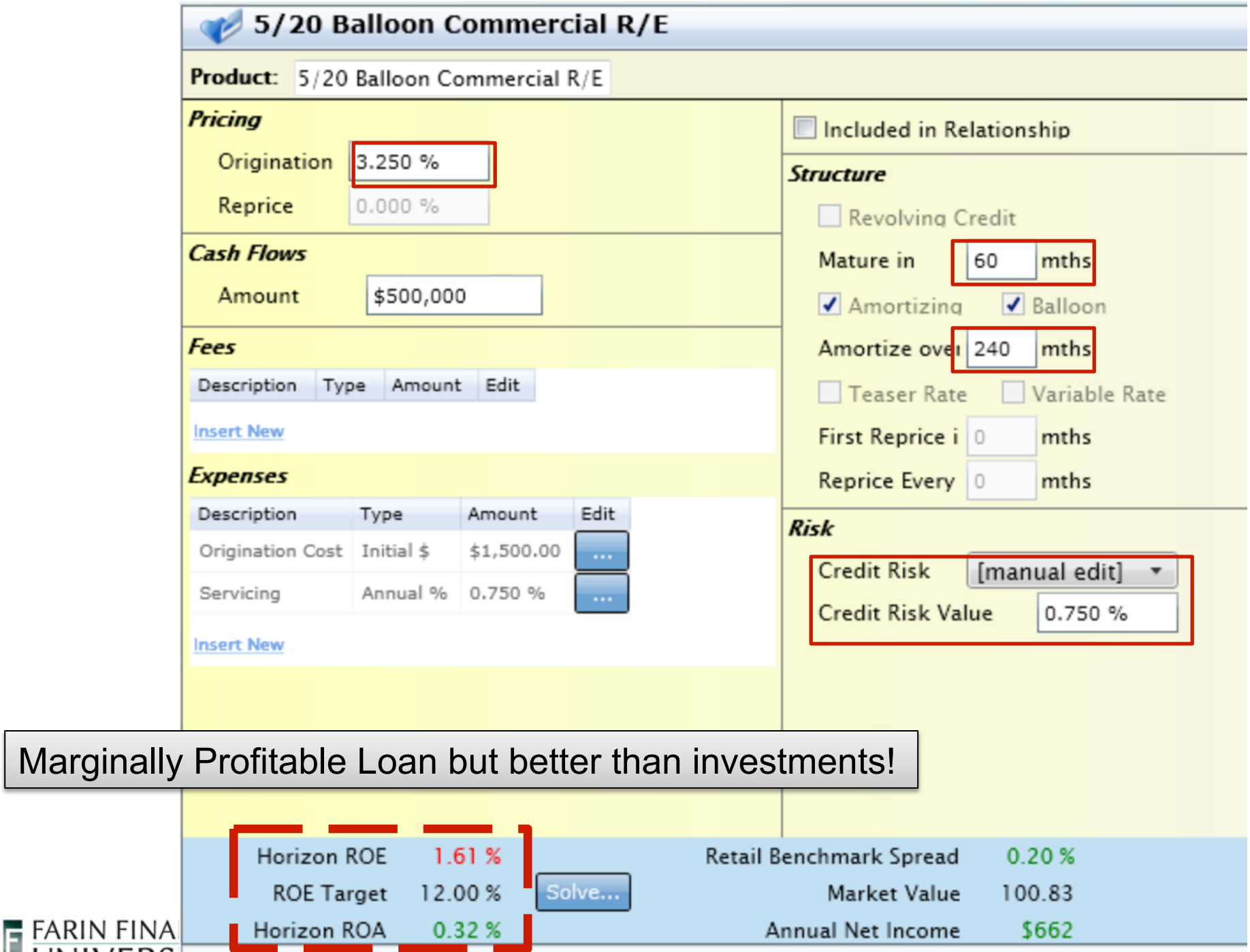
Stress Testing

The regulators remind institutions that stress testing, which includes both scenario and sensitivity analysis, is an integral component of IRR management. In general, scenario analysis uses the model to predict a possible future outcome given an event or series of events, while sensitivity analysis tests a model's parameters without relating those changes to an underlying event or real world outcome.[7]

