



Financial  
Performance

Regulatory  
Compliance



◆ *Complete ALM Solutions* ◆

# ALCO Decision Making

## Making the *Right* Decisions at the Right Time

October 1, 2014

Frank L. Farone, Managing Director  
[ffarone@darlingconsulting.com](mailto:ffarone@darlingconsulting.com)

- ◆ *Back to The Future*, A Look Back at Previous FHLB Webinars
- ◆ Understanding Your TRUE Risk Profile
- ◆ Importance of Accurate and Defensible Model Assumptions
- ◆ Purpose of ALCO
  - Regulatory compliance
  - Financial performance
  - Both
- ◆ Information Driving Decision Making
- ◆ Effective Strategy Development Process
- ◆ Q&A

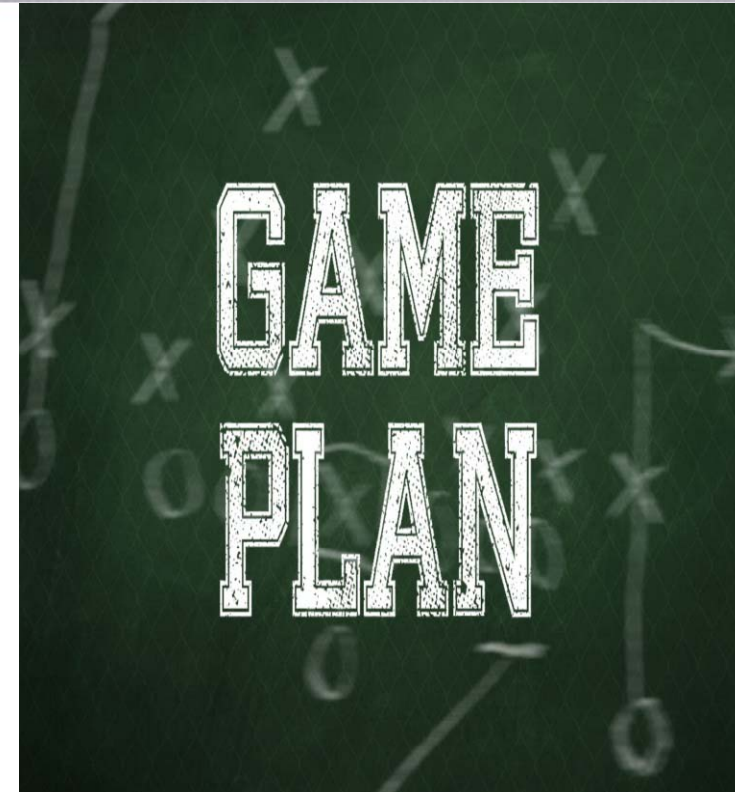


# Credit Union Survival in a Challenging Environment

## *How to Make Balance Sheet Strategy Decisions with Confidence*

**January 24, 2013**

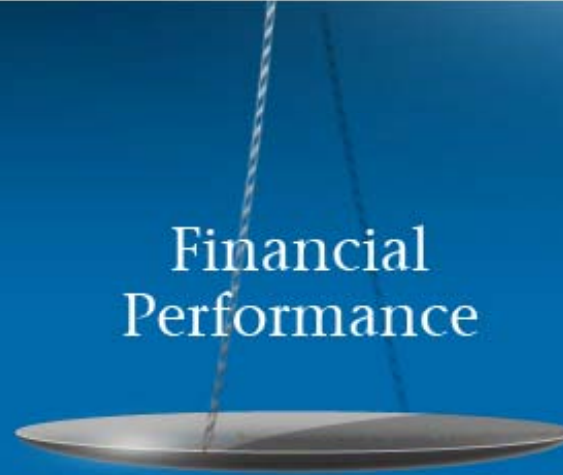
- ❑ Current Industry Issues
  
- ❑ CU Earnings Model
  - Basic Business of a Credit Union
  - NEV vs. NII
  - Liquidity Measurement and Management
  
- ❑ Risk/Return Trade-offs
  
- ❑ Regulatory/Accounting vs. Business Issues
  
- ❑ Balance Sheet Management Strategies
  
- ❑ Managing Regulatory Expectations
  
- ❑ Q & A





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# Watch the *Curve* Ahead

## Credit Union Strategies in a Rising Rate Environment

*Presented October 3, 2013*  
Frank Farone, Managing Director  
[ffarone@darlingconsulting.com](mailto:ffarone@darlingconsulting.com)

- ◆ First, The Good News...Rates are HIGHER, but NEV Looks Worse!
- ◆ Strategy Development...The First Step
- ◆ Getting the Numbers Right: Credit Union “Business Model” & “Risk Management” Issues
- ◆ CASE STUDIES...Document of Resolutions; Issues and Solutions!
- ◆ Strategies (miscellaneous)
- ◆ Q&A

# Analyzing Your Risk Profile

*Misinterpreting Your Risk Profile Can Have  
**Disastrous** Results*

## Theory... Cumulative Gap x Rate Chg. = NII Sensitivity

Name	Total		One Day		Jan 13		Feb 13		Mar 13		4-6 Months		7-12 Months		13-24 Months		25-36 Months		37-60 Months		> 60 months	
	Volume	Rate	Volume	Rate	Volume	Rate	Volume	Rate	Volume	Rate	Volume	Rate	Volume	Rate	Volume	Rate	Volume	Rate	Volume	Rate	Volume	Rate
<b>Asset</b>																						
Investment	30,875	1.96	821	0.05	1,567	1.72	1,411	2.02	2,130	0.69	1,845	2.32	3,949	2.26	7,001	1.93	3,501	2.39	3,752	2.60	4,898	1.76
Loan	240,113	4.85	--	--	9,329	4.59	20,982	4.42	5,216	4.97	16,324	5.13	25,809	4.95	45,228	5.00	38,761	4.90	58,060	4.77	20,403	4.89
Other Asset	15,447	1.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15,447	1.33
<b>Total Assets</b>	<b>286,435</b>	<b>4.35</b>	<b>821</b>	<b>0.05</b>	<b>10,896</b>	<b>4.18</b>	<b>22,393</b>	<b>4.27</b>	<b>7,345</b>	<b>3.73</b>	<b>18,170</b>	<b>4.84</b>	<b>29,758</b>	<b>4.59</b>	<b>52,229</b>	<b>4.59</b>	<b>42,262</b>	<b>4.69</b>	<b>61,813</b>	<b>4.64</b>	<b>40,748</b>	<b>3.16</b>
<b>Liability</b>																						
Non-Maturity Deposit	126,828	0.25	--	--	--	--	--	--	43,675	0.38	--	--	--	--	--	--	--	--	--	--	83,152	0.18
Time Deposit	109,162	1.87	--	--	7,323	1.52	8,660	2.40	5,979	1.00	14,060	1.04	17,203	1.44	24,790	2.55	11,632	2.54	18,853	1.71	662	2.46
Borrowing	19,775	1.27	12,500	0.25	7	5.66	7	5.66	7	5.66	3,514	3.88	29	5.75	2,060	1.59	64	5.75	1,585	2.74	--	--
Other Liability	1,572	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,572	--
Equity	29,099	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	29,099	--
<b>Total Liabilities</b>	<b>286,435</b>	<b>0.91</b>	<b>12,500</b>	<b>0.25</b>	<b>7,330</b>	<b>1.52</b>	<b>8,667</b>	<b>2.40</b>	<b>49,662</b>	<b>0.46</b>	<b>17,574</b>	<b>1.61</b>	<b>17,232</b>	<b>1.44</b>	<b>26,851</b>	<b>2.47</b>	<b>11,696</b>	<b>2.56</b>	<b>20,439</b>	<b>1.79</b>	<b>114,486</b>	<b>0.15</b>
Gap (and Rate Spread)	--	--	(11,679)	(0.20)	3,566	2.65	13,726	1.86	(42,317)	3.27	596	3.23	12,527	3.15	25,378	2.12	30,567	2.13	41,374	2.84	(73,737)	3.01
Cumulative Gap (Spread)	--	--	(11,679)	(0.20)	(8,113)	3.17	5,613	2.90	(36,704)	3.32	(36,108)	3.40	(23,582)	3.41	1,797	3.20	32,363	3.15	73,737	3.13	(0)	3.44
RSA/RSL	--	--	--	0.07	--	1.49	--	2.58	--	0.15	--	1.03	--	1.73	--	1.95	--	3.61	--	3.02	--	0.36
Cumulative RSA/RSL	--	--	--	0.07	--	0.59	--	1.20	--	0.53	--	0.62	--	0.79	--	1.01	--	1.21	--	1.43	--	1.00

**Negative Gap = \$23.6 million**  
**∴ NII sensitivity ~ \$236,000 Reduction per +100bps rate shift ?**

0.14 -- (0.26)  
 0.26 -- (0.00)



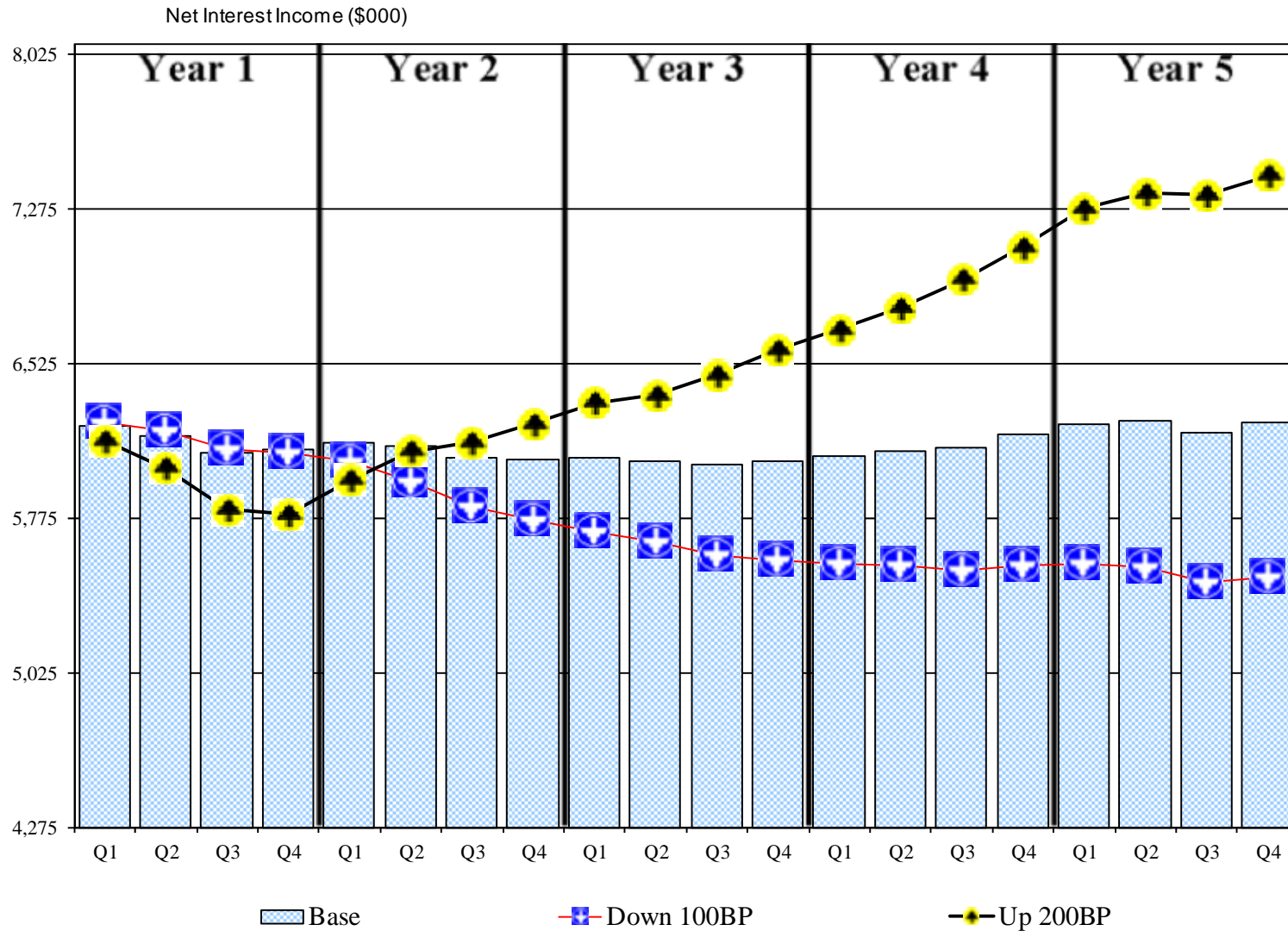
	<b>Inst. A</b>	<b>Inst. B</b>
1 Month Cumulative Gap	159,872	(432,237)
1 Year Cumulative Gap	(33,454)	(328,774)

Short-term asset sensitivity with longer-term liability sensitivity

More significant liability sensitivity in the near term

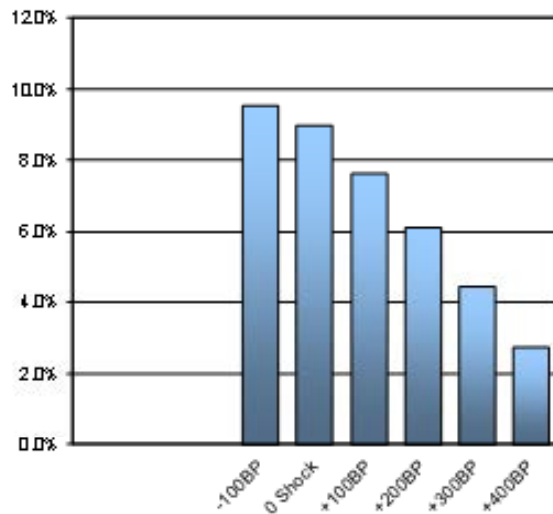
How does NII sensitivity differ?

# No Difference in NII Sensitivity – Same Institution!



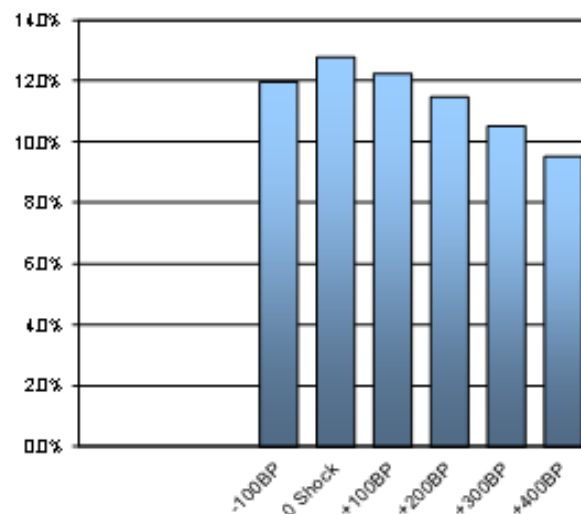
Which institution is positioned best for rising rates?

**EVE Ratio (EVE/EVA)**



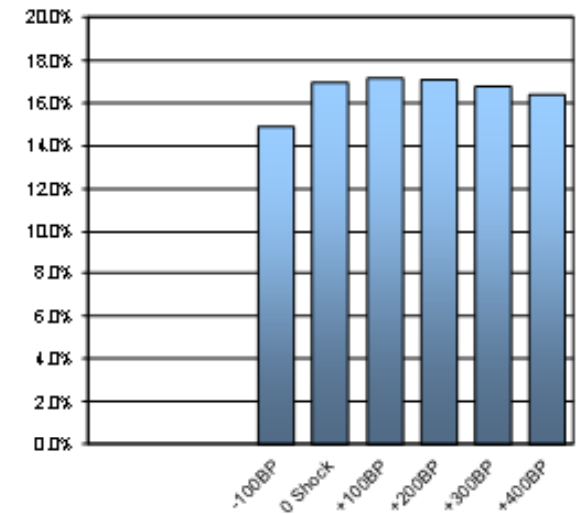
A

**EVE Ratio (EVE/EVA)**

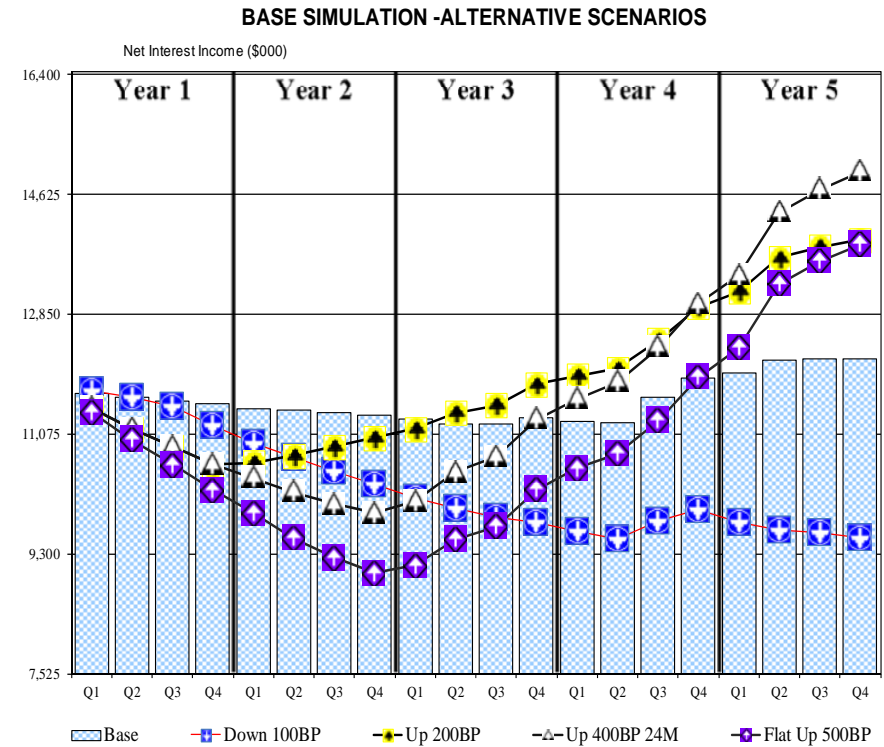
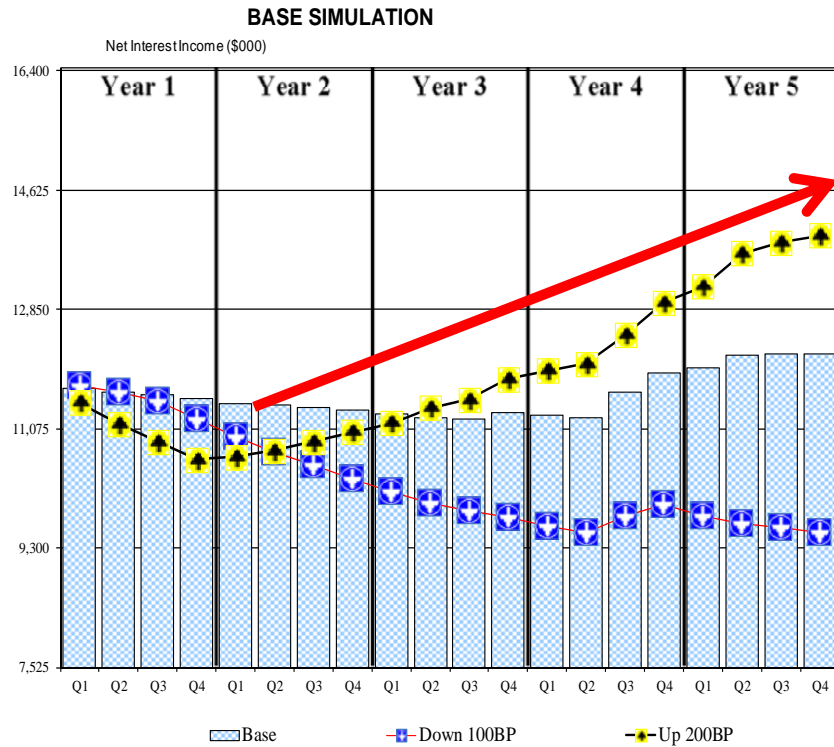


B

**EVE Ratio (EVE/EVA)**



C



**All the Same Institution! Different NMD Assumptions!**

## ◆ Myths

- NEV is an adequate indicator of short-term earnings sensitivity
- NEV is an adequate predictor of capital at risk
- NEV offers predictive power for net worth as rates rise/fall

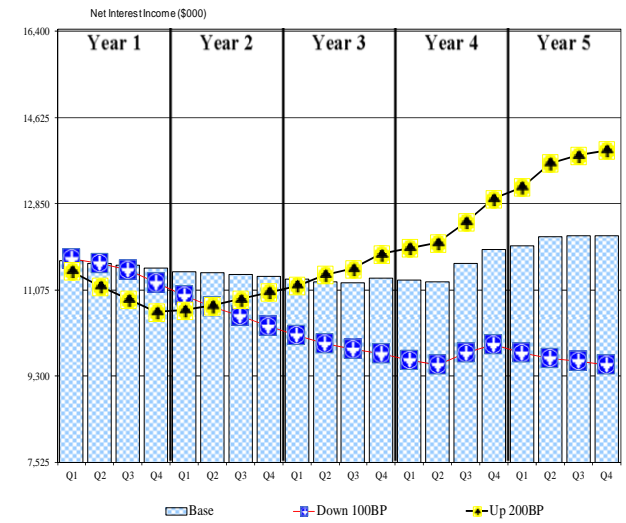
## ◆ Facts

- NEV = **Theoretical** liquidation value
- NEV Ratio = “Economic” Tier 1 Leverage Ratio
- NEV = is can be an indicator of long-term structural mismatches within the balance sheet

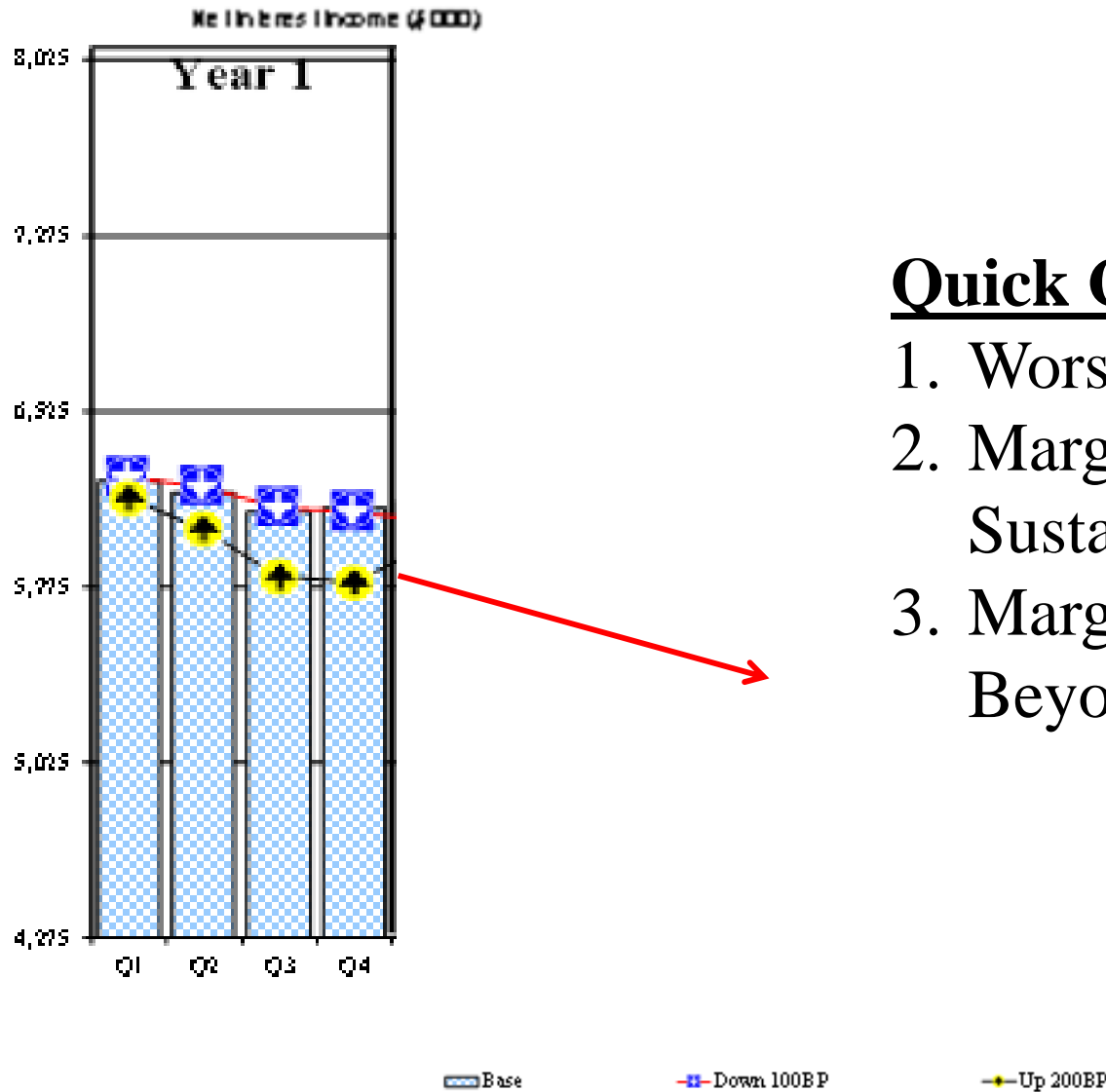


NII simulations provide the most complete analysis of your interest rate risk profile, but rely heavily on:

- Quality of data inputs
- Utility of scenarios reviewed
- Assumptions
- Backtesting of model
- Stress testing of key assumptions
- How results are presented to decision makers
  - Simulation horizon

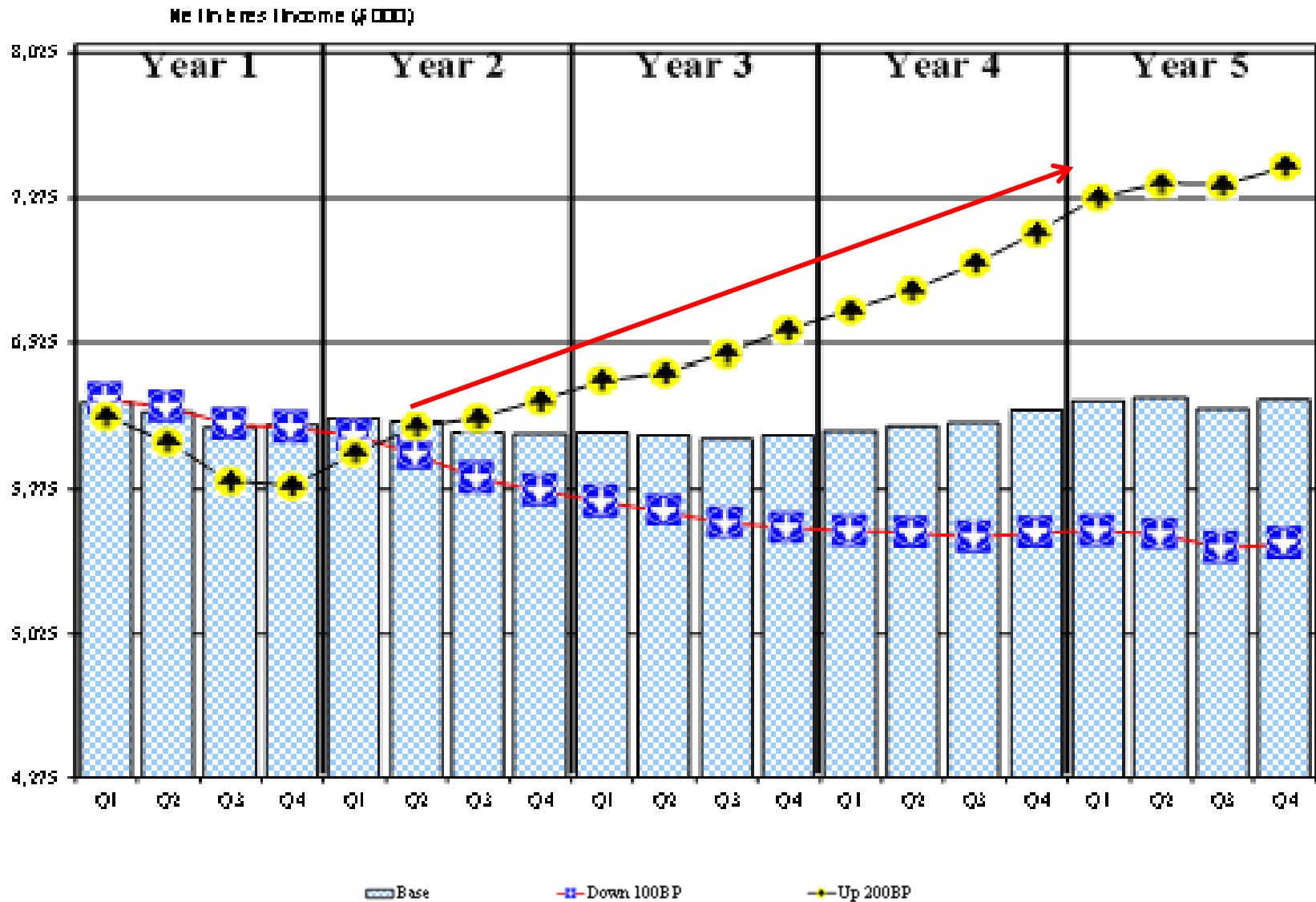


## One Year NII Simulations Are Insufficient



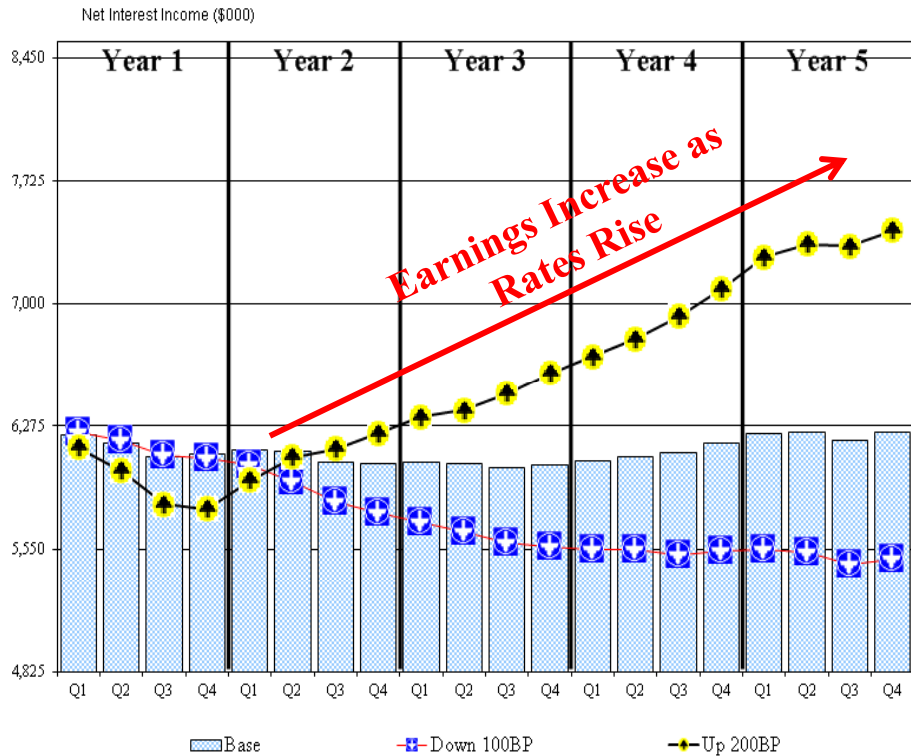
### Quick Conclusions

1. Worst Case Rising Rates
2. Margin Pressure Sustained Beyond Year 1
3. Margin Pressure Worsens Beyond Year 1

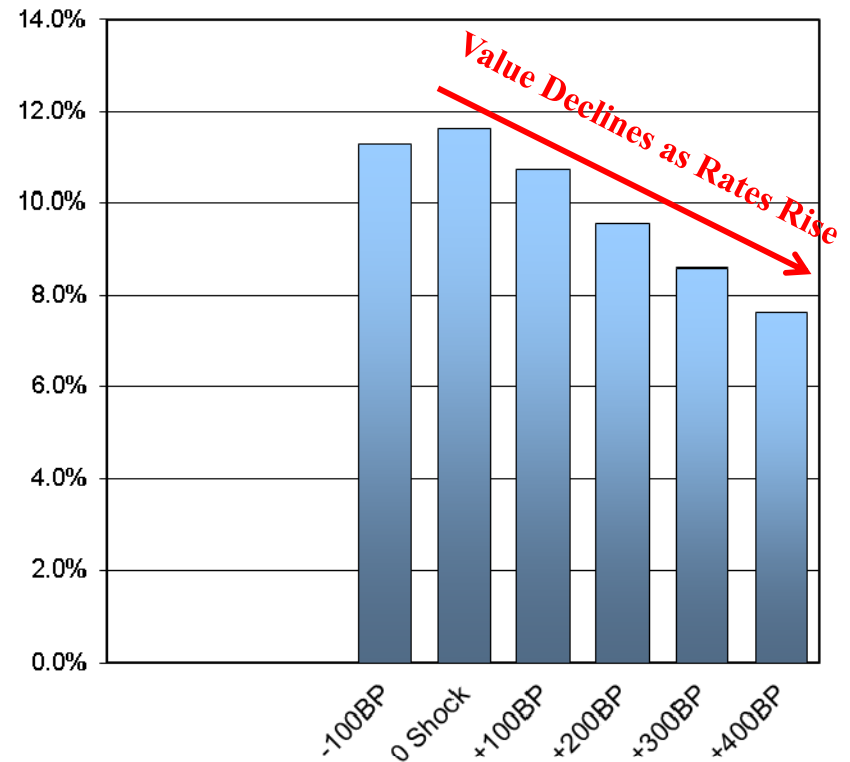




## Earnings at Risk



## Value at Risk EVE Ratio (EVE/EVA)



**Which one is right?**

**Why the difference?**

# Assumptions

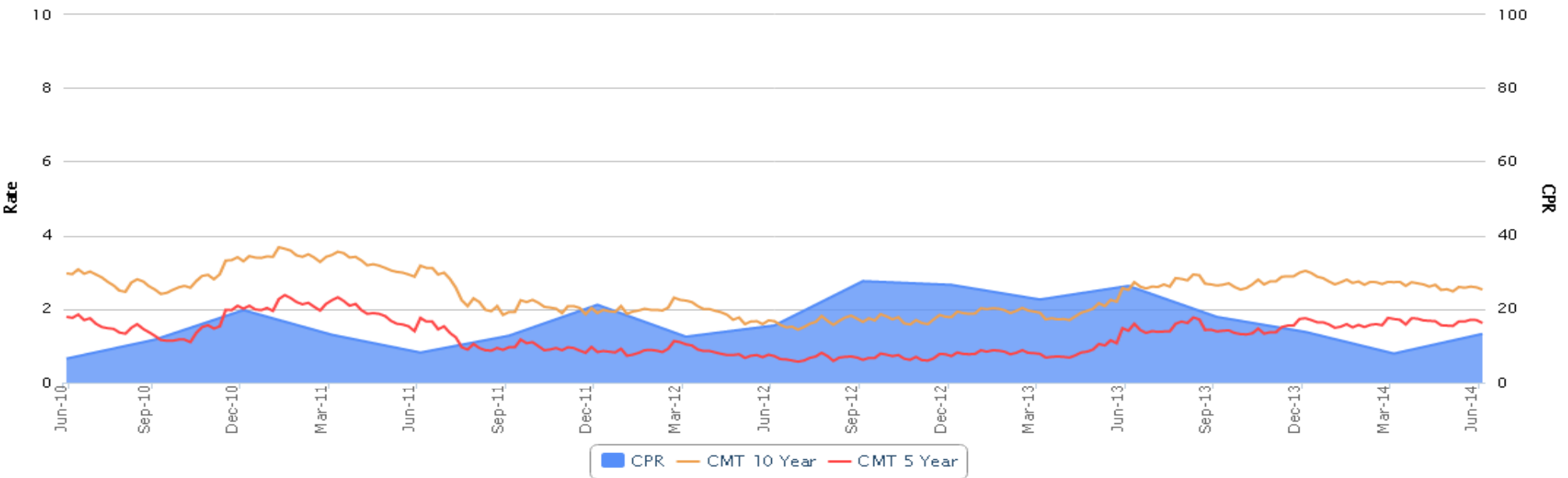
*Institution Specific, Difficult to Quantify and a Huge Impact on Results. **How Do We Do It?***

- ◆ “Close Enough for Government Work” Not Good Enough
- ◆ Evaluated and Updated Regularly
- ◆ Should Involve Active Participation by Appropriate Business Lines
- ◆ Documentation, Validation and **Stress-Testing** Important

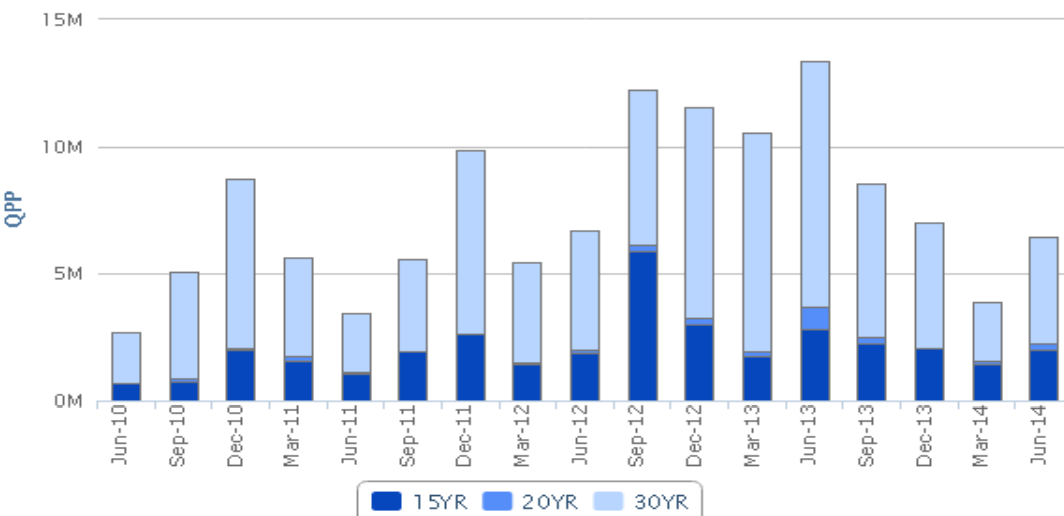
1. Deposit Sensitivity/Lives
2. Replacement/New Volume
3. Prepayment

***They Should Be Stress Tested Regularly***

## Residential Fixed History

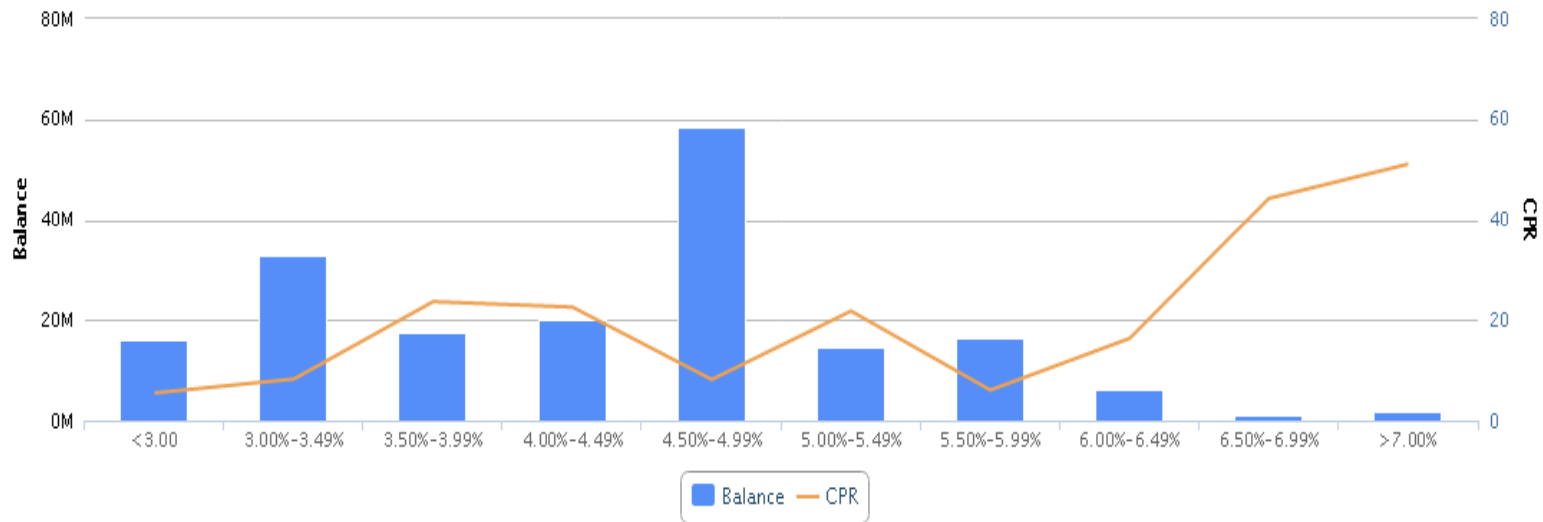


## Prepayment Allocation



QTD	Portfolio	Beg. Bal (\$000's)	QPP (\$000's)	Current CPR	Trailing CPR	
					L6M	LTM
06/30/2014	15YR	\$61,673	\$1,974	12.40	11.07	13.71
	20YR	\$1,731	\$293	52.72	37.75	39.67
	30YR	\$122,360	\$4,169	12.97	10.36	14.79
	<b>Total</b>	<b>\$185,764</b>	<b>\$6,436</b>	<b>13.25</b>	<b>10.89</b>	<b>14.68</b>
03/31/2014	15YR	\$63,744	\$1,453	8.90	10.41	20.07
	20YR	\$1,833	\$86	17.40	9.24	24.70
	30YR	\$123,598	\$2,319	7.24	11.20	17.18
	<b>Total</b>	<b>\$189,174</b>	<b>\$3,857</b>	<b>7.90</b>	<b>10.92</b>	<b>18.12</b>
09/30/2013	15YR	\$58,921	\$2,266	14.75	26.51	28.41
	20YR	\$1,373	\$228	51.96	39.22	51.21
	30YR	\$119,954	\$6,081	18.86	20.98	24.63
	<b>Total</b>	<b>\$180,247</b>	<b>\$8,576</b>	<b>17.86</b>	<b>22.86</b>	<b>25.82</b>

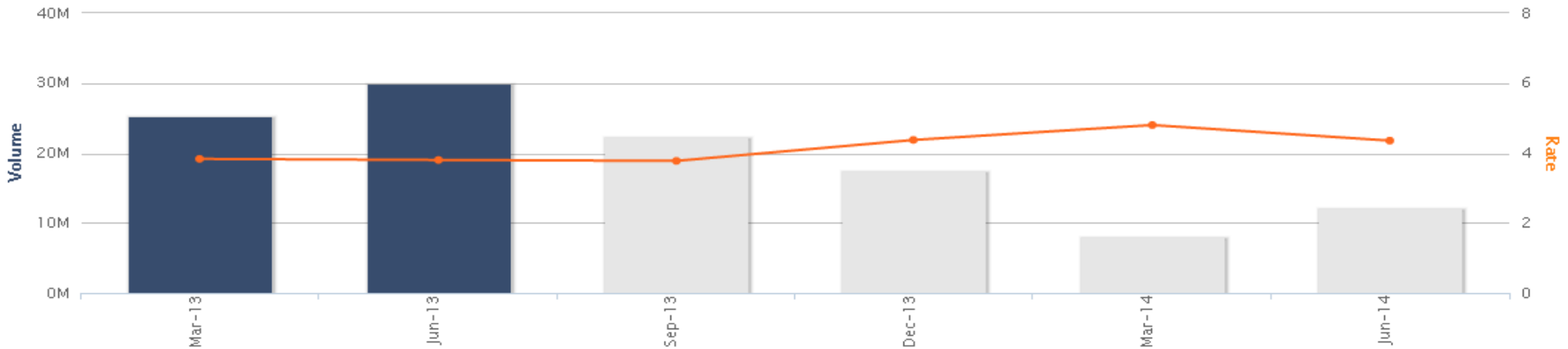
### Residential Fixed CPR by Coupon Band (L3M)



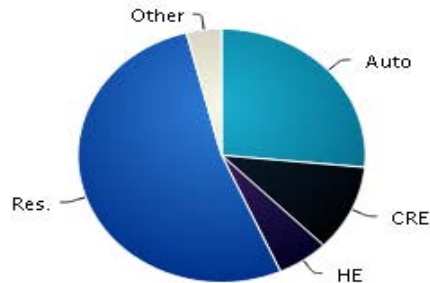
		<3.00%		3.00%-3.49%		3.50%-3.99%		4.00%-4.49%		4.50%-4.99%		5.00%-5.49%		5.50%-5.99%		6.00%-6.49%		6.50%-6.99%		>7.00%	
		\$000	CPR	\$000	CPR	\$000	CPR	\$000	CPR	\$000	CPR	\$000	CPR	\$000	CPR	\$000	CPR	\$000	CPR	\$000	CPR
06/30/2014	<120	\$5,673	12.98	\$10,035	8.29	\$1,983	1.20	\$186	-	\$444	3.87	-	-	\$18	70.11	-	-	-	-	\$701	4.52
	121-180	\$149	-	\$14,862	11.52	\$4,364	2.73	\$4,239	31.96	\$7,112	6.29	\$1,158	58.81	\$510	4.03	\$50	-	\$542	20.64	\$292	50.71
	181-240	\$1,809	0.58	\$1,939	0.61	\$1,582	0.54	\$705	0.31	\$522	47.93	\$686	31.24	\$348	0.15	\$17	3.07	\$12	11.02	\$144	28.79
	241-300	-	-	\$107	0.01	\$169	-	\$143	0.15	\$538	-	\$62	-	-	-	-	-	-	-	\$361	85.53
	>300	\$8,463	0.24	\$6,017	2.14	\$9,312	36.10	\$14,927	20.79	\$49,875	7.92	\$12,616	15.93	\$15,460	6.11	\$6,036	16.48	\$666	57.58	\$160	-
	<b>Total</b>	<b>\$16,095</b>	<b>5.48</b>	<b>\$32,960</b>	<b>8.25</b>	<b>\$17,410</b>	<b>23.65</b>	<b>\$20,199</b>	<b>22.56</b>	<b>\$58,491</b>	<b>8.16</b>	<b>\$14,522</b>	<b>21.77</b>	<b>\$16,336</b>	<b>6.05</b>	<b>\$6,103</b>	<b>16.33</b>	<b>\$1,220</b>	<b>44.23</b>	<b>\$1,658</b>	<b>51.06</b>