When conducting scenario analyses, institutions should assess a range of alternative future interest rate scenarios in evaluating IRR exposure. This range should be sufficiently meaningful to fully identify basis risk, yield curve risk and the risks of embedded options. In many cases, static interest rate shocks consisting of parallel shifts in the yield curve of plus and minus 200 basis points may not be sufficient to adequately assess an institution's IRR exposure. As a result, institutions should regularly assess IRR exposures beyond typical industry conventions, including changes in rates of greater magnitude (e.g., up and down 300 and 400 basis points) across different tenors to reflect changing slopes and twists of the yield curve. Institutions should ensure their scenarios are severe but plausible in light of the existing level of rates and the interest rate cycle. For example, in low-rate environments, scenarios involving significant declines in market rates can be deemphasized in favor of increasing the number and size of alternative rising-rate scenarios.

Loan Pricing Issues

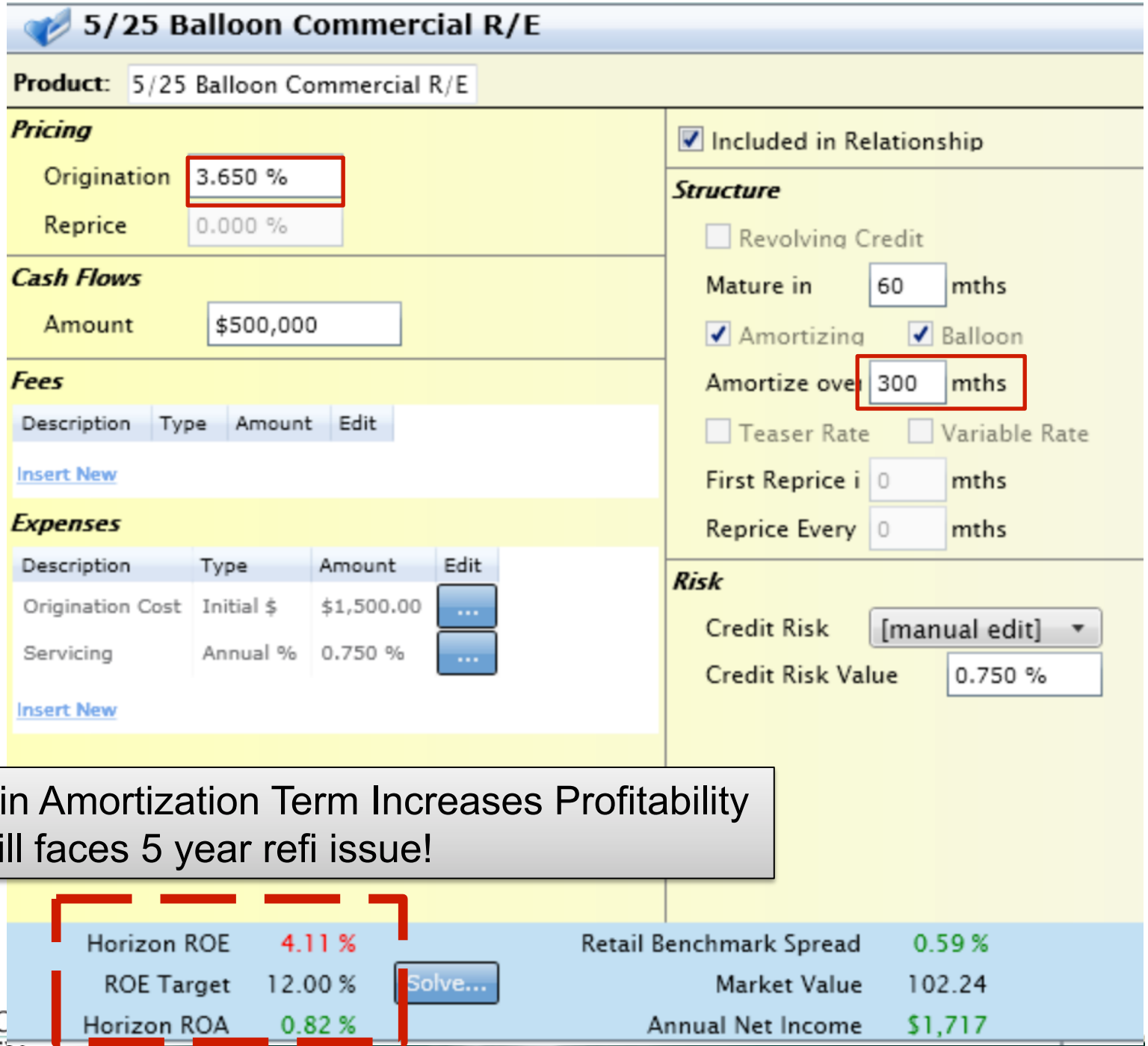
- Financial Institution
  - If interest rate risk is pushed off on borrower, has the potential to take credit risk back.
  - Has the ability to mitigate IRR by:
    - Loan Structure
    - Deposit Funding
    - FHLB Advances
    - Hedging Tools – Swaps, Caps, etc.
  - Needs to understand the supply/demand implications on price.