## Loan Originations

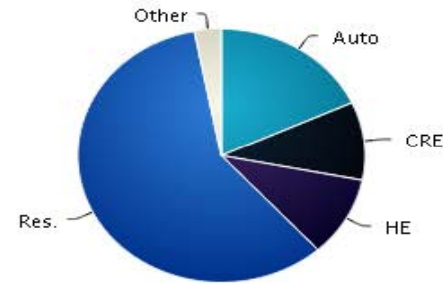
6/30/2013 - 6/30/2014



6/30/2013-6/30/2014



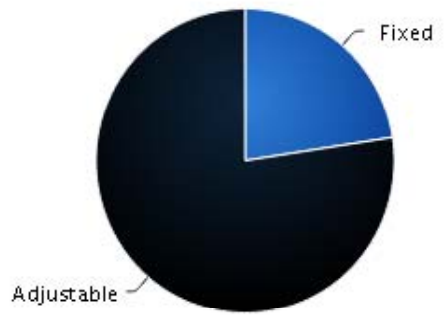
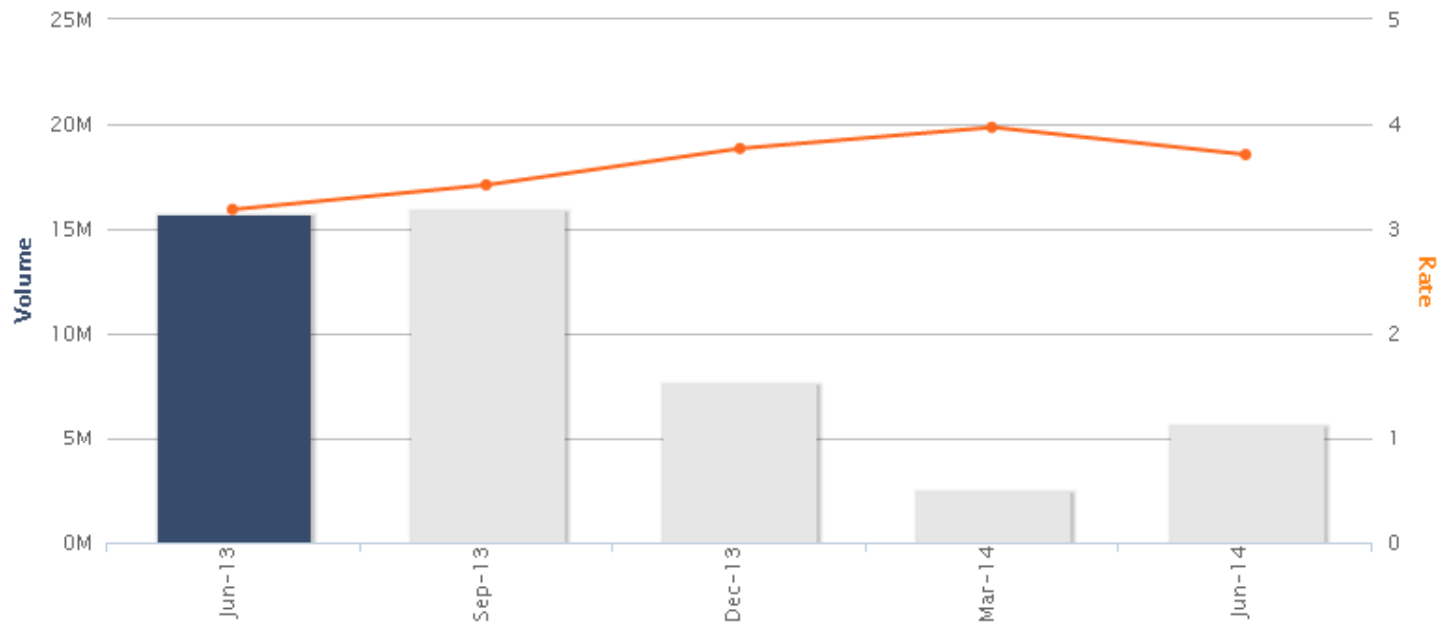
Total Portfolio



Classification	Count	Balance	Rate
Auto	973	\$15,851	4.60%
C&I	23	\$820	3.24%
CRE	21	\$6,564	4.60%
G&A Guar.	2	\$148	5.55%
HE	104	\$3,479	4.44%
Install.	454	\$1,382	11.73%
Res.	158	\$31,548	3.60%
<b>Total Originations</b>	<b>1,735</b>	<b>\$59,792</b>	<b>4.21%</b>

Classification	Count	Balance	Rate
Auto	2,900	\$33,826	4.55%
C&I	67	\$1,881	3.71%
CRE	69	\$18,675	4.58%
G&A Guar.	5	\$1,325	4.71%
HE	458	\$19,002	4.64%
Install.	880	\$2,582	11.44%
Res.	820	\$109,563	3.79%
<b>Total Portfolio</b>	<b>5,199</b>	<b>\$186,654</b>	<b>4.21%</b>

## Res. Loan Originations

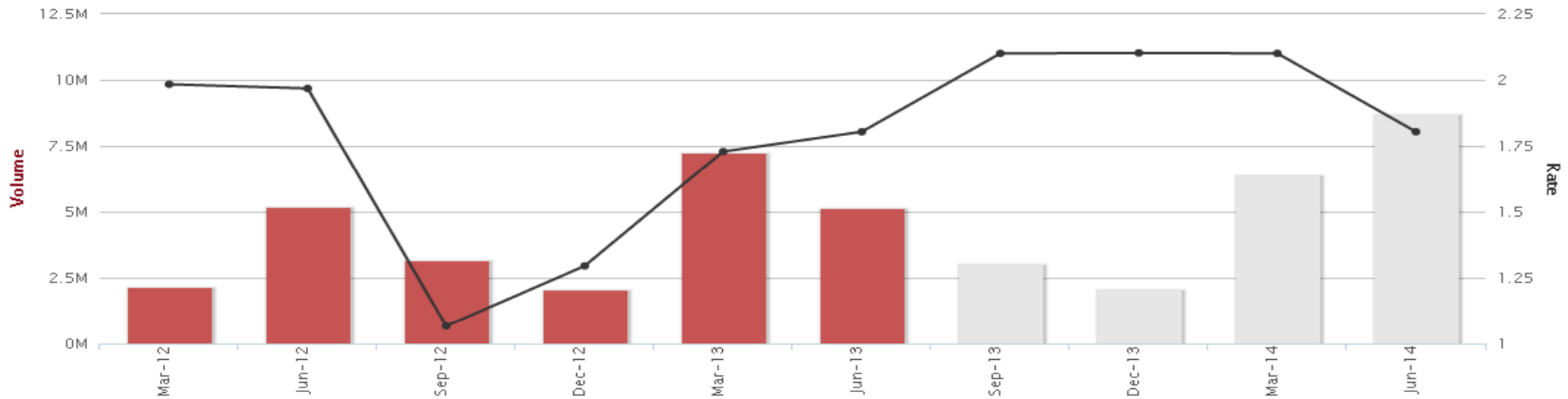


Product	Count	Balance	Rate
Fixed	73	\$7,119	3.92%
Adjustable	85	\$24,429	3.50%
<b>Total</b>	<b>158</b>	<b>\$31,548</b>	<b>3.60%</b>

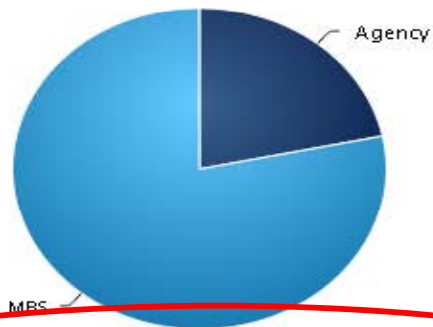


## Investment Purchases

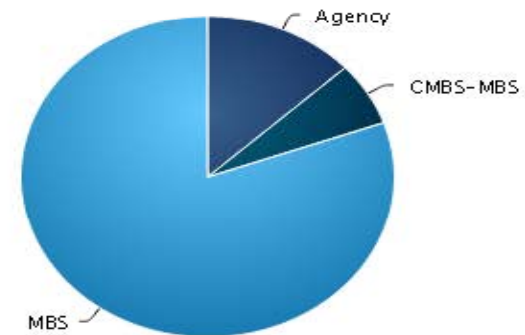
6/30/2013 - 6/30/2014



6/30/2013-6/30/2014



Total Portfolio

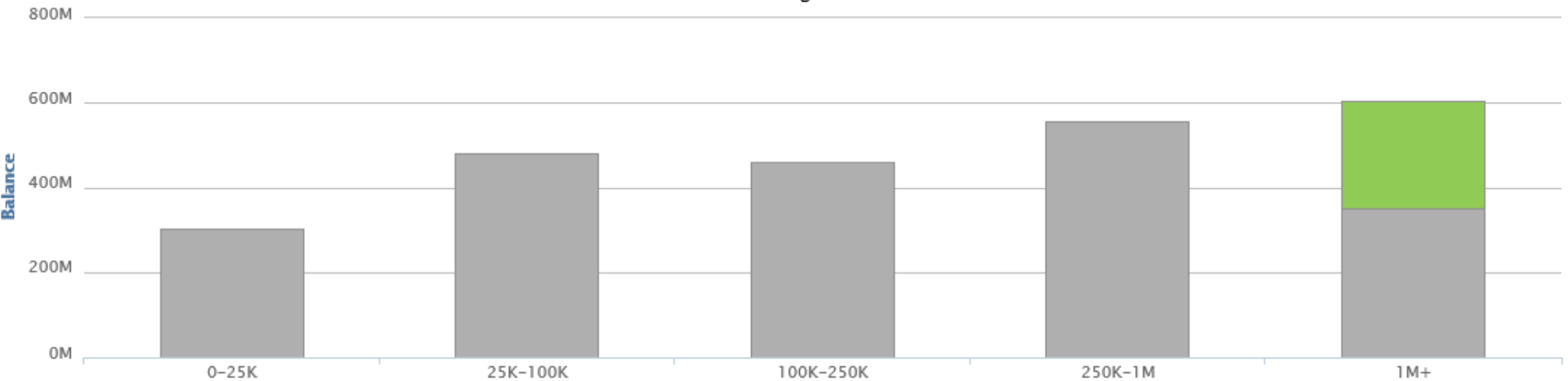


Classification	Count	Book Value	Price (Book / Mkt)	Rate (Yld / Cpn)
Agency	8	\$8,431	100.28% / 100.21%	1.04% / 1.13%
MBS	30	\$30,380	101.61% / 102.70%	2.26% / 2.73%
<b>Total Portfolio</b>	<b>38</b>	<b>\$38,811</b>	<b>101.32% / 102.16%</b>	<b>2.00% / 2.38%</b>

Classification	Count	Book Value	Price (Book / Mkt)	Rate (Yld / Cpn)
Agency	6	\$6,212	100.19% / 100.11%	1.07% / 1.14%
CMBS-MBS	2	\$3,017	101.49% / 97.69%	2.18% / 2.36%
MBS	48	\$37,988	102.48% / 102.08%	1.96% / 2.65%
<b>Total Portfolio</b>	<b>56</b>	<b>\$47,217</b>	<b>102.11% / 101.54%</b>	<b>1.86% / 2.43%</b>

## NMD Concentration

Balance: Largest 25



■ Balance: Largest 25

Recalculate

	Portfolio		Balance: Largest 25		Concentration %	
	Balance	Accounts	Balance	Accounts	Balance	Accounts
<input checked="" type="checkbox"/> DDA	\$1,033,560	56,832	\$76,479	11	7.40%	0.02%
<input checked="" type="checkbox"/> MMDA	\$766,109	5,275	\$174,815	13	22.82%	0.25%
<input checked="" type="checkbox"/> NOW	\$281,999	6,634	\$5,733	1	2.03%	0.02%
<input checked="" type="checkbox"/> Savings	\$320,819	25,429	-	-	-	-
<b>Total Non-Maturity</b>	<b>\$2,402,487</b>	<b>94,170</b>	<b>\$257,027</b>	<b>25</b>	<b>10.70%</b>	<b>0.03%</b>



Non-Maturity Deposits (Financial Institutions <\$10 Billion)	Compounded Annualized Growth %
12/31/2008 - 12/31/2012	8.9%
12/31/2004 - 12/31/2008	.8%

**Most Impactful Assumptions!!!!**

## ◆ Potential for Reductions in NMD Balances

- Disintermediation (leave “banking” system)
- Migrate/Shift Back to CDs
- Public Funds
- Sensitized Customers (“Smarter”/More Aware/Less Loyal?)

## ◆ Greater Than “Normal” Growth *Can* be “CORE”

- Local Market Bank Failures/Troubled Institutions
- In-Market Mergers (Large and/or Out-of-Market Banks)
- Some Simply DO BETTER JOB @ Increasing Market Share
- Rewards Checking?



# Key Findings – Average Lives CU#1

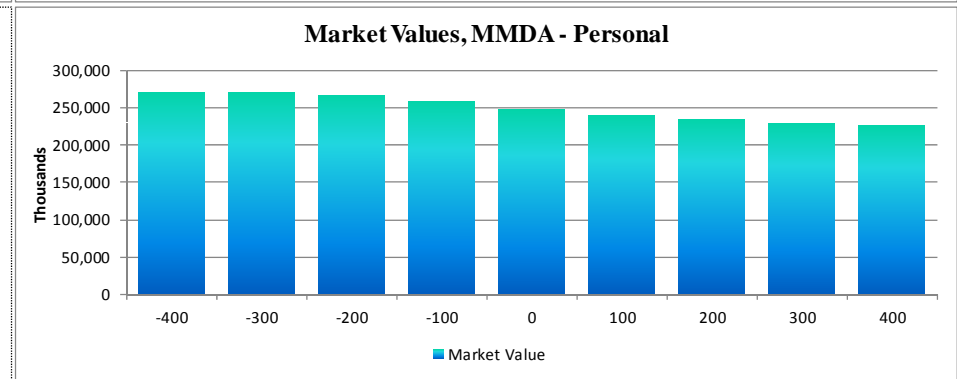
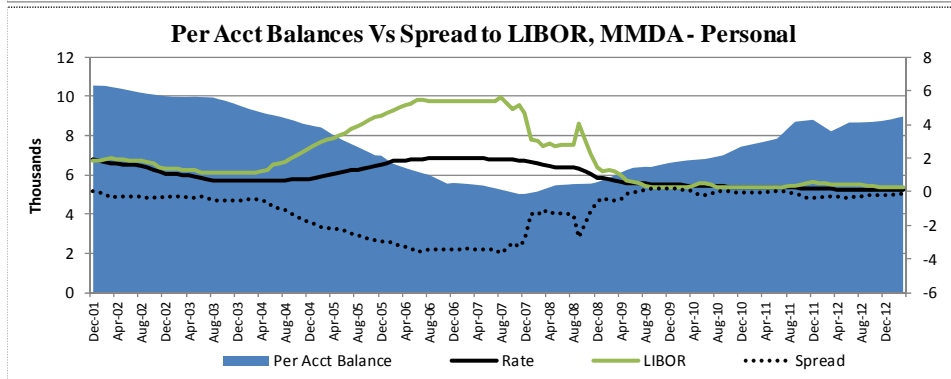
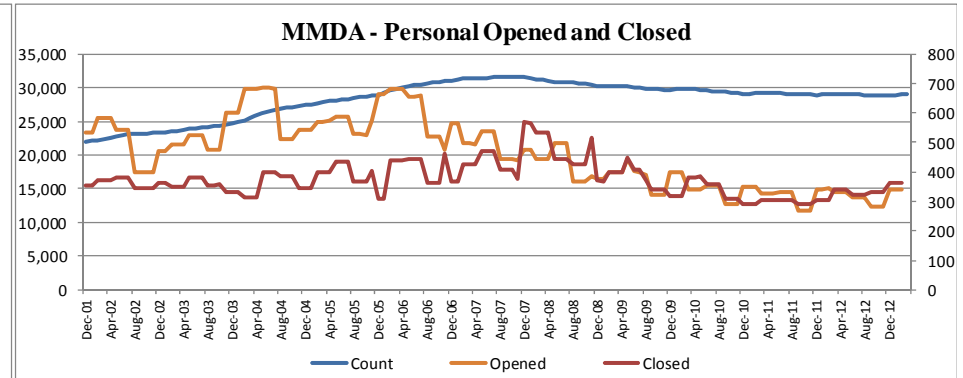
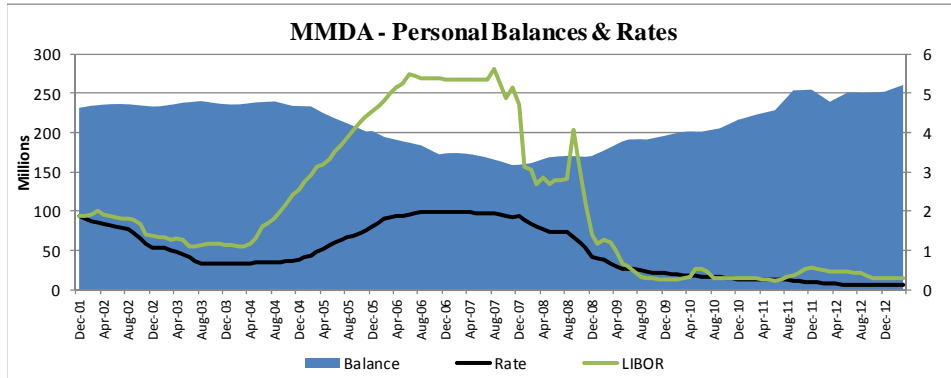
## *NMD Study Results:*

Account Type	Balance	Rate	Baseline Scenario		Stress Scenario	
			12 Mo.	36 Mo.	12 Mo.	36 Mo.
DDA	165,663,919	0.00%	7.00	5.89	6.03	2.87
MMDA	275,005,406	0.14%	4.07	3.80	2.34	2.19
MMDA - Business	16,309,677	0.11%	4.07	2.74	3.21	1.32
MMDA - Premium	230,173,046	0.27%	6.81	5.81	6.19	2.70
NOW	92,405,897	0.02%	8.16	6.71	7.47	2.23
NOW - Rewards	40,712,787	0.00%	3.61	2.45	3.12	0.53
Savings	241,035,848	0.05%	5.04	3.86	4.18	1.93
Savings - IRA	40,048,990	0.25%	7.20	6.93	7.03	4.41
<b>Total</b>	<b>1,101,355,569</b>	<b>0.12%</b>	<b>5.7</b>	<b>4.8</b>	<b>4.7</b>	<b>2.4</b>

## *Model Implementation:*

***** Average Life Assumptions *****							
Product	Balance	Rate	DCG 12 Mo. Average	DCG 36 Mo. Average	DCG 12 & 36 Mo. Average	Current Average	Change
DDA (Non-Int. Checking)	\$ 165,663,919	0.00%	7.00	5.89	6.45	5.04	1.40
MMDA (Regular Money Market)	\$ 275,005,406	0.14%	4.07	3.80	3.94	3.16	0.78
MMDA - Business	\$ 16,309,677	0.11%	4.07	2.74	3.41	3.16	0.25
MMDA - Premium	\$ 230,173,046	0.27%	6.81	5.81	6.31	3.16	3.15
NOW (Interest Checking)	\$ 92,405,897	0.02%	8.16	6.71	7.44	4.75	2.68
NOW - Rewards (Bus. Checking)	\$ 40,712,787	0.00%	3.61	2.45	3.03	5.04	(2.01)
Savings	\$ 241,035,848	0.05%	5.04	3.86	4.45	3.40	1.05
Savings - IRA	\$ 40,048,990	0.25%	7.20	6.93	7.07	3.40	3.66
<b>Totals</b>	<b>\$ 1,101,355,570</b>	<b>0.11%</b>	<b>5.74</b>	<b>4.84</b>	<b>5.29</b>	<b>3.71</b>	<b>1.58</b>

## MMDA - Personal



Beta Estimates					
Rising					
Full Rising Cycle 437bp Increase from March 2004 - June 2006					
Beta	R-Sq	Beta Sign	R-Sq Rank	Func Res	Reason
35%	98%	1	High	Yes	High R-Squared
Falling					
Full Falling Cycle 537bp Decrease from August 2007 - December 2009					
Beta	R-Sq	Beta Sign	R-Sq Rank	Func Res	Reason
31%	90%	1	High	Yes	High R-Squared

Account Information			
Type	Balance	Rate	Func. Cost
MMDA - Personal	260,565,421	0.13%	0.86%

Decay Estimates			
	Baseline		Stress
12Mo	14.1%	12Mo	14.4%
36Mo	13.4%	36Mo	15.1%

Baseline 12 Mo. Scenario Valuation			
Scenario	Value	Premium	Prem%
-400	269,511,795	-8,946,374	-3.4%
-300	269,511,795	-8,946,374	-3.4%
-200	265,317,231	-4,751,810	-1.8%
-100	256,437,797	4,127,624	1.6%
0	246,171,150	14,394,271	5.5%
100	240,062,281	20,503,140	7.9%
200	234,440,502	26,124,919	10.0%
300	229,259,554	31,305,867	12.0%
400	224,477,968	36,087,453	13.8%

Volatility				
	Non-Core %	Core %	Non-Core \$	Core \$
Baseline 12 Mo.	1.4%	98.6%	3,668,221	256,897,200
Baseline 36 Mo.	2.0%	98.0%	5,261,411	255,304,010
Stress 12 Mo.	4.5%	95.5%	11,763,139	248,802,283
Stress 36 Mo.	6.1%	93.9%	15,815,559	244,749,862

Average Lives			
	Baseline		Stress
12Mo	5.7	12Mo	5.4
36Mo	5.9	36Mo	4.2

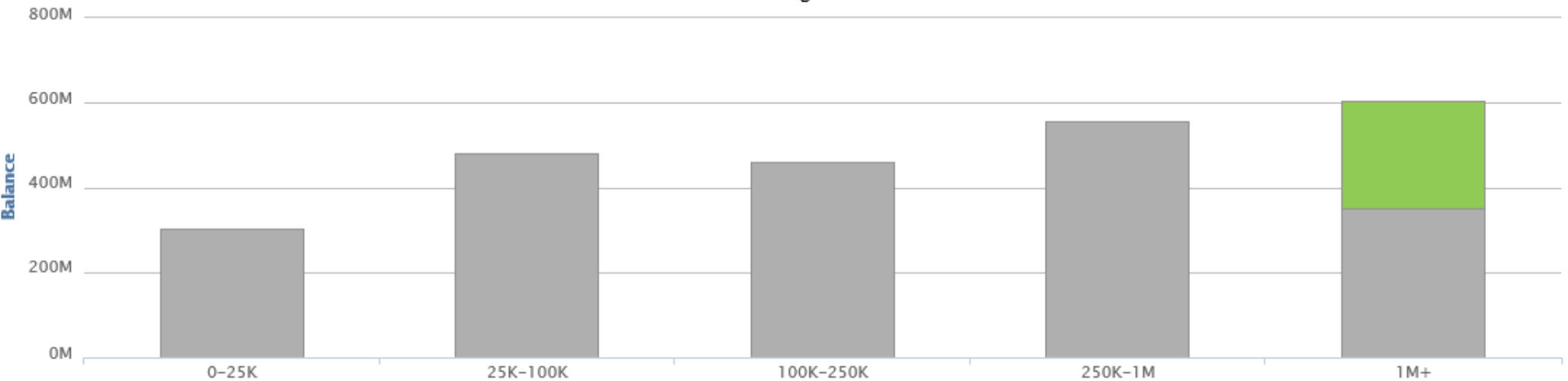


# CU #2:Core Deposit Study Results 7.8 Years...

Account Type	Balance	Rate	Baseline Scenario		Stress Scenario	
			12 Mo.	36 Mo.	12 Mo.	36 Mo.
IMMA	343,878,054	0.45%	8.67	8.62	8.44	8.22
Share Drafts	237,272,049	0.11%	6.07	6.59	5.26	5.26
Share Drafts - Business	23,968,819	0.20%	6.12	5.80	5.85	3.89
Shares	581,851,207	0.30%	7.96	7.88	7.79	7.05
Shares - Business	13,383,652	0.30%	6.20	6.21	5.40	4.93
Shares - IRA	23,638,320	0.30%	7.85	8.01	7.62	7.62
<b>Total</b>	<b>1,223,992,102</b>	<b>0.30%</b>	<b>7.7</b>	<b>7.8</b>	<b>7.4</b>	<b>7.0</b>

## NMD Concentration

Balance: Largest 25



■ Balance: Largest 25

Recalculate

	Portfolio		Balance: Largest 25		Concentration %	
	Balance	Accounts	Balance	Accounts	Balance	Accounts
<input checked="" type="checkbox"/> DDA	\$1,033,560	56,832	\$76,479	11	7.40%	0.02%
<input checked="" type="checkbox"/> MMDA	\$766,109	5,275	\$174,815	13	22.82%	0.25%
<input checked="" type="checkbox"/> NOW	\$281,999	6,634	\$5,733	1	2.03%	0.02%
<input checked="" type="checkbox"/> Savings	\$320,819	25,429	-	-	-	-
<b>Total Non-Maturity</b>	<b>\$2,402,487</b>	<b>94,170</b>	<b>\$257,027</b>	<b>25</b>	<b>10.70%</b>	<b>0.03%</b>



## Purpose of ALCO

*ALCO Should be a **PROFIT CENTER**, Not  
a Regulatory Check Box*

## Financial Performance

## Regulatory Compliance

### MAXIMUM RISK

### MANAGED RISK

### MINIMAL RISK

CAPITAL	<i>Low</i>	←→	<i>Managed</i>	←→	<i>High</i>
GROWTH	<i>High</i>	←→	<i>Managed</i>	←→	<i>Low</i>
CREDIT RISK	<i>High</i>	←→	<i>Managed</i>	←→	<i>Low</i>
LIQUIDITY	<i>Low</i>	←→	<i>Managed</i>	←→	<i>High</i>
INT. RATE RISK	<i>High</i>	←→	<i>Managed</i>	←→	<i>Low</i>

MAXIMIZE INCOME ??