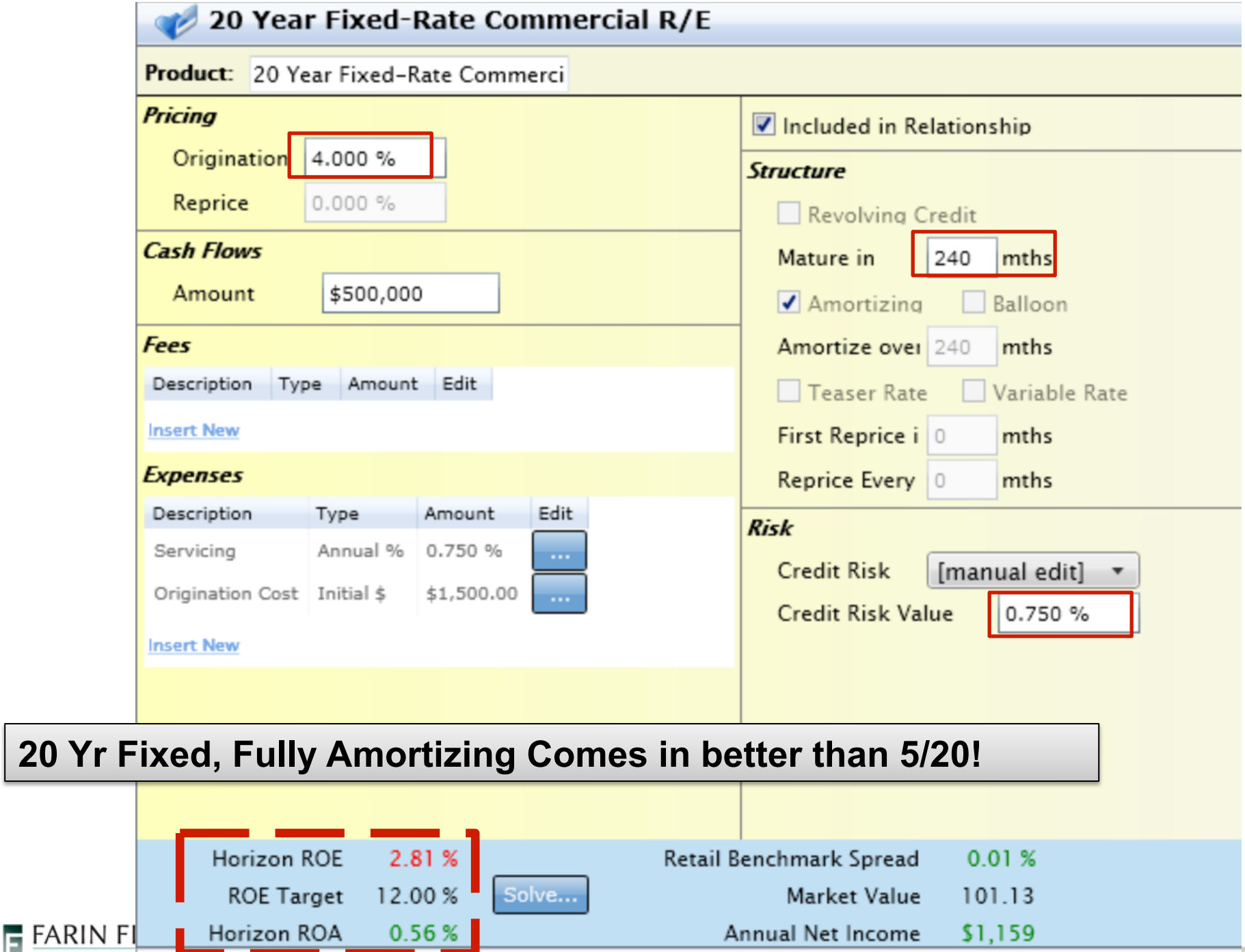
Marginally Profitable Loan but better than investments!

What Measure Of Loan Profitability Is Right?

- First, if loan pricing is not better than investment returns (adjusted for risk & cost), DO NOT MAKE THE LOAN!
- Then,
  - ROE: When Capital is a constraint, ROE is Key
  - ROA: When Capital is sufficient or no growth in assets planned. Reallocation of assets
- Funding in pricing models may be different than your balance sheet so ALM Models tell you how long a strategy can last.

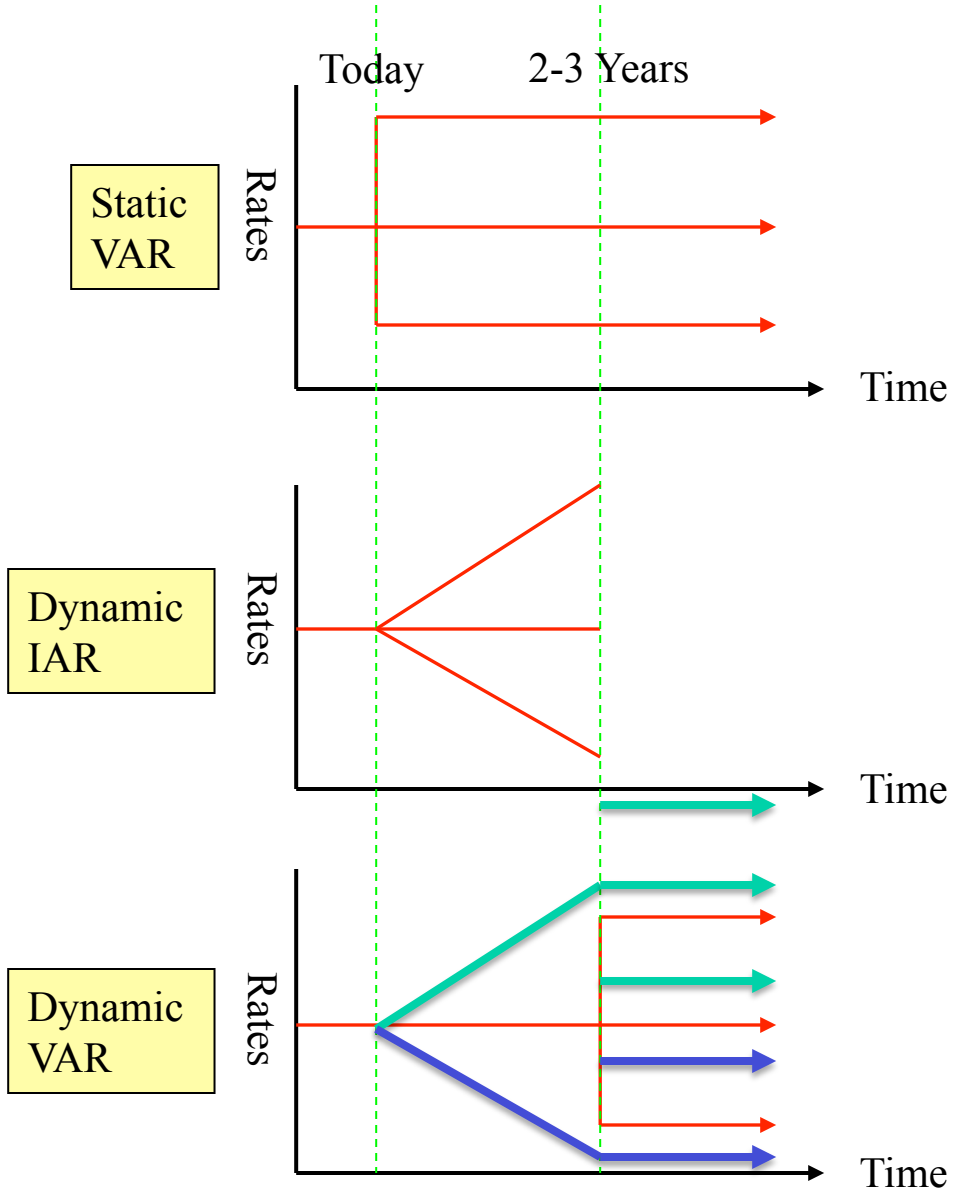


Small Increase in Amortization Term Increases Profitability but customer still faces 5 year refi issue!



Dynamic Value at Risk (VAR)

- Calculation Technique
  - Run a computer simulation run of one or more management strategies in a single rate environment.
  - Run a VAR Test on forecast balance sheet
- Application In IRR Management
  - Used to evaluate effect of a strategy on future VAR.
  - Only effective way to test the long-term effect of changes in rates on a strategy.
  - Can be used as tool in comparing risk-return tradeoffs of alternative strategies.



EFFECTIVE ALCO

Case Study - Questions

- Considering longer term CRE Loans & Manage IRR
  - Do I Need Long Term Funding?
  - What is my exposure if I do this?
- We know earnings will increase over the short run, what are the issues in moving ahead
  - Long Term Exposure to Rates (IRR): Dynamic EVE under Various Rate Projections
  - Impact on Capital/Asset Ratios: Review of forecast ratios on capital ratio limits
  - Liquidity concerns?
  - “We Don’t Do That” mentality?