OPTIMIZE INCOME

MINIMIZE INCOME

GOING CONCERN ??

GOING CONCERN

LIQUIDATION

# Information Drives Decision Making

*Providing **Too Much** or **Too Little** Information to  
ALCO Can **Stall** Effective Decision Making*

- 1) Do we have adequate capital?
- 2) How much liquidity do we have?
- 3) How much liquidity do we need?
- 4) How much are we (or should we be) willing to pay for liquidity?
- 5) What is our exposure to changes in interest rates?
- 6) What action is required to align our performance goals with our risk posture?

## ALCO Objective – Stability & Growth in Capital

- ◆ How Much Growth Can Be Supported?...
- ◆ How Much Loss Can Be Absorbed?...

...Without Violating Capital Standards

## Liquidity Defined

“the ability to raise cash quickly with minimal principal loss and at a reasonable cost.”

## Theory vs. Practice: Does it Fit our Liquidity Definition?

- Loan/Deposit
  
- Short-term Investments/Assets
  
- Non-Core Funding Dependency
  - “Volatile Liabilities”
  
- Cash Flow (liquidity gap)
  - ◆ < 12 Months
  - ◆ < 60 Months



## I. LIQUID ASSETS

Overnight Funds Sold & Short-Term Investments (avg. balance, if wide daily fluctuations)			0
Security Collateral	<u>UST &amp; Agency</u>	<u>MBS / CMOs</u> <u>(-5% Haircut)</u>	
Total Market Value of Securities	500	88,139	
Less Securities Pledged to:			
FHLB	0	-6,938	
Wholesale Repos	0	0	
Retail Repos/Sweeps	0	0	
Municipal Deposits	0	-2,536	
Other	0	0	
Available / Unencumbered Security Collateral	<u>500</u>	<u>74,732</u>	75,232
Over Collateralized Securities Pledging Position			0
Gvt. & Agency Guaranteed Loans (SLMA / SBA unpledged)			0
Cash flow (< 30 Days) from Securities not listed above			0
Other Liquid Assets (Int. Bearing Deposits, MM Mutual Funds, etc.)			1,045
<b>TOTAL LIQUID ASSETS</b>			<b>76,277</b>

Short Term  
Cash Investments

Investment Collateral

Other Readily Available  
Cash Resources

## II. SHORT TERM / POTENTIALLY VOLATILE LIABILITIES & COVERAGES

Maturing Unsecured Liabilities (< 30 Days)		0
Deposit Coverages		
25% of Regular CDs maturing < 30 Days	7.1% of Total Deposits	2,104
30% of Jumbo CDs maturing < 30 Days		3,573
10% of Other Deposits		19,173
Additional Liquidity Reserve(s)		0
<b>TOTAL SHORT TERM / POTENTIALLY VOLATILE LIABILITIES &amp; COVERAGES</b>		<b>24,850</b>

Fed Funds Purchased

Deposit Contingency/Reserve

Pct. Of  
Assets

**BASIC SURPLUS**

51,426

10.1%



**BASIC SURPLUS** 51,426 10.1%

III. QUALIFYING FHLB LOAN COLLATERAL	
A. Maximum Borrowing Line at FHLB is Not Available	
B. Qualifying Loan Collateral at the FHLB (net of haircut)	127,017
C. Excess Loan Collateral (if A < B)	
Maximum Borrowing Capacity (Lesser of A or B)	127,017
Collateral Currently Encumbered by Outstanding Advances	133,955
<b>REMAINING FHLB LOAN BASED BORROWING CAPACITY</b>	<b>0</b>

FHLB - Loan Collateral

**BASIC SURPLUS W/ FHLB** 51,426 10.1%

IV. BROKERED DEPOSIT ACCESS	
Maximum Board Authorized Brokered CD Capacity (per policy)	34,934
Current Brokered CD Balances	11,438
<b>REMAINING CAPACITY TO UTILIZE BROKERED CDs</b>	<b>23,496</b>

Brokered CD Capacity  
4.5% of Assets

**BASIC SURPLUS W/ FHLB & BROKERED CDs** 74,922 14.7%

Secondary Collateral?  
Saleable Assets?

OTHER LIQUIDITY ITEMS			
	<u>Mkt Value</u>	<u>Pledged</u>	<u>Available</u>
Corporate Securities	23,264	0	23,264
Municipal Securities	0	0	0
Equity Securities	4,611	0	4,611
Other	0	0	0
	<u>Borrowing Line</u>	<u>Outstanding</u>	<u>Available</u>
Fed Funds Lines	0	0	0
Fed BIC Lines	0	0	0
Other	6,292	0	6,292

Back-Up at Federal Reserve?

# Liquidity Measurement – Basic Surplus Approach

## Local CU @ 06/30/2014



I. LIQUID ASSETS			
Overnight Funds Sold & Short-Term Investments (avg. balance, if wide daily fluctuations)			0
Security Collateral	<b>UST &amp; Agency</b>	<b>MBS / CMOs</b>	
		<b>Agency Backed</b>	<b>Private Label</b>
<i>Collateral Value</i>	100%	95%	90%
Total Market Value of Securities	0	186,811	0
Less Securities Pledged to:			
FHLB	0	-51,421	0
Fed Discount/Other Secured	0	0	0
Wholesale Repos	0	0	0
Retail Repos/Sweeps	0	0	0
Municipal Deposits	0	0	0
Other	0	0	0
Available / Unencumbered Security Collateral	0	128,621	0
			128,621
Over Collateralized Securities Pledging Position			35,969
Government Guaranteed Loans			0
Cash flow (< 30 Days) from Securities not listed above			0
Other Liquid Assets (Int. Bearing Deposits, MM Mutual Funds, etc.)			0
<b>TOTAL LIQUID ASSETS</b>			<b>164,589</b>

**TOTAL ASSETS = 639,357**

II. SHORT TERM / POTENTIALLY VOLATILE LIABILITIES & COVERAGES		
Maturing Unsecured Liabilities (< 30 Days)		0
Deposit Coverages		
25% of Regular CDs Maturing < 30 Days		1,895
30% of Jumbo CDs Maturing < 30 Days	6.4%	492
10% of Other Deposits	of Total Deposits	26,935
<b>TOTAL SHORT TERM / POTENTIALLY VOLATILE LIABILITIES &amp; COVERAGES</b>		<b>29,322</b>

**BASIC SURPLUS 135,267 21.2%**

III. QUALIFYING FHLB LOAN COLLATERAL	
A. Maximum Borrowing Line at FHLB (Up to 50% of Assets)	319,678
B. Qualifying Loan Collateral at the FHLB (net of haircut)	103,634
C. Excess Loan Collateral (if A < B)	
Maximum Borrowing Capacity (Lesser of A or B)	103,634
Collateral Currently Encumbered by Outstanding Advances/Letters of Credit	103,634
<b>REMAINING FHLB LOAN BASED BORROWING CAPACITY</b>	<b>0</b>

**BASIC SURPLUS W/ FHLB 135,267 21.2%**

IV. BROKERED DEPOSIT ACCESS	
Maximum Board Authorized Brokered Deposit Capacity (15% of Total Assets)	95,904
Current Brokered Deposit Balances	0
<b>REMAINING CAPACITY TO UTILIZE BROKERED DEPOSITS</b>	<b>95,904</b>

**BASIC SURPLUS W/ FHLB & BROKERED DEPOSITS 231,171 36.2%**

Pct. Of Assets

25.7%

OTHER LIQUIDITY ITEMS	Mkt Value	Pledged	Available
Corporate Securities	0	0	0
Municipal Securities	0	0	0
Equity Securities	0	0	0
Other	0	0	0

UNSECURED BORROWING LINES	Line	Outstanding	Available
Fed Funds Lines	0	0	0

SECURED BORROWING LINES	Line	Outstanding	Available
Fed BIC Lines	77,030	0	77,030
Fed Discount/Other	0	0	0
Total	77,030	0	77,030

BASIC SURPLUS - EXCL. FED BIC & OTHER SECURED LINES			% of Assets
No Change to Basic Surplus	N/A	N/A	N/A
No Change to Basic Surplus	N/A	N/A	N/A
No Change to Basic Surplus	N/A	N/A	N/A

AVAILABLE BORROWING CAPACITY (PER POLICY)	
Max Borrowing Capacity (per policy)	152,637
Current Outstanding Borrowings (Exc. Sweeps/Ret. Repos)	116,250
Available Policy Authorized Borrowing Capacity	36,387

OTHER NOTES
1. Maximum borrowing capacity, per policy, is 300% of Net Worth.
2. Federal Reserve BIC line is secured by auto loans.

Policy Limits (Min.)	
Well Capitalized	< Well Capitalized

Management's Perspective on Liquidity and the Role of Wholesale Funding WILL IMPACT its:

- Deposit Pricing
- Loan Strategy
- Investment Strategy
- Growth Strategy
- and, Therefore, ITS EARNINGS!

## Funds Required Forecast – 90 Day Horizon:

Basic Surplus w/FHLB	\$51,426
Less: Net New Loans	4,000
Plus: Deposit Growth	1,500
Plus: Non-Liquid Security Maturities	1,200
<b>Equals: Expected Liquidity Position</b>	<b>\$49,946</b>
<hr/>	
<p>Note: \$ 19,437 Expected Security Cashflows &lt; 90 days</p>	

## NEW FUNDS COST ANALYSIS

Rate to be Paid on New Deposits:	1.50%	
Current Balance in Accounts w/ Conversion Risk (\$ millions)	\$1,102,597	All NMD Accounts
Weighted Avg. Rate Paid on Funds Converted	0.12%	
<u>MARKET RATE for 5Yr Funding</u>	<u>1.23%</u>	

TOTAL BALANCE IN NEW ACCOUNT			MARGINAL COST NEW BALANCES
Converted	New	Ratio	
0%	100%		1.50%
10%	90%	9.0 : 1	1.65%
20%	80%	4.0 : 1	1.85%
30%	70%	2.3 : 1	2.09%
40%	60%	1.5 : 1	2.42%
50%	50%	1.0 : 1	2.88%
60%	40%	0.7 : 1	3.57%
70%	30%	0.4 : 1	4.72%
80%	20%	0.3 : 1	7.02%
90%	10%	0.1 : 1	13.92%
95%	5%	0.1 : 1	27.72%

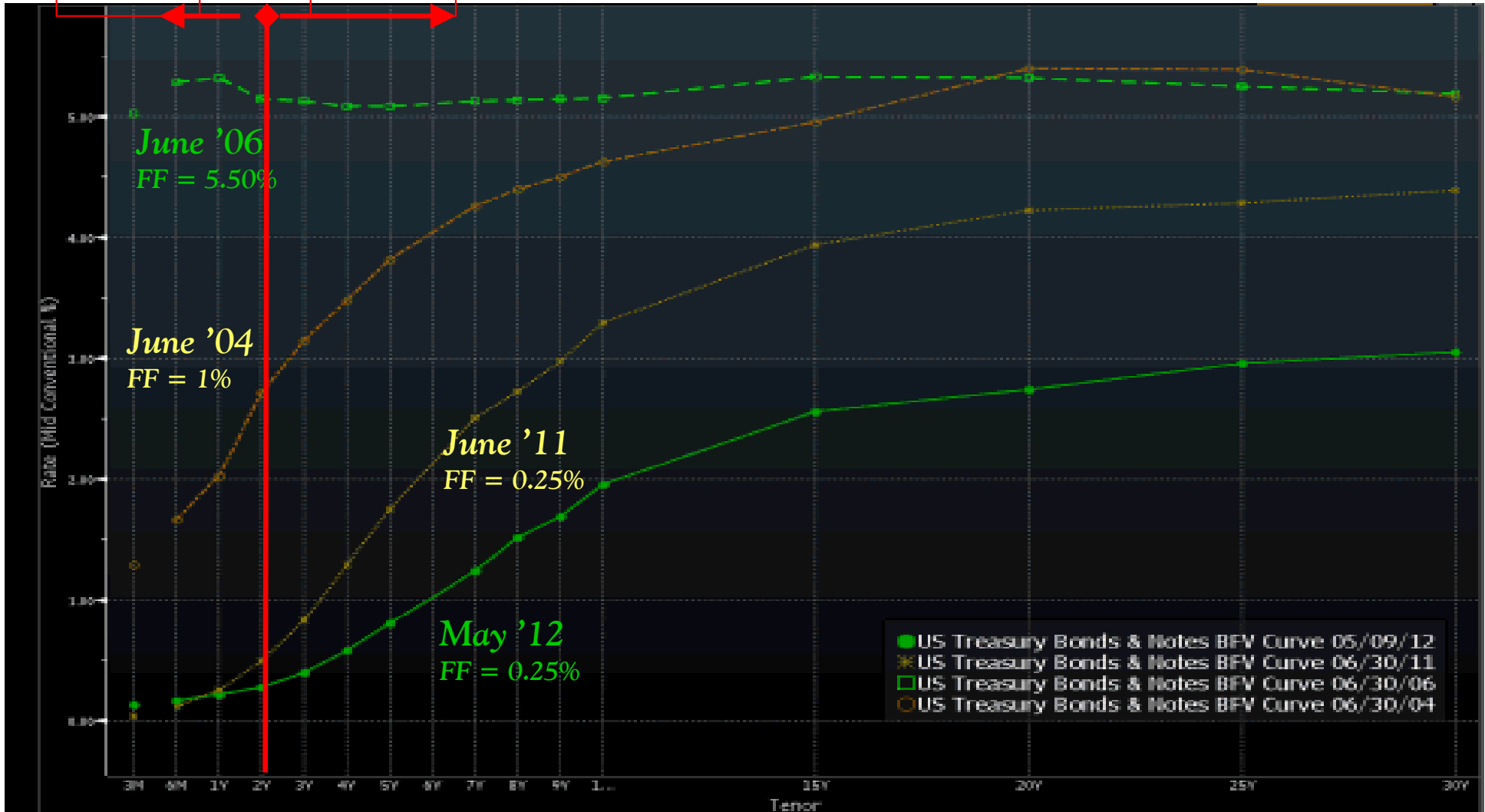
Note: The marginal cost of new money should be compared to the incremental cost of alternative funding

## ◆ Sources of IRR

- **Mismatch Risk** – Differences in timing of maturities/repricings
- **Option Risk** – Options embedded in products/ investments/funding that create variability in cash flows
- **Yield Curve Risk** – Changing slope of the yield curve (i.e. short vs. long rates)
- **Basis Risk** – Imperfect correlation between instruments with similar repricing characteristics

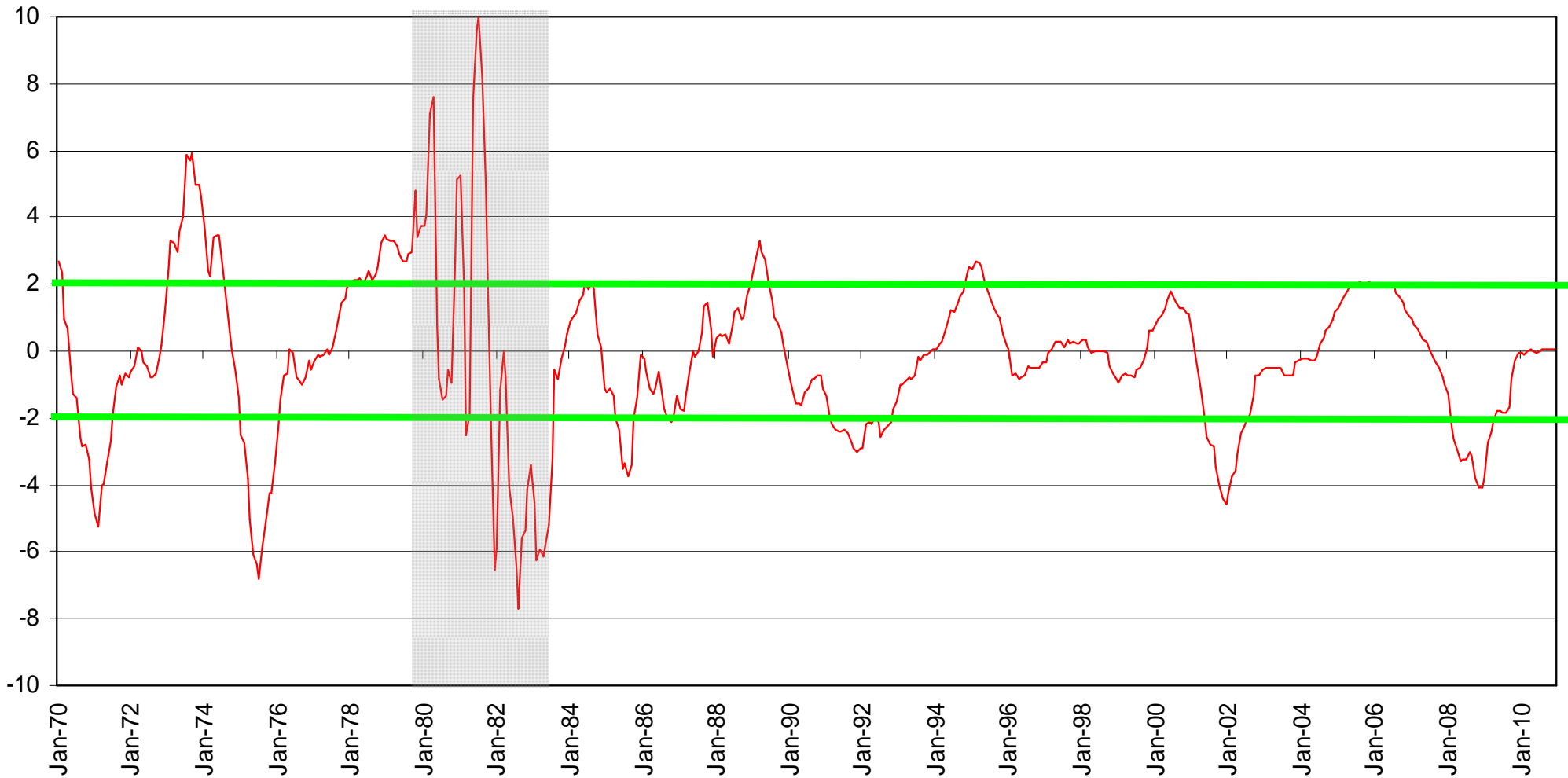
Funds  
Costs

Asset  
Yields



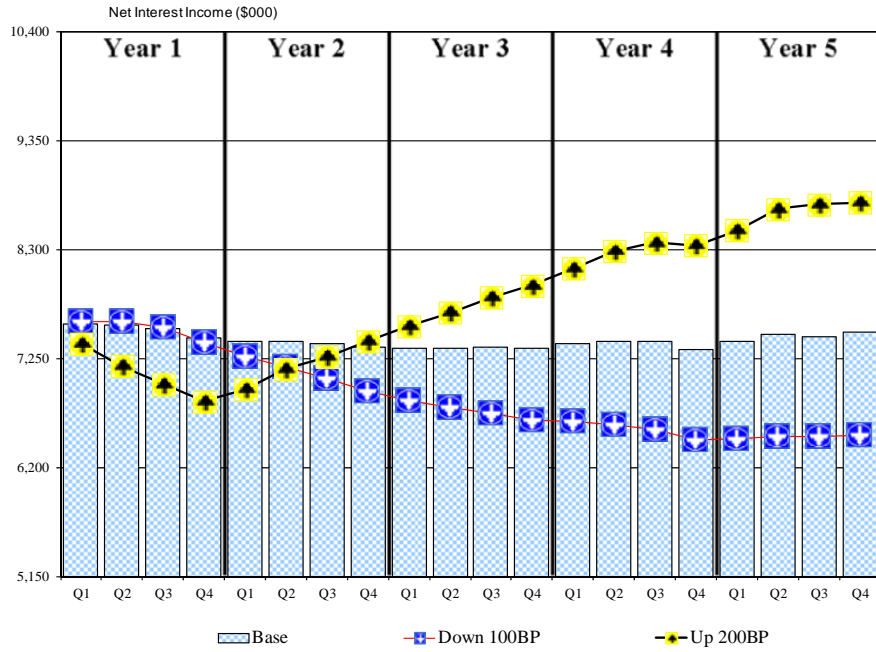
# Annual Changes in FOMC Target Funds Rates

Avg. Annual Change in Fed Funds (1970-2010) = +/-180bp

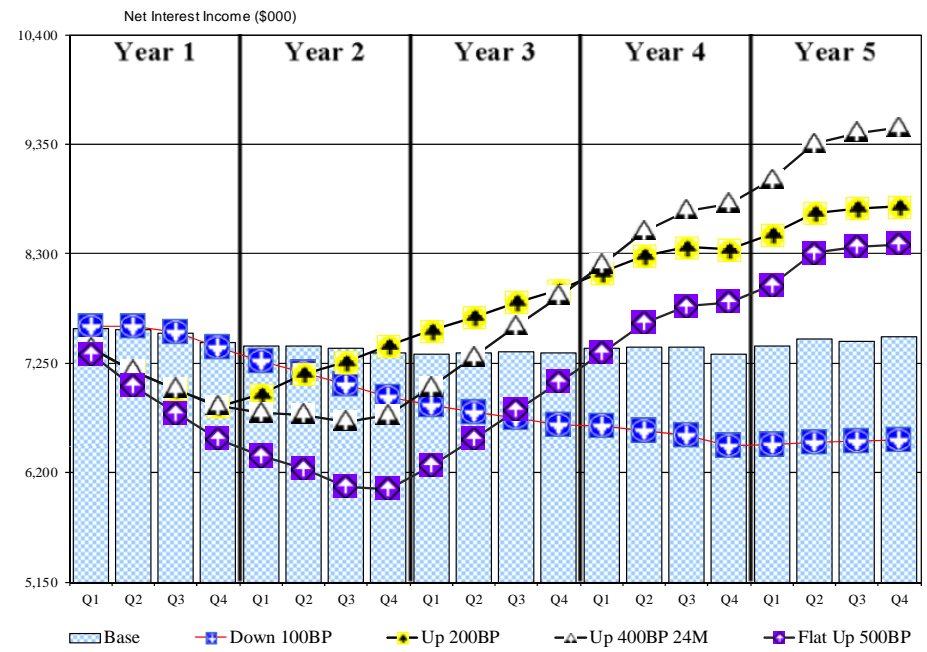




**BASE SIMULATION AS OF 3/31/2014**



**BASE SIMULATION -ALTERNATIVE SCENARIOS**

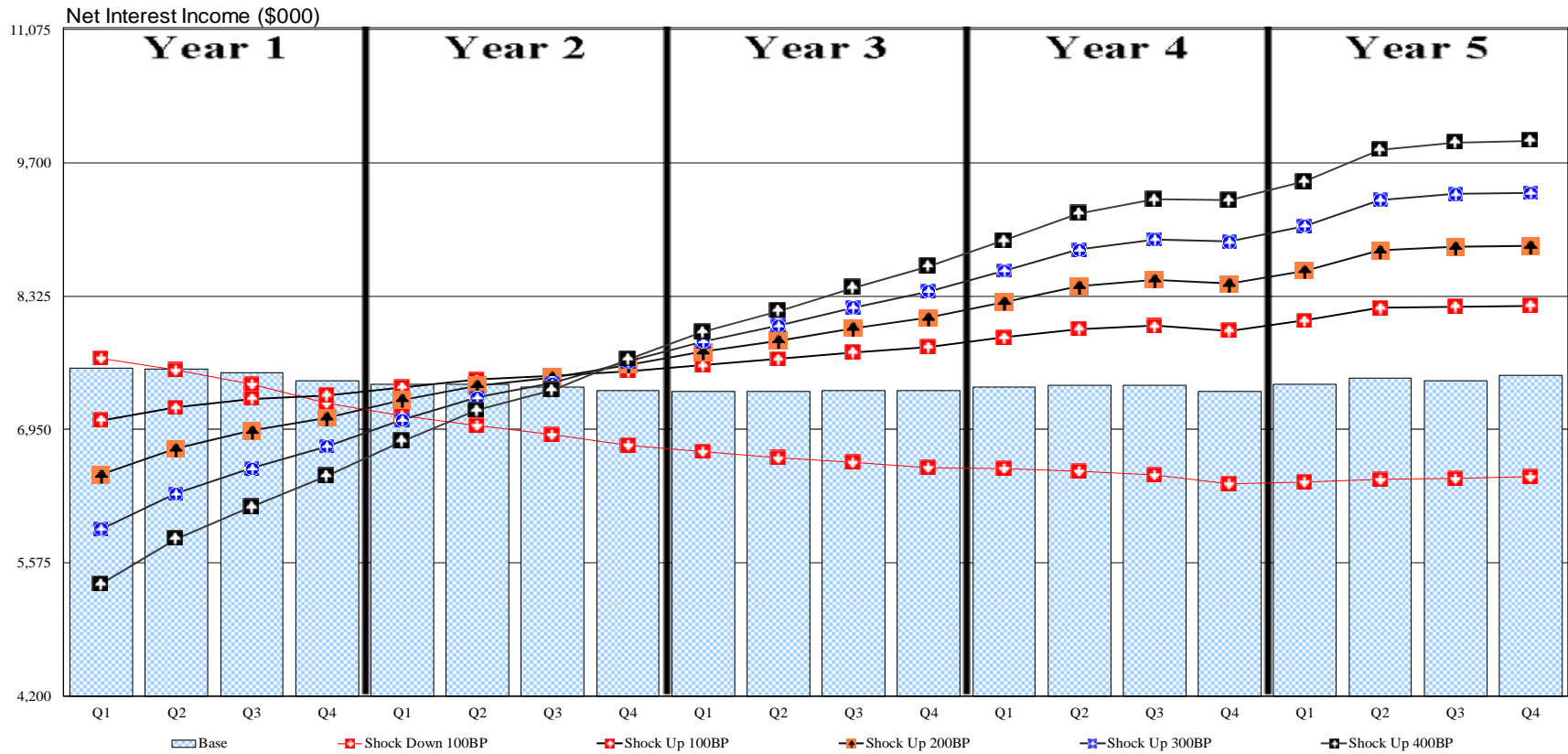


**NII SUMMARY**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>
<b>Year-1 NII</b>	30,161	30,138	28,403
<b>Year-2 NII</b>	28,409	29,570	28,773
<b>Year-3 NII</b>	27,000	29,385	31,032
<b>Year-4 NII</b>	26,269	29,539	33,096
<b>Year-5 NII</b>	25,970	29,860	34,653

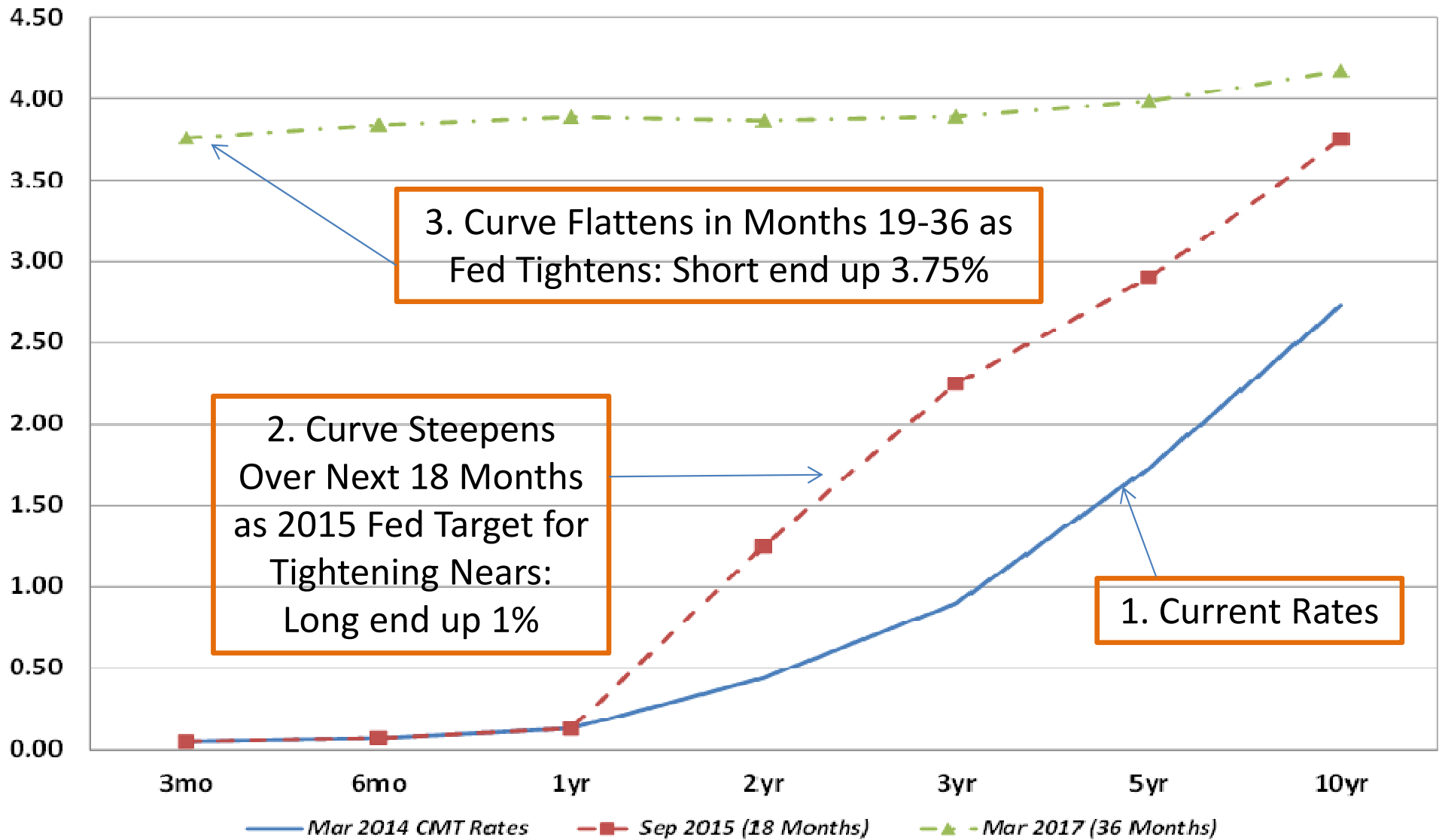
**NII SUMMARY**

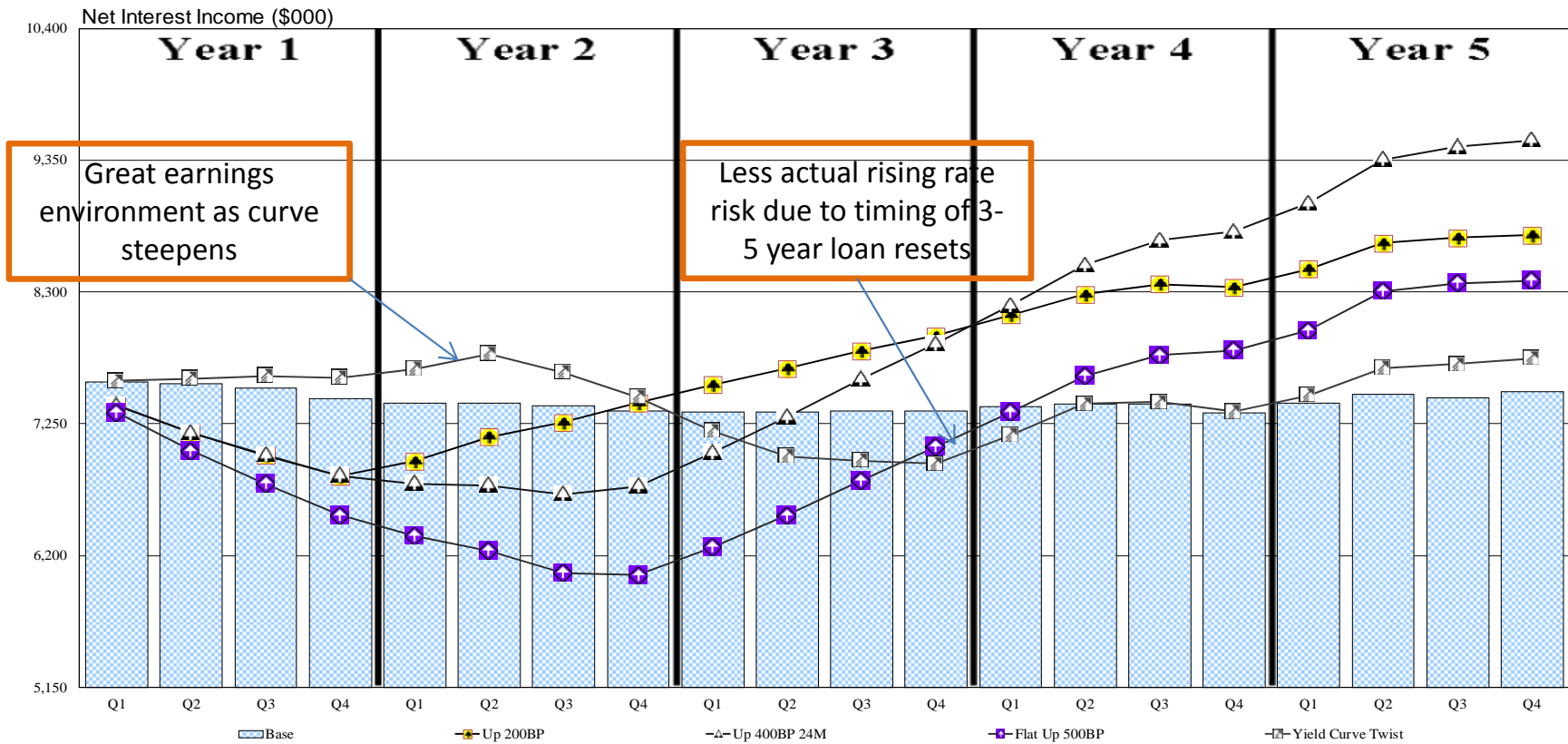
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
<b>Year-1 NII</b>	30,161	30,138	28,403	28,409	27,664
<b>Year-2 NII</b>	28,409	29,570	28,773	26,966	24,700
<b>Year-3 NII</b>	27,000	29,385	31,032	29,815	26,649
<b>Year-4 NII</b>	26,269	29,539	33,096	34,194	30,604
<b>Year-5 NII</b>	25,970	29,860	34,653	37,322	33,056



NII SUMMARY						
	Shock Down 100BP	Base	Shock Up 100BP	Shock Up 200BP	Shock Up 300BP	Shock Up 400BP
Year-1 NII	29,883	30,138	28,792	27,249	25,536	23,806
Year-2 NII	27,769	29,570	29,901	29,763	29,403	29,010
Year-3 NII	26,549	29,385	30,838	31,715	32,461	33,165
Year-4 NII	25,942	29,539	31,872	33,634	35,193	36,708
Year-5 NII	25,750	29,860	32,723	35,059	37,137	39,179

## Yield Curve Twist





NII SUMMARY					
	Base	Up 200BP	Up 400BP 24M	Flat Up 500BP	Yield Curve Twist
Year-1 NII	30,138	28,403	28,409	27,664	30,448
Year-2 NII	29,570	28,773	26,966	24,700	30,612
Year-3 NII	29,385	31,032	29,815	26,649	28,069
Year-4 NII	29,539	33,096	34,194	30,604	29,332
Year-5 NII	29,860	34,653	37,322	33,056	30,662

Yield curve steepens over the first 18 months (10Y CMT = 3.75%) and flattens over months 19-36 to the average slope from 2005-2007 (Fed Funds targeted @ 4.00%).

## **Quarter 1 (As of date: January, February, March)**

- *Option Risk Stress Test* – Alternative prepayments in various rate environments.

## **Quarter 2 (As of date: April, May, June)**

- *Asset Pricing/Mix Stress Test* – Alternative product pricing and/or mix in different rate simulations (e.g. asset spreads, investment mix, etc.)

## **Quarter 3 (As of date: July, August, and September)**

- *Deposit Sensitivity Stress Test* – Retail deposit migration, alternative elevated betas, etc.

## **Quarter 4 (As of date: October, November, December)**

- *Alternative EVE/NPV Stress Test* – Significant changes to non-maturity deposit average life assumptions.

- ◆ Succinct and Informative ALCO Package
- ◆ Graphics and use of scorecards
  - Liquidity/Liquidity Contingency
  - Interest Rate Risk
  - Capital at risk
  - Credit
- ◆ Focused, Decision-Oriented Agenda
- ◆ Potential Strategy Documentation
- ◆ Stress-Testing Section
- ◆ More Formal Assumption Review/Approval



# Executive Risk Summary

	Policy Guidelines	3/31/2014	12/31/2013	9/30/2013	6/30/2013	3/31/2013	Risk Assessment		
							LOW	MODERATE	HIGH
<b>LIQUIDITY</b>									
Basic Surplus (Min.)		11.9%	9.8%	10.2%	14.5%	16.1%	←	→	
Basic Surplus w/ FHLB (Min.)		21.2%	20.3%	22.5%	26.8%	28.4%	←	→	
Basic Surplus w/ FHLB & Brokered (Min.)		29.7%	30.3%	32.5%	36.8%	38.4%	←	→	
Borrowings / Assets (Max.)	<b>20.00%</b>	2.3%	1.6%	0.0%	0.0%	0.0%	←	→	
Brokered Deposits / Assets (Max.)	<b>10.00%</b>	1.6%	0.0%	0.0%	0.0%	0.0%	←	→	
Total Wholesale Funds / Assets (Max.)		3.9%	1.6%	0.0%	0.0%	0.0%			

<b>INTEREST RATE RISK</b>									
<b>Earnings at Risk (Max.)</b>									
Pct.(%) Change in Net Interest Income with +/- 200bps ramp (12 Mths)									
Year 1 NII (% Change from Year 1 - Base)									
Down 100BP		1.4%	1.0%	1.1%	1.8%	1.7%	←	→	
Up 200BP		-4.1%	-3.9%	-5.2%	-5.3%	-3.4%	←	→	
Year 2 NII (% Change from Year 1 - Base)									
Base		-0.8%	-0.4%	0.8%	0.5%	-1.0%	←	→	
Down 100BP		-4.8%	-4.7%	-2.7%	-2.3%	-3.3%	←	→	
Up 200BP		-1.8%	-0.6%	-1.6%	-3.4%	-2.6%	←	→	
<b>Core Funding Utilization (Max.)</b>									
Base		42.4%	36.1%	37.7%	35.0%	27.4%			
Down 100BP		32.6%	29.0%	29.4%	28.4%	16.0%			
Up 200BP		48.5%	39.6%	41.5%	38.2%	34.1%			
<b>NEV Analysis</b>									
Pre-shock NEV ratio		13.37%	14.08%	14.09%	13.64%	12.67%			
Post-shock NEV ratio	<b>3.00%</b>	12.41%	13.36%	13.19%	12.95%	11.36%	←	→	
Basis Point Change in NEV		-97	-72	-89	-69	-131			
Percentage Change in NEV	<b>-50.00%</b>	-13.10%	-10.60%	-12.00%	-10.71%	-9.93%	←	→	
Policy Guidelines are for +300 scenario. See NEV report for detail.		+300	+300	+300	+300	-100			

<b>CAPITAL RATIOS</b>									
Net Worth Ratio		11.45%	11.82%	11.86%	11.72%	11.78%	←	→	
<i>Net Worth Ratio is as of the 3/31/2014 call report.</i>									

<b>OTHER BALANCE SHEET INFORMATION</b>									
Balance Sheet Spread		2.81%	2.51%	2.55%	2.52%	2.56%			
Total Assets (Millions)		\$641.9	\$618.1	\$611.4	\$613.2	\$606.0			
Investments (Millions)		\$116.4	\$99.0	\$98.5	\$125.4	\$132.4			
Gross Loans (Millions)		\$502.1	\$497.2	\$490.9	\$465.9	\$454.8			
Deposits (Millions)		\$551.6	\$533.7	\$536.8	\$539.4	\$533.0			
Borrowings (Millions)		\$15.0	\$10.0	\$0.0	\$0.0	\$0.0			
Net Loans / Assets	<b>85.00%</b>	78.6%	80.8%	80.6%	76.2%	75.3%	←	→	
Net Loans / Deposits	<b>95.00%</b>	91.5%	93.6%	91.8%	86.6%	85.6%	←	→	
Loan Loss / Loans		0.46%	0.45%	0.45%	0.47%	0.47%			



- 1) Do we have adequate capital?
- 2) How much liquidity do we have?
- 3) How much liquidity do we need?
- 4) How much are we (or should we be) willing to pay for liquidity?
- 5) What is our exposure to changes in interest rates?
- 6) **What action is required to align our performance goals with our risk posture?**

*How do we do this?*



## Effective Strategy Development

*ALCOs need to look at a variety of strategic options and not focus on the past in order to **survive** and **thrive** in the current environment and in the **future**.*

## ◆ Pressure on Gross Revenues

- Weak loan demand
- Loan pricing pressures
- Borrowers refinancing (fixed...are we selling?)
- Unattractive investment yields
- Fee income way down

## ◆ Limited Funding Cost Relief

- Can't get below zero
- Money flow into banking system...for *Insurance*
- Discomfort to fully test elasticity of deposits

## ◆ Costs of Regulation & Compliance (and ALM consultants!)



- ◆ Impact to NII if Rates Remain Low for 2015-2017
  - Loan pricing pressures to continue
  - Emphasis on asset growth to offset margin pressure
  
- ◆ Strategy for Excess Cash and Expected Investment Cash Flow Over Next 6-12 months
  - Pre-investment opportunity if market sells off?
  
- ◆ Potential Sensitivity of Non-Maturity Deposit Base in More Detail
  
- ◆ Selective Funding Extensions as Loan Growth Materializes
  
- ◆ Wholesale Funding Will Become of Greater Importance for Most if Managing Properly!

## ◆ Focus = Rising Rates

(When? How Much? How Fast?)

**ARE YOU  
PREPARED  
FOR RISING  
INTEREST  
RATES?**



## ◆ INSURANCE: Funding Extensions

- How Much Need?
- How Long Need It?
- What Are My Choices?
- How Much Cost?
- What Can I Afford?
- How Can I Reduce Cost?



- ◆ Regulatory
- ◆ The “Market”
- ◆ Credit Union



## ◆ Regulatory: Terrified of Rising Rates

- Natural “Bias” (“No Limit” To How High Rates Can Go)
- Asset Durations Have Been Increasing
- Depositor Preference for Short-Term Liquidity
- How Core Are “Core Deposits” ?