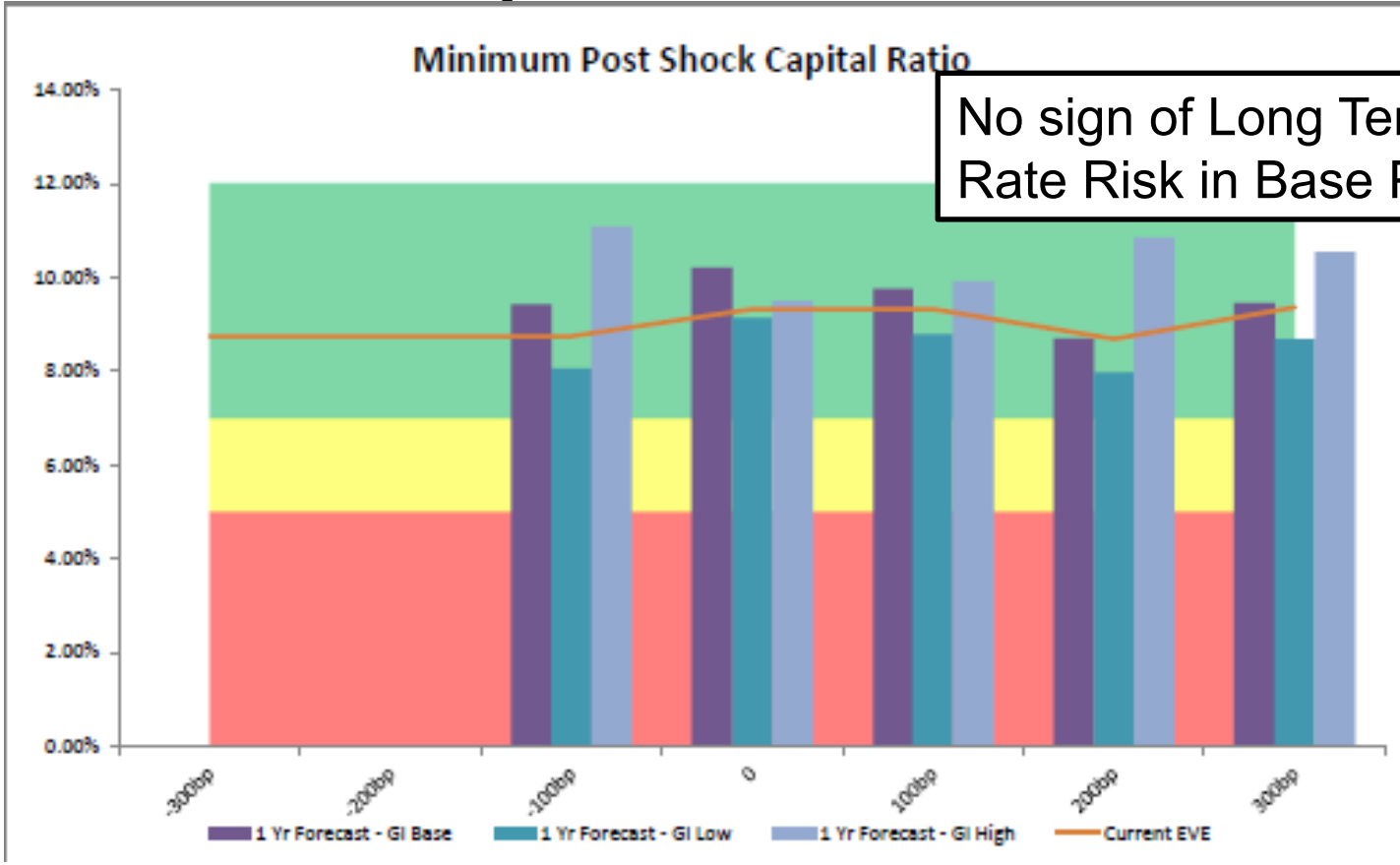
Comparing Earnings at Risk

Calculated Row (Dollars in Thousands)	Sep-2012							
	Flat rates	GI Base Dec	GI High Dec	GI Low Dec-	I & P -100	I & P 100	I & P 200	I & P 300
Net Income								
Base Business Plan	444.01	504.71	898.28	298.97	-783.74	945.37	1,159.33	1,323.20
Long Assets/Short Funding	687.50	731.62	1,054.38	555.04	-502.74	1,097.83	1,307.61	1,472.11
Net Interest Margin before PLL								
Base Business Plan	11,999.46	12,060.26	12,558.15	11,854.47	10,767.95	12,616.45	12,940.23	13,185.03
Long Assets/Short Funding	12,259.00	12,318.42	12,795.38	12,113.39	11,048.96	12,843.38	13,165.58	13,411.33
Net Interest Margin after PLL								
Base Business Plan	10,424.46	10,485.26	10,983.15	10,279.47	9,192.95	11,041.45	11,365.23	11,610.03
Long Assets/Short Funding	10,684.00	10,743.42	11,220.38	10,538.39	9,473.96	11,268.38	11,590.58	11,836.33
Return on Assets								
Base Business Plan	0.119	0.136	0.241	0.080	-0.211	0.254	0.311	0.355
Long Assets/Short Funding	0.185	0.197	0.283	0.149	-0.135	0.294	0.349	0.392
Return on Equity								
Base Business Plan	1.592	1.809	3.207	1.073	-2.851	3.367	4.113	4.680
Long Assets/Short Funding	2.459	2.616	3.757	1.987	-1.823	3.904	4.632	5.199
Book Capital/Assets								
Base Business Plan	7.597	7.608	7.682	7.569	7.365	7.691	7.711	7.704
Long Assets/Short Funding	7.642	7.651	7.623	7.618	7.419	7.578	7.545	7.539