## ◆ Regulatory: Terrified of Rising Rates

....NOT Just Interest Rate Risk

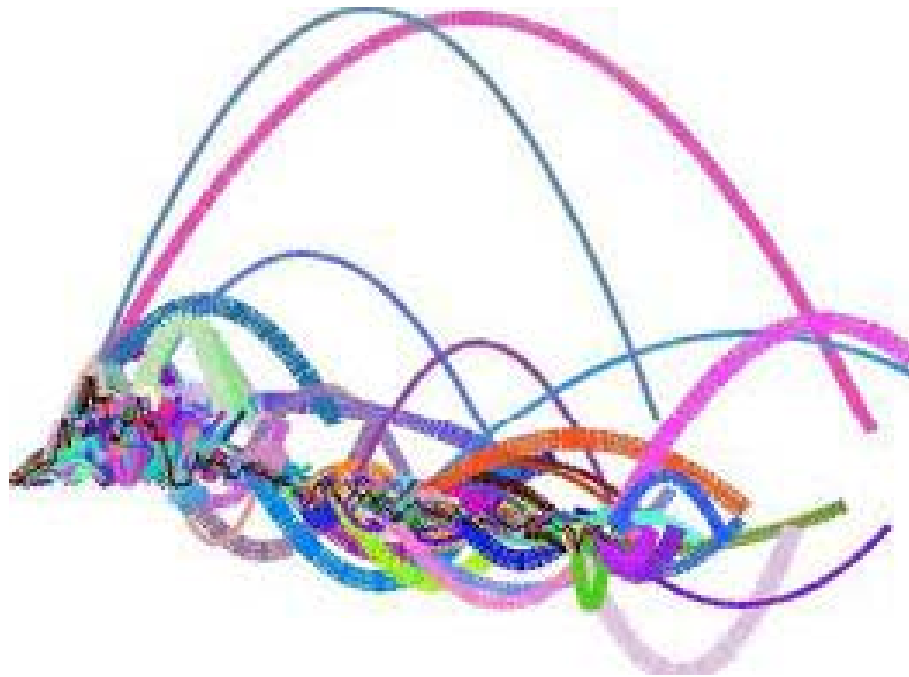
- Capital (OCI)
- Liquidity Risk



## Impact to Your Credit Union?



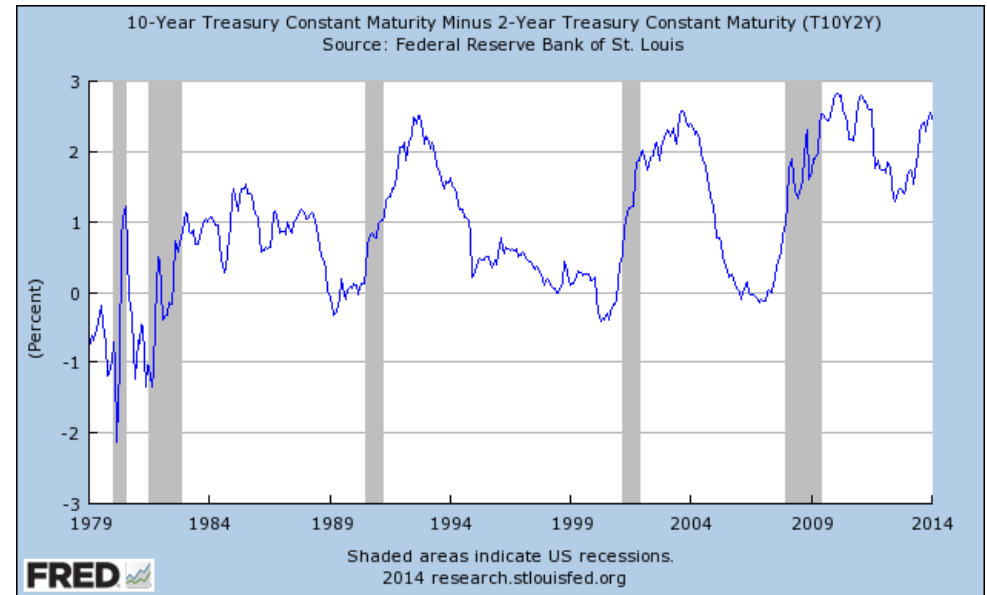
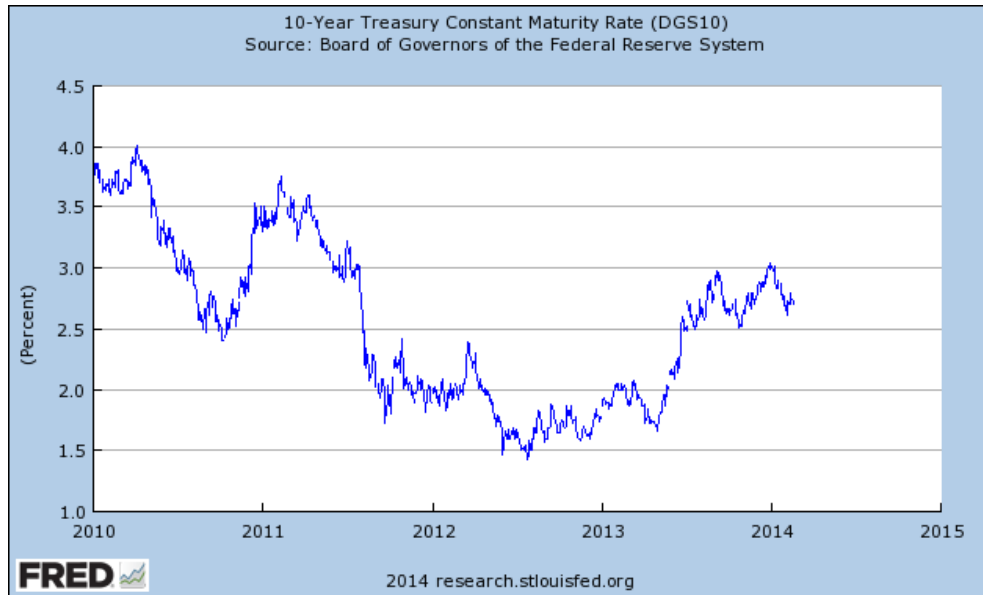
## ◆ The “Market”: When Will “Rates” Rise?



**Short Rates: Fed Funds Futures**

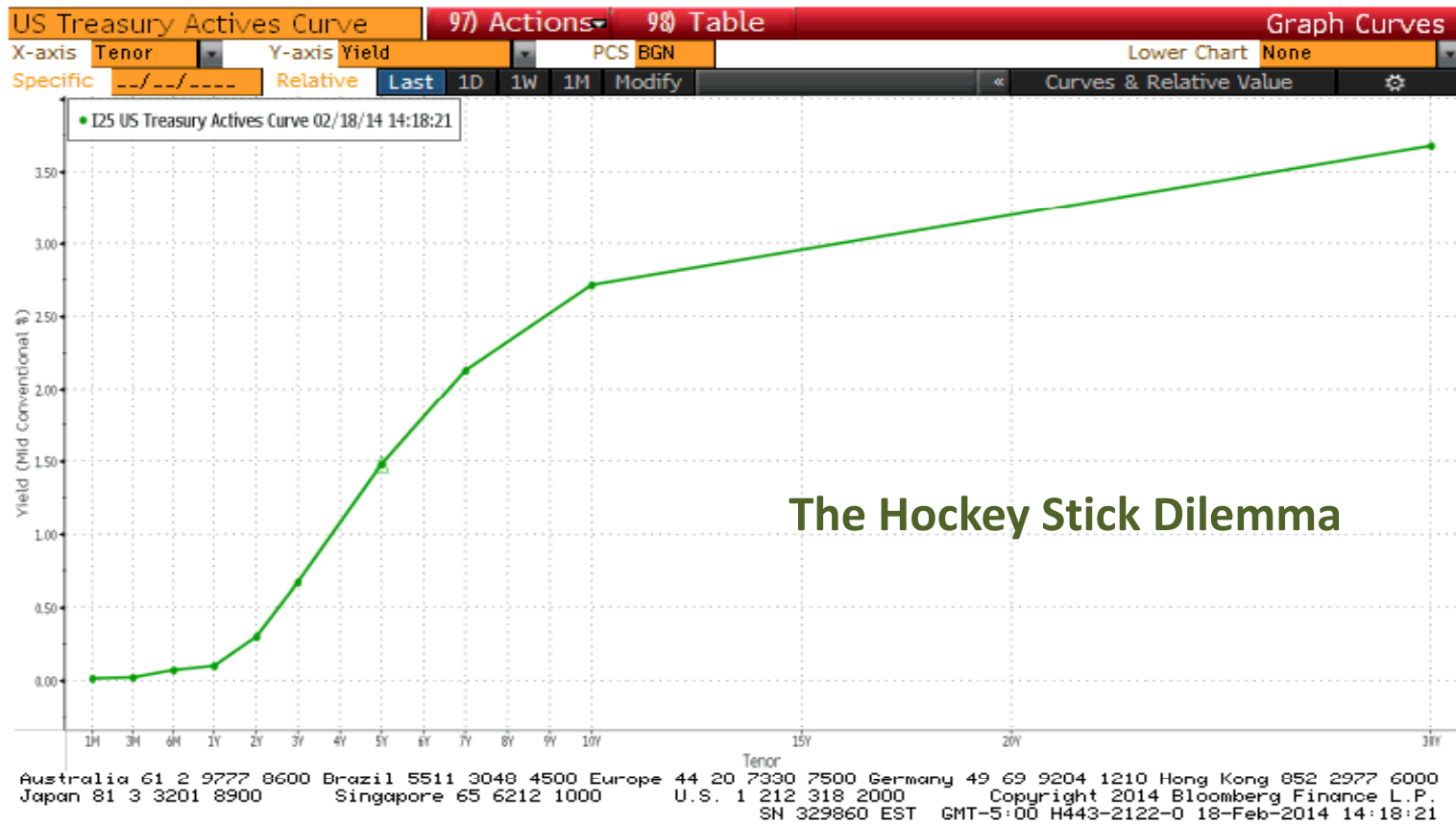
**Long Rates: 2 vs. 10 Year**

## ◆ The “Market”: When Will “Rates” Rise?

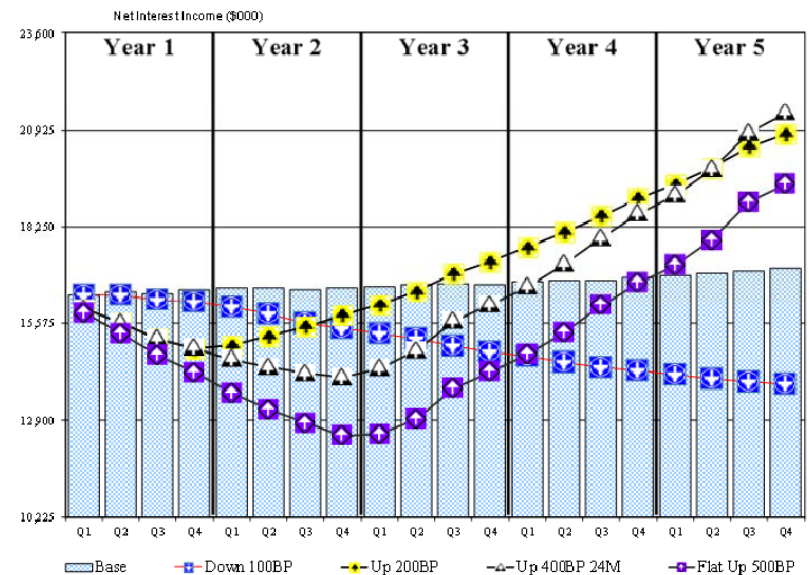
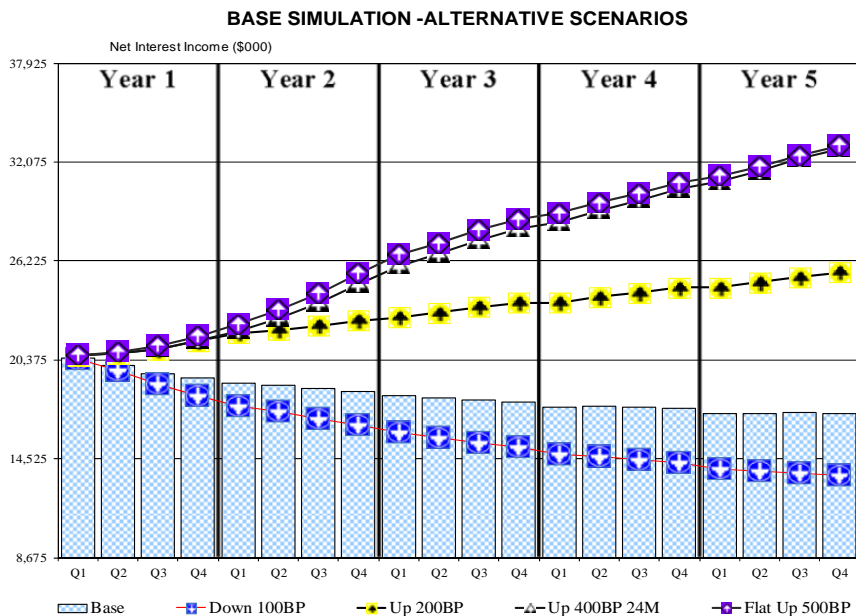


## ◆ The “Market”: The Cost Of Insurance

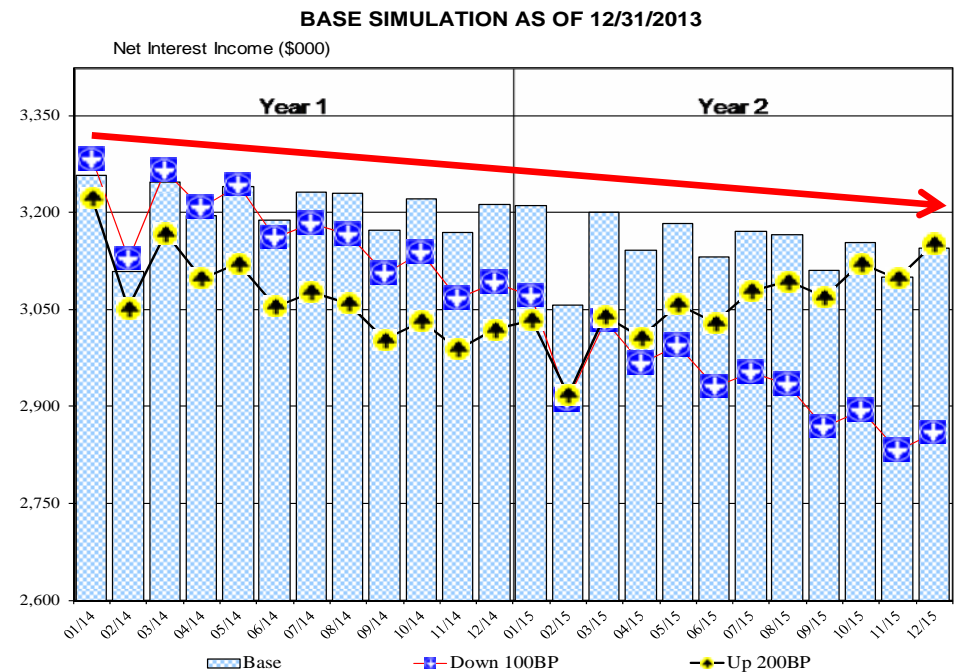
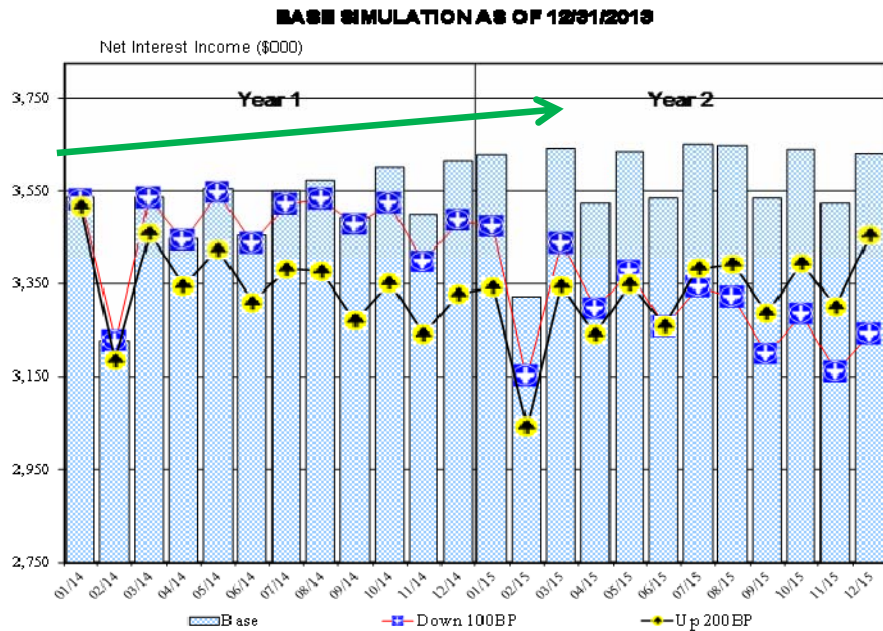
<HELP> for explanation, <MENU> for similar functions.



## ◆ Credit Union: Some Welcome Higher Rates, Others Loathe

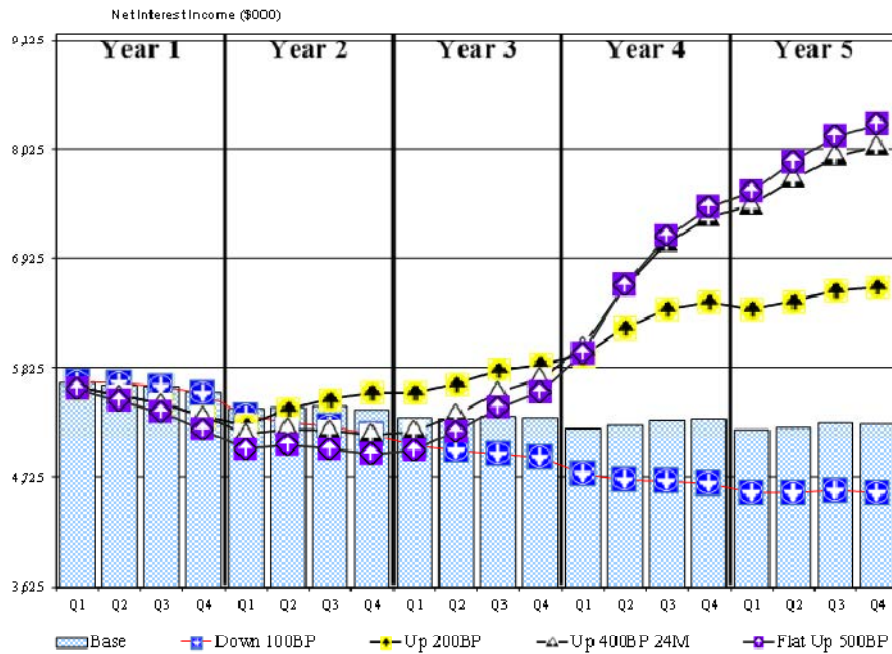


## ◆ Credit Union: Some Can Readily Afford Insurance, Others Can't

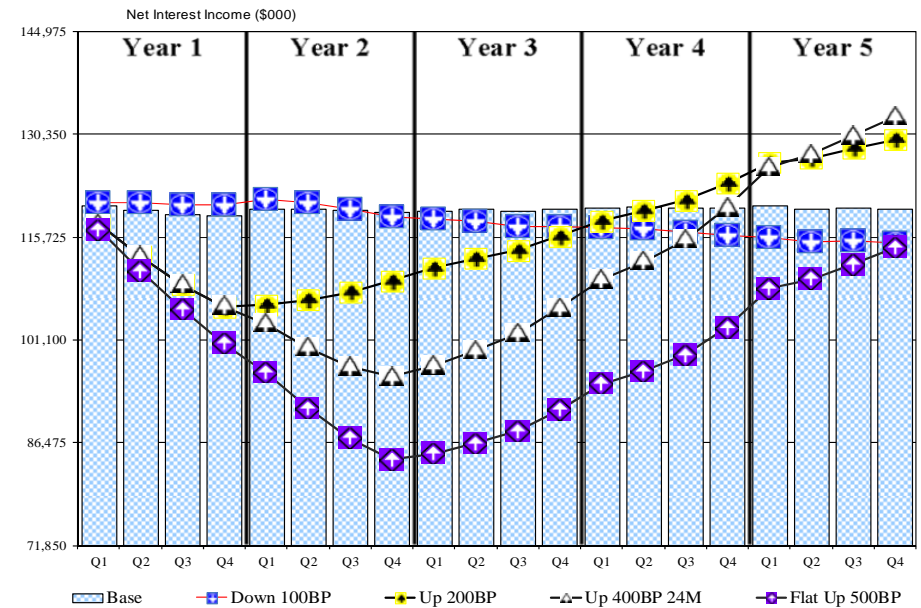


## ◆ Credit Union: Some Need A Little, Others Need A Lot

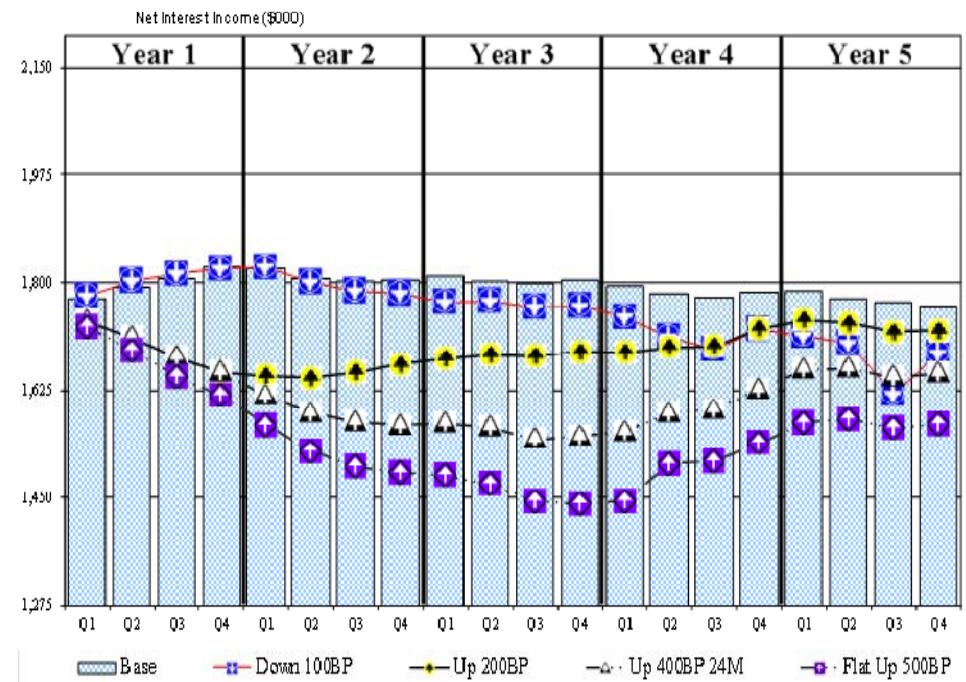
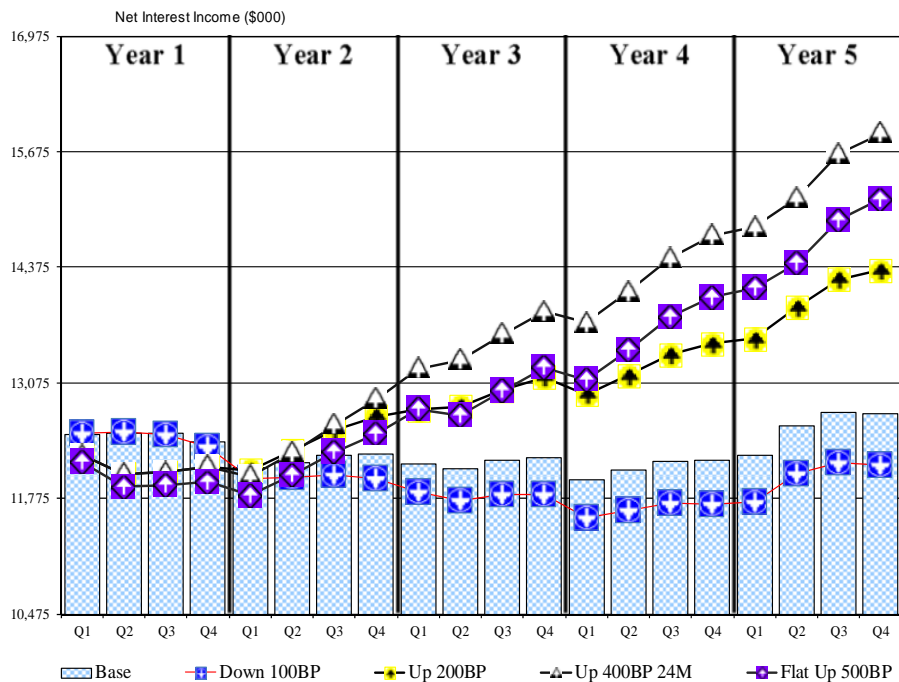
**BASE SIMULATION -ALTERNATIVE SCENARIOS**



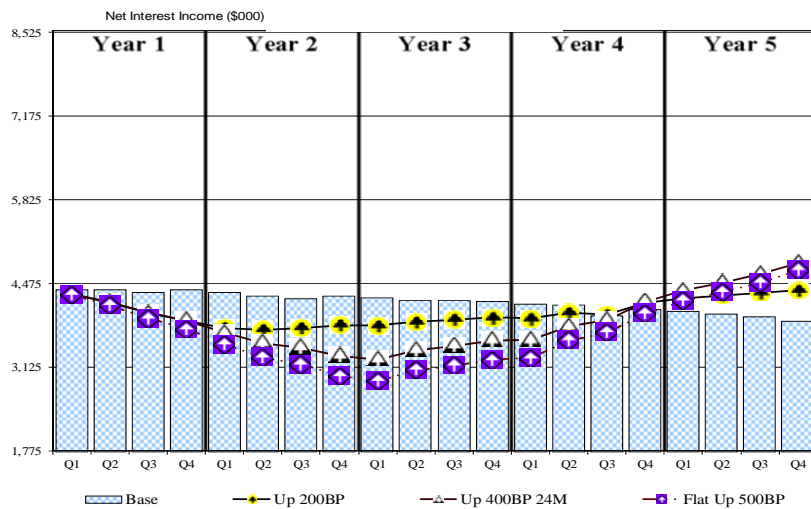
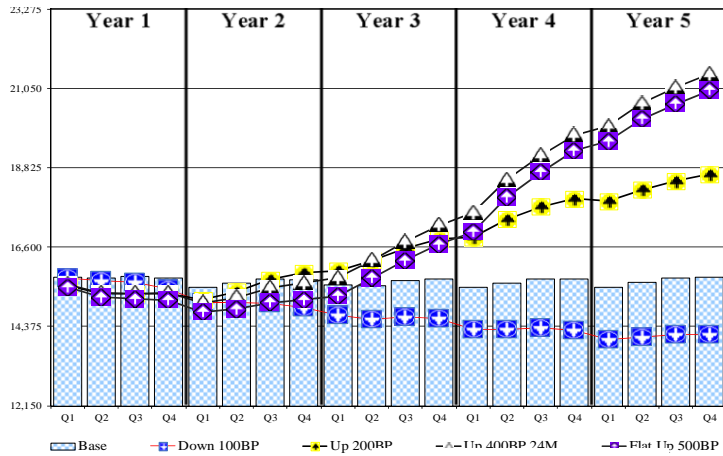
**BASE SIMULATION -ALTERNATIVE SCENARIOS**



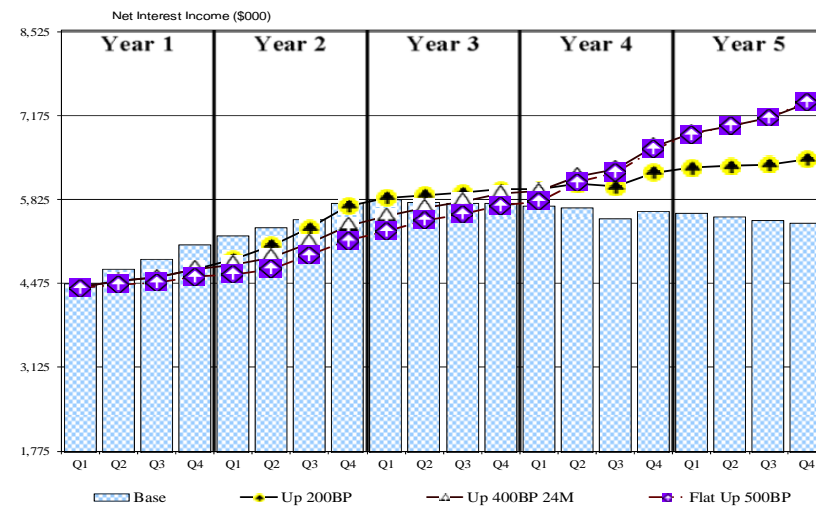
## ◆ Credit Union: Some Need Short-Term, Others Need Long-Term



## ◆ Credit Union: ...While Some Can “Self Insure”/Grow



Growth Model

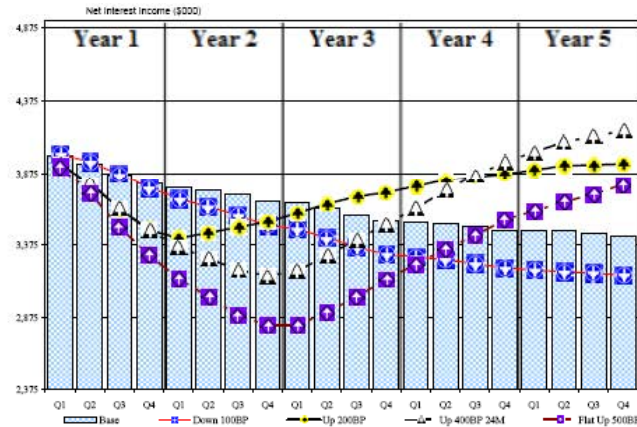




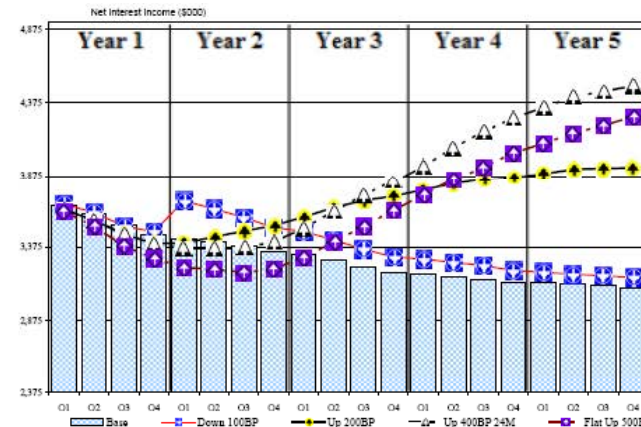
## ◆ CU: Many Concerned, But With Caveats

### ➤ Utility of Current vs. Future Earnings

- NIM Pressures: “Hard” to put \$ on table today to fight tomorrow’s challenge



NII SUMMARY					
	Down 100BP	Base	Up 200BP	Up 400BP 24M	Flat Up 500BP
Year-1 NII	15,604	15,605	14,844	14,843	14,455
Year-2 NII	14,410	14,912	13,902	13,001	11,874
Year-3 NII	13,570	14,408	14,886	13,420	11,891
Year-4 NII	13,024	14,010	15,325	15,187	13,568
Year-5 NII	12,738	13,827	15,715	16,423	14,783



NII SUMMARY					
	Down 100BP	Base	Up 200BP	Up 400BP 24M	Flat Up 500BP
Year-1 NII	14,275	14,243	14,048	14,047	13,811
Year-2 NII	14,410	13,553	13,851	13,511	12,885
Year-3 NII	13,570	13,050	14,642	14,682	13,863
Year-4 NII	13,024	12,652	15,282	16,459	15,544
Year-5 NII	12,738	12,465	15,671	17,698	16,783

CHANGE / DIFFERENCE IN RESULTS					
	Down 100BP	Base	Up 200BP	Up 400BP 24M	Flat Up 500BP
Year-1 NII	-1,330	-1,362	-796	-796	-644
Year-2 NII	0	-1,358	-51	511	1,011
Year-3 NII	0	-1,358	-43	1,262	1,962
Year-4 NII	0	-1,358	-43	1,272	1,975
Year-5 NII	0	-1,362	-43	1,275	1,980

## ◆ CU: Many Concerned, But With Caveats

- Utility of Current vs. Future Earnings
  - NIM Pressures: “Hard” to put \$ on Table today to fight tomorrow’s challenge
  - Primary Current Goal = Increase Capital
  - Making Money and avoiding a “loss” due to low rate environment
  
- For Most CUs, Sustained Low/Lower Rates – WORST OUTCOME
  
  
- Anticipated “Events”
  - Merger
  - Branch expansion or sale
  - Reductions in NPA/OREO
  
- Some Have Strong Current Attitudes Re: Bond Markets
  - Rates not going anywhere anytime soon
  - If rates rise significantly = Strong Economy (Growth Opportunities)

## ◆ Shorten Assets

- Business Model “Capacity” to Generate Floating Assets?
- Customer Preferences for Long-Term Fixed Rate

## ◆ Lengthen Liabilities

- How Lengthen NMDs?
- What about CDs?
- Wholesale Alternatives: How Much Short-Term Have Today?
- Are We Prepared to “Borrow” Money from FHLB (vs. members!)



## ◆ Shorten Assets

- Strategic Implications: Loan Strategy
- Pricing Incentives?
- Use of Swaps

## ◆ Lengthen Liabilities

- Funding Extensions (wholesale most logical)
  - What if nominal borrowing levels?
  - Structured Borrowings (e.g. FHLB embedded options)
  - Role of Swaps (Spot & Forward)

## ◆ *Stand Alone Derivatives: Swaps (and Caps) ?*



# Rising Rate Readiness



## Strategies and Implications

## **I. Current Position Summary**

1. Earnings
2. Liquidity
3. Interest Rate Risk
4. Capital
5. Important Operating Trends/Issues and Implications

## **II. Strategy Formulation**

1. Objectives
2. Strategy Elements
3. Interest Rate Environment/Yield Curve

## **III. Potential Strategies (Actions/Results/Risks)**

## **IV. Action Plan**

1. Recommended Strategies/Actions
2. Implementation: Timetable & Responsibilities

## **V. Other Items**

Potential Strategy	Expected Results	Risks
<ul style="list-style-type: none"> <li>• Describe the purpose of the potential strategy and the nature of the transaction</li> <li>• Provide the financial characteristics or details</li> </ul>	<ul style="list-style-type: none"> <li>• Summarize the specific impact on:               <ul style="list-style-type: none"> <li>✓ IRR</li> <li>✓ Liquidity</li> <li>✓ Capital/Earnings</li> <li>✓ Other?</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Describe the various risks such as:               <ul style="list-style-type: none"> <li>✓ Opportunity costs</li> <li>✓ Prepayment</li> <li>✓ Extension</li> <li>✓ Credit</li> <li>✓ Etc.</li> </ul> </li> </ul>

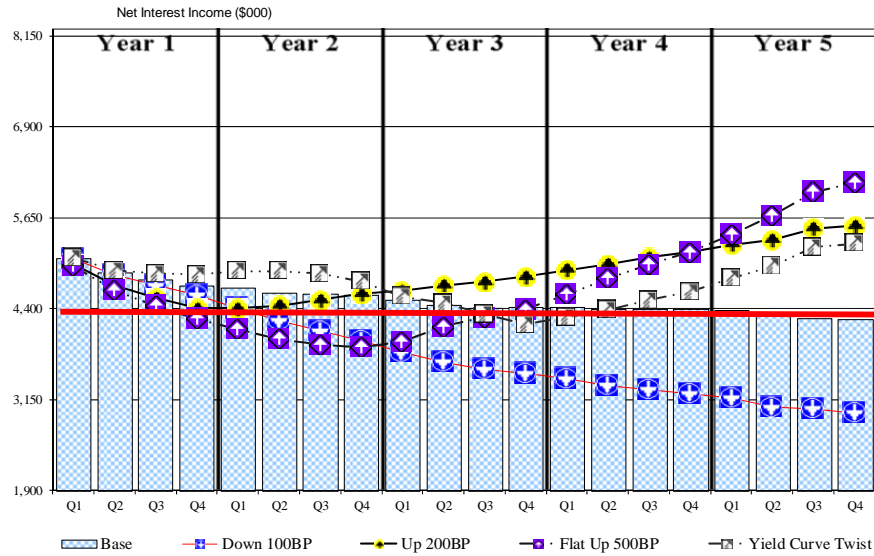
# Market with Strong Loan Demand



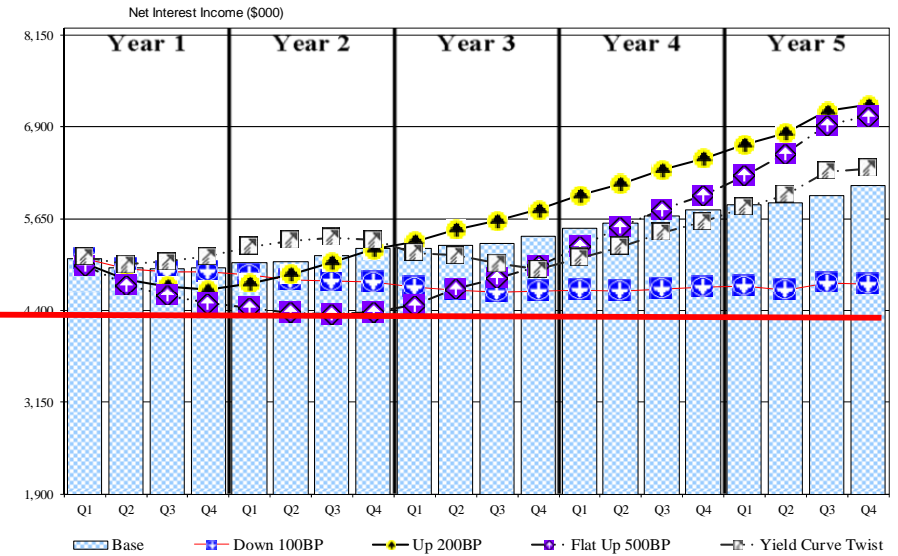


# Reinvest Investment Cash Flow into 30-Year FR Loans!

Base Simulation as of 9/30/2013



Alt Investment Cash Flow Assumption - Loans



NII SUMMARY					
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Flat Up 500BP</u>	<u>Yield Curve Twist</u>
Year-1 NII	19,254	19,478	18,679	18,330	19,775
Year-2 NII	16,686	18,461	17,968	15,871	19,486
Year-3 NII	14,544	17,766	18,969	16,774	17,540
Year-4 NII	13,295	17,574	20,226	19,596	17,815
Year-5 NII	12,205	17,184	21,659	23,230	20,332

NII SUMMARY					
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Flat Up 500BP</u>	<u>Yield Curve Twist</u>
Year-1 NII	19,934	20,079	19,270	18,869	20,359
Year-2 NII	19,292	20,547	19,963	17,529	21,363
Year-3 NII	18,697	21,286	22,238	19,011	20,327
Year-4 NII	18,753	22,620	24,887	22,550	21,461
Year-5 NII	18,956	23,812	27,785	26,741	24,411

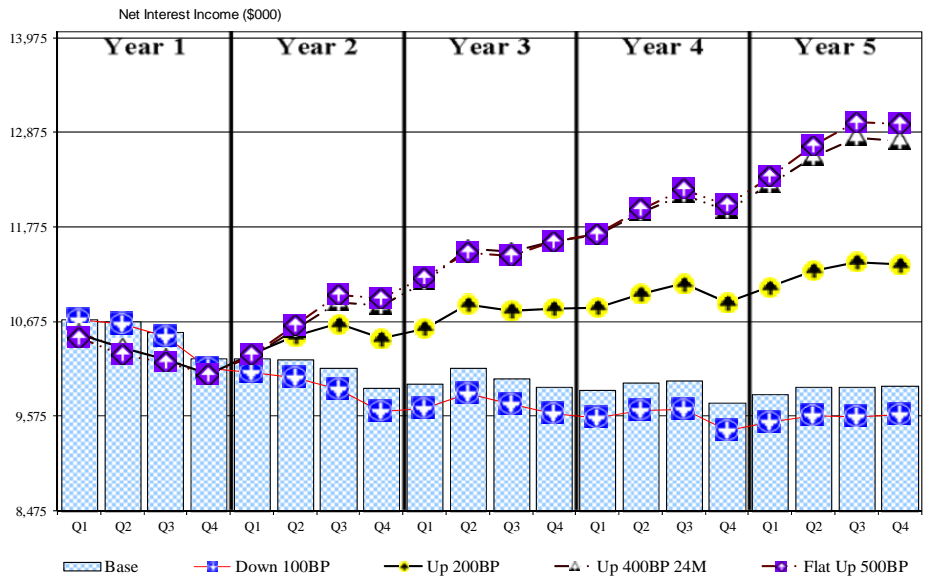
CHANGE / DIFFERENCE IN RESULTS					
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Flat Up 500BP</u>	<u>Yield Curve Twist</u>
Year-1 NII	680	601	590	538	584
Year-2 NII	2,606	2,087	1,995	1,658	1,877
Year-3 NII	4,152	3,521	3,268	2,237	2,787
Year-4 NII	5,458	5,046	4,661	2,954	3,647
Year-5 NII	6,752	6,628	6,126	3,511	4,079

NOTE: In the base simulation, all investment cash flow is assumed to roll into a blend of 2-5 year Agencies and Investment CDs. This alternative simulation assumes that all investment cash flow will fund 30 Yr Residential mortgages @ 4.25%.

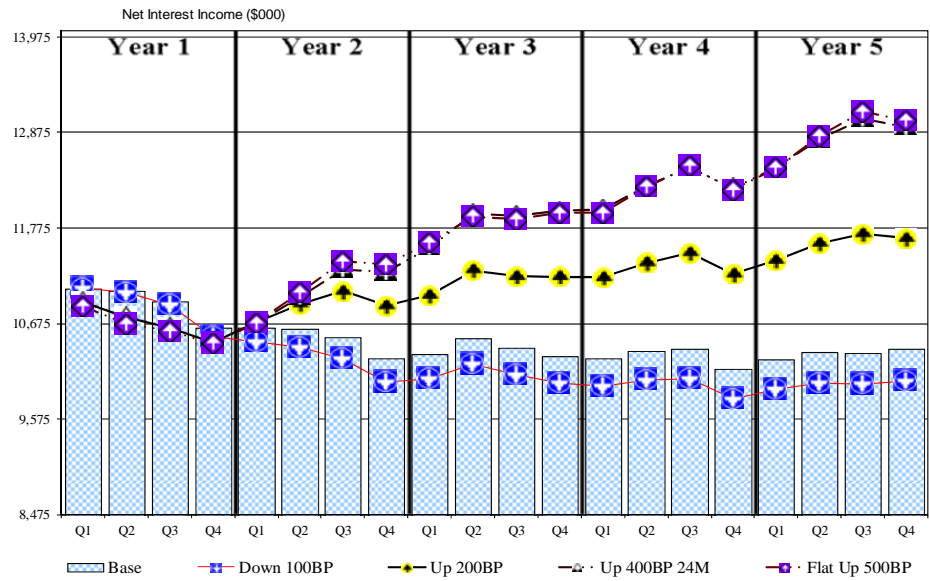


# 30-Year Jumbo Loans Funded by 3-5 Year FHLB Ladder

**Base Model**



**\$50MM 30yr Jumbo**



**NII SUMMARY**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
<b>Year-1 NII</b>	41,982	42,159	41,200	41,217	41,038
<b>Year-2 NII</b>	39,619	40,509	41,930	42,620	42,857
<b>Year-3 NII</b>	38,821	39,996	43,103	45,747	45,715
<b>Year-4 NII</b>	38,262	39,534	43,856	47,749	47,914
<b>Year-5 NII</b>	38,241	39,571	45,055	50,443	51,054

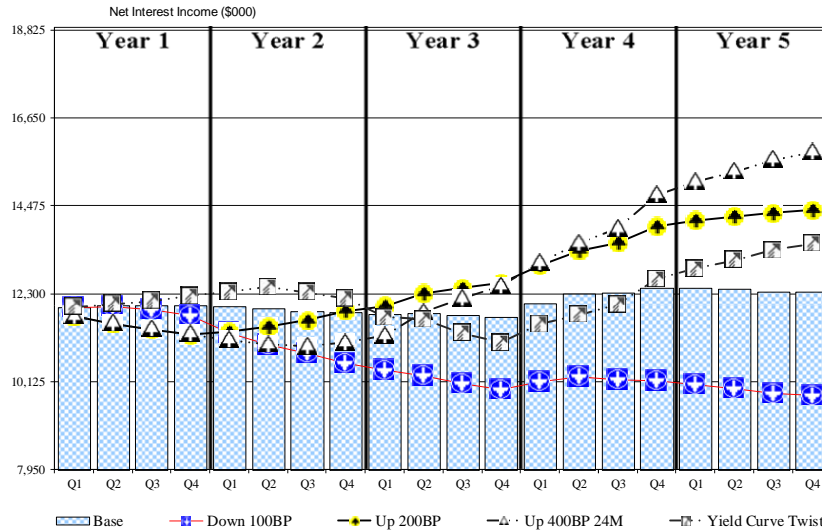
**NII SUMMARY**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
<b>Year-1 NII</b>	43,524	43,704	42,750	42,768	42,588
<b>Year-2 NII</b>	41,143	42,054	43,517	44,216	44,454
<b>Year-3 NII</b>	40,327	41,553	44,722	47,389	47,333
<b>Year-4 NII</b>	39,829	41,188	45,308	48,964	48,901
<b>Year-5 NII</b>	39,897	41,347	46,362	51,248	51,426