- Under EVERY rate scenario, earnings improve
- No additional volatility in earnings at risk
- Why NOT book longer term loans???

Need to measure at 1 & 2 year points, maybe even 3?

Dynamic EVE



No sign of Long Term Interest Rate Risk in Base Plan

- Forecast EVE Ratios 1 Yr Forward under 3 different rate projections
  - GI Base, GI Low & GI High
  - Could use ANY projected Rates
  - Take Ending Rates then SHOCK up/down like Current EVE

Measuring Risk/Risk/Return

Risk/Return Risk/Risk Decision Matrix 1 YR Forecast				
CAMEL Component	***Ratio***	**Base Plan**	**Strategy 1**	**Strategy 2**
Capital Risk	***Core capital Ratio***	8.25%	8.31%	8.65%
	Tier 1 Leverage	8.25%	8.31%	8.65%
	Risk Based Capital	11.35%	12.07%	12.33%
Earnings	ROA	-0.30%	0.55%	0.80%
Interest Rate Risk	***Income at Risk***	-10.55%	-18.50%	-25.50%
	Current EVE	Minimal	Minimal	Minimal
	Forecast EVE	Minimal	Minimal	Moderate
Liquidity Risk	***Liquidity Gap Ratio - Base***	18.38%	14.55%	12.25%
	Liquidity Gap Ratio - Stressed	10.75%	1.85%	-2.50%
	LCR Ratio	107.85%	102.23%	98.75%
	Non-Core Funding/Assets	20.15%	25.75%	33.45%

KEY SWAP ASSUMPTIONS

- Rates are going to rise! Soon!
- Liability Durations are shorter than asset durations
  - On the balance sheet or for a transaction?
  - What does your ALM Modeling say?
- Margin Pressure Coming Due To
  - Rate Floors and Caps on Variable Loans
  - Early Withdrawal of Longer Term CDs
  - Sensitivity of MMDA Account Pricing and Balances
- ***Key Sniff Test***
  - ***Are you willing to accept the SWAP terms as the terms on the loan to the client?***
  - ***If not, then why pay for that "right"?***

FHLB Funding Options

Pros

- Can match virtually any cash flow structure typically found in CRE loans
- Can hedge prepayment risk
- Some FHLBs provide funding for forward commitments
- Can be used as part of a blended funding approach

Cons

- You may not need the funding
- Requires collateral
- Uses liability based liquidity
- Cost
- Management/board may not like the idea of borrowing money

Take Away's

Don't Hedge Risk You Don't Have

- Loan Pricing Tools are a Critical Part of Decision Making on Quality Credits
  - Must involve treasury/CFO concerns
  - Must be flexible for lenders in the field to assess alternatives
- Core Funding is Key to your Interest Rate Risk & Profitability
  - What is your core funding plan for rising rates?
  - What is the sensitivity of non-maturity accounts
    - That you believe
    - That you model
- Modeling ALM Risks is no longer a regulatory exercise
  - You Must understand and make decisions based on results
  - Must consider all ALCO risks together – Enterprise Risk

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Core Deposit Study

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