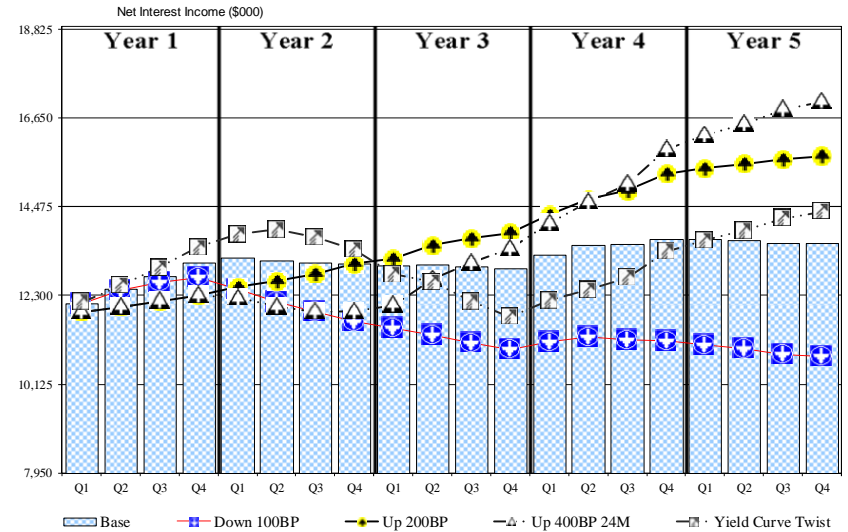
**CHANGE / DIFFERENCE IN RESULTS**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
<b>Year-1 NII</b>	1,542	1,545	1,550	1,550	1,550
<b>Year-2 NII</b>	1,524	1,545	1,587	1,597	1,597
<b>Year-3 NII</b>	1,505	1,557	1,618	1,642	1,619
<b>Year-4 NII</b>	1,568	1,654	1,453	1,216	987
<b>Year-5 NII</b>	1,656	1,776	1,307	806	372

Base Simulation as of 6/30/2014



Loan Growth Simulation



NII SUMMARY					
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	47,580	47,945	45,995	46,007	48,381
Year-2 NII	43,756	47,570	46,341	44,286	49,308
Year-3 NII	40,664	47,049	49,288	47,754	45,785
Year-4 NII	40,666	49,079	53,900	55,259	48,000
Year-5 NII	39,619	49,513	56,979	61,780	52,973

NII SUMMARY					
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	49,896	50,469	48,377	48,389	51,140
Year-2 NII	48,156	52,603	51,059	48,087	54,860
Year-3 NII	44,943	52,079	54,257	51,319	49,353
Year-4 NII	44,858	54,112	59,070	59,575	50,709
Year-5 NII	43,754	54,540	62,291	66,646	56,085

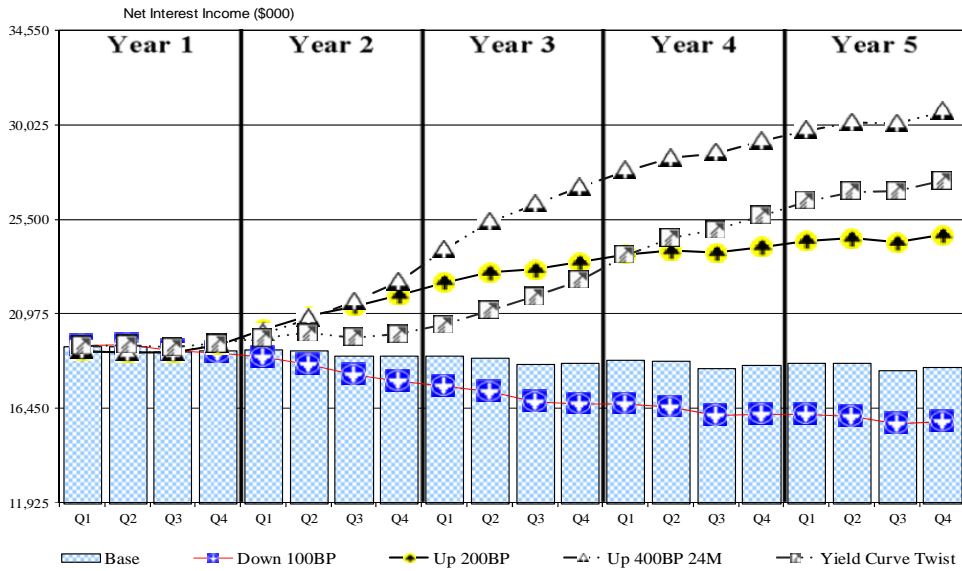
CHANGE / DIFFERENCE IN RESULTS					
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	2,315	2,524	2,382	2,382	2,759
Year-2 NII	4,400	5,032	4,717	3,801	5,551
Year-3 NII	4,279	5,030	4,969	3,565	3,568
Year-4 NII	4,193	5,033	5,170	4,316	2,708
Year-5 NII	4,135	5,028	5,312	4,866	3,112

All investment cashflow over the first 9 months of the model (\$74MM) is assumed to fund loan growth (60% Auto, 40% Residential; Same breakout as base model).  
 Additionally, \$80MM of overnight cash @ 0.25 bps is assumed to fund loan growth (60% Auto, 40% Residential) over the next year.  
 \$70MM of deposits (\$28MM DDA, \$28MM Premium MMDA >100K @ 0.30bps, \$14MM 1 Yr IRA CDs @ 0.43bps) is assumed to fund loan growth (60% Auto, 40% Residential) over the next year.

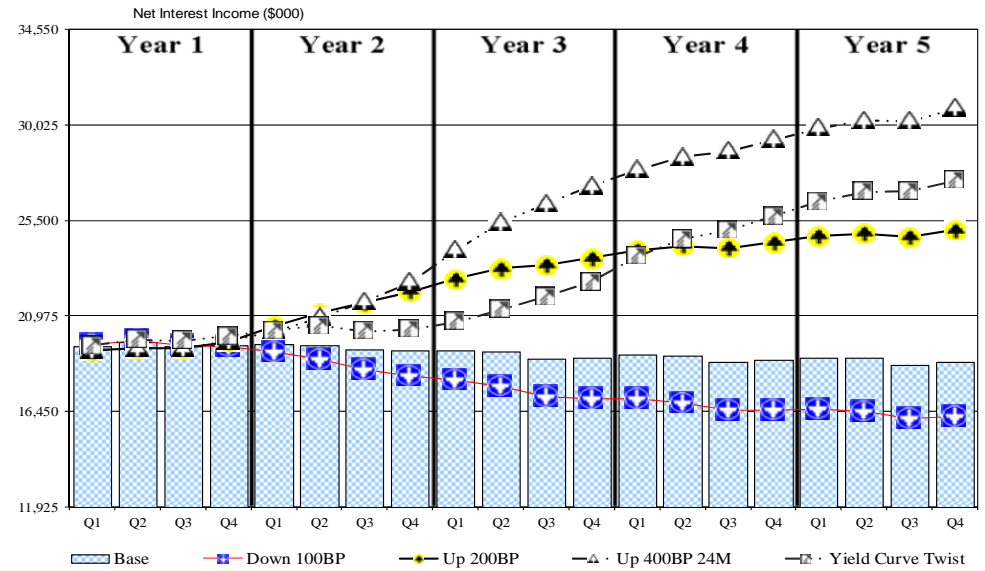


# \$50 MM Loan Growth: 10/1 ARM's at 3.50% Using Cash

Base Scenario As of 06/30/2014



Loan Growth



NII SUMMARY

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	77,274	77,123	76,901	76,945	77,859
Year-2 NII	73,224	76,337	84,299	84,856	79,723
Year-3 NII	68,207	74,996	91,985	102,692	85,978
Year-4 NII	65,407	74,289	95,890	114,136	99,038
Year-5 NII	63,811	73,860	98,215	120,628	107,351

NII SUMMARY

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	78,510	78,409	77,906	77,950	79,237
Year-2 NII	74,785	77,962	85,291	85,327	81,328
Year-3 NII	69,730	76,621	93,050	102,876	86,432
Year-4 NII	66,897	75,914	97,021	114,487	99,114
Year-5 NII	65,271	75,485	99,403	121,128	107,511

CHANGE / DIFFERENCE IN RESULTS

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	1,237	1,286	1,005	1,005	1,378
Year-2 NII	1,561	1,625	991	472	1,604
Year-3 NII	1,523	1,625	1,065	184	454
Year-4 NII	1,490	1,625	1,130	351	76
Year-5 NII	1,460	1,625	1,188	499	160

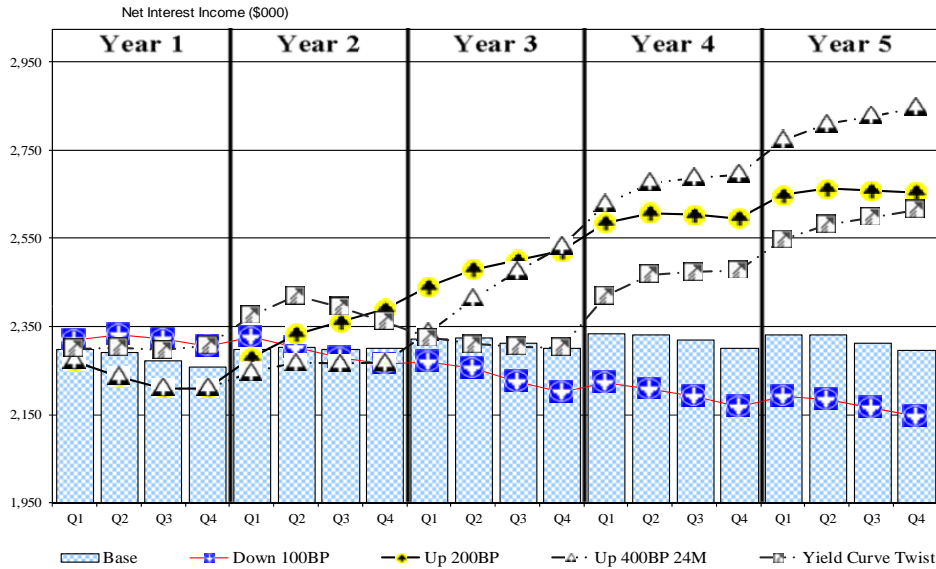
Fund \$50 million of Residential 10/1 Loan growth @ 3.50% over the next 6 months of the simulation with excess cash reserves.

# Market with Weak Loan Demand

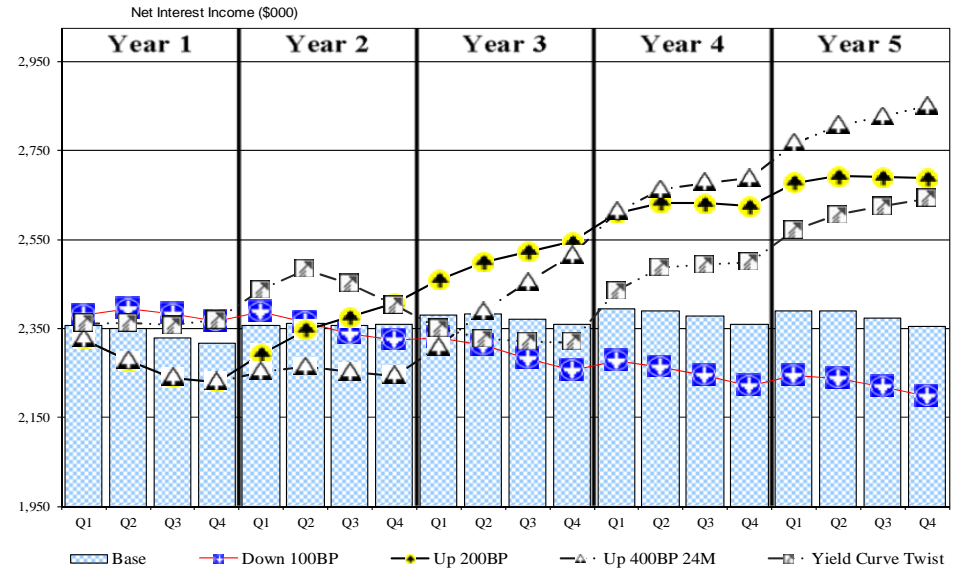


# Strategy: \$10MM MBS Purchase

Base Simulation as of 2/28/2014



\$10MM MBS Purchase



NII SUMMARY

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	9,276	9,118	8,927	8,927	9,205
Year-2 NII	9,174	9,198	9,362	9,047	9,549
Year-3 NII	8,951	9,256	9,942	9,756	9,242
Year-4 NII	8,788	9,285	10,392	10,685	9,837
Year-5 NII	8,688	9,271	10,623	11,255	10,340

NII SUMMARY

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	9,521	9,361	9,073	9,073	9,450
Year-2 NII	9,413	9,442	9,424	9,012	9,771
Year-3 NII	9,178	9,500	10,027	9,664	9,315
Year-4 NII	9,005	9,529	10,498	10,638	9,914
Year-5 NII	8,896	9,514	10,747	11,247	10,443

CHANGE / DIFFERENCE IN RESULTS

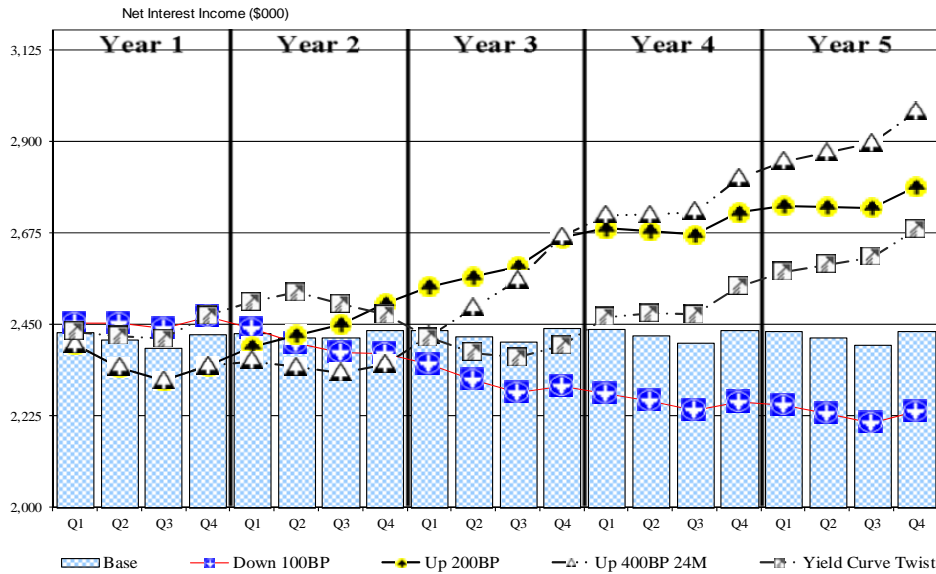
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	245	244	147	147	245
Year-2 NII	239	244	62	-35	222
Year-3 NII	228	244	85	-92	72
Year-4 NII	217	244	106	-47	77
Year-5 NII	208	244	124	-8	103

Purchase \$5MM of 15Yr MBS at 2.29% and \$5MM of 30Yr MBS at 3.19% funded by short-term borrowings at 0.30%.  
Purchase occurs in month one of the model

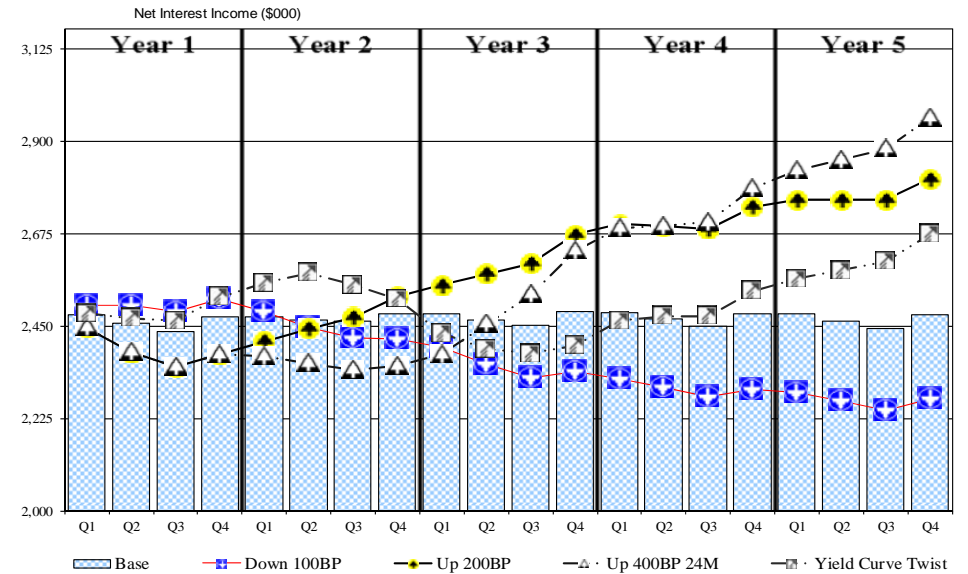


# Strategy: \$10MM MBS Purchase (same CU)

Base Simulation as of 5/31/2014



\$10MM Investment Purchase



**NII SUMMARY**

	Down 100BP	Base	Up 200BP	Up 400BP 24M	Yield Curve Twist
Year-1 NII	9,812	9,657	9,402	9,402	9,738
Year-2 NII	9,600	9,695	9,770	9,385	10,007
Year-3 NII	9,245	9,698	10,363	10,136	9,561
Year-4 NII	9,038	9,696	10,760	10,972	9,962
Year-5 NII	8,923	9,677	11,005	11,590	10,471

**NII SUMMARY**

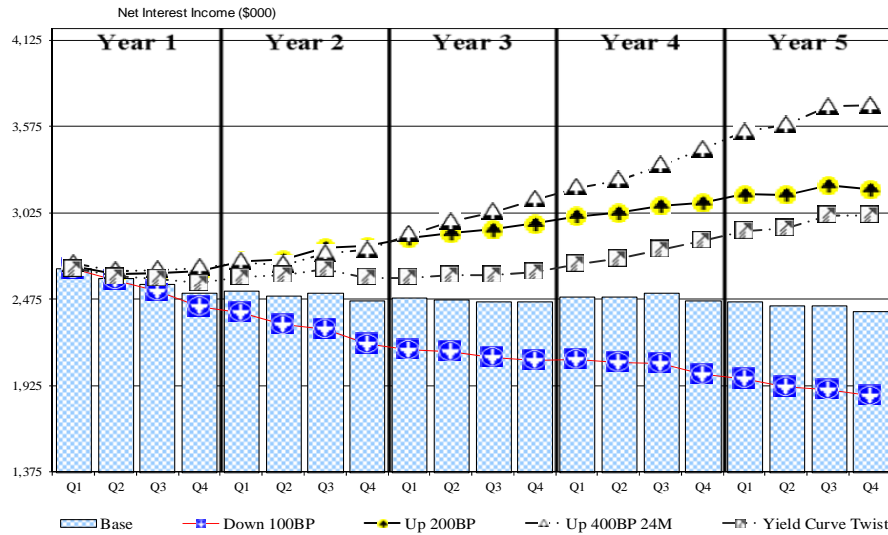
	Down 100BP	Base	Up 200BP	Up 400BP 24M	Yield Curve Twist
Year-1 NII	10,004	9,852	9,566	9,566	9,935
Year-2 NII	9,774	9,889	9,853	9,432	10,201
Year-3 NII	9,420	9,893	10,404	9,994	9,613
Year-4 NII	9,198	9,891	10,820	10,871	9,950
Year-5 NII	9,073	9,872	11,082	11,524	10,435

**CHANGE / DIFFERENCE IN RESULTS**

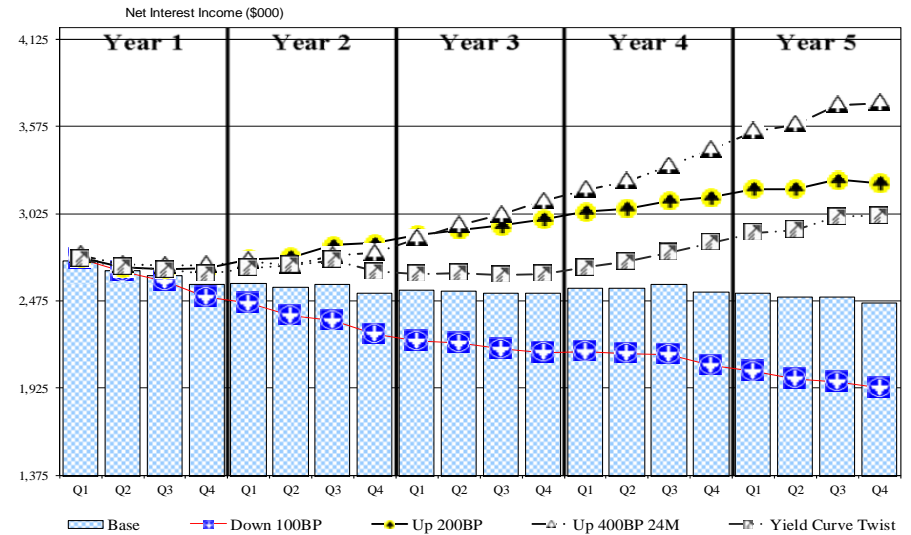
	Down 100BP	Base	Up 200BP	Up 400BP 24M	Yield Curve Twist
Year-1 NII	192	195	164	164	197
Year-2 NII	175	195	83	46	194
Year-3 NII	175	195	40	-141	51
Year-4 NII	160	195	60	-102	-12
Year-5 NII	150	195	77	-65	-36

Assumes purchase of \$5MM 10 Yr MBS and \$5MM 30 Yr Jumbo MBS funded with \$3.33MM Overnight FHLB @ 0.30%, \$3.33MM 1 Yr FHLB @ 0.32%, and \$3.33MM 2 Yr FHLB @ 0.79%.

Base Model as of 4/30/2014



\$10M Purchased Loans



NII SUMMARY

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	10,214	10,355	10,608	10,688	10,471
Year-2 NII	9,176	9,992	11,056	10,956	10,517
Year-3 NII	8,480	9,863	11,626	11,990	10,515
Year-4 NII	8,230	9,953	12,185	13,167	11,063
Year-5 NII	7,645	9,715	12,652	14,532	11,852

NII SUMMARY

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	10,497	10,629	10,787	10,867	10,747
Year-2 NII	9,463	10,271	11,158	10,963	10,778
Year-3 NII	8,758	10,146	11,753	11,941	10,583
Year-4 NII	8,501	10,239	12,334	13,160	11,031
Year-5 NII	7,910	10,005	12,820	14,563	11,842

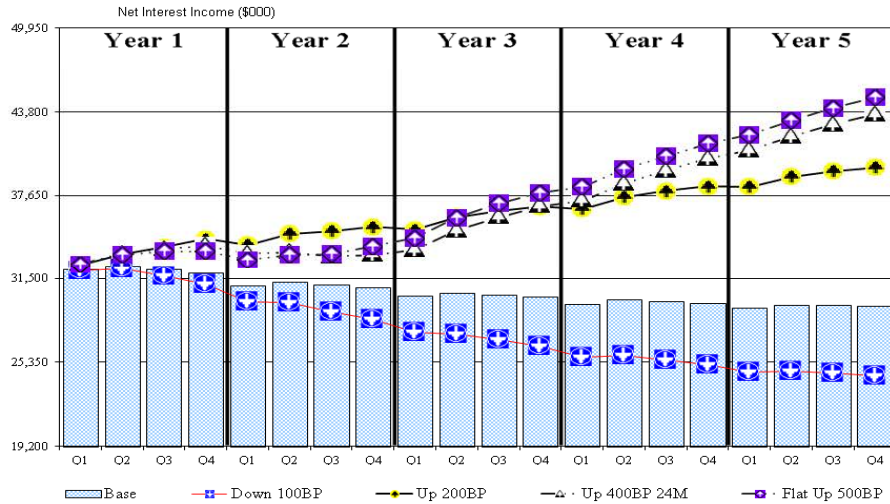
CHANGE / DIFFERENCE IN RESULTS

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
Year-1 NII	283	274	179	179	276
Year-2 NII	287	279	102	7	260
Year-3 NII	278	283	127	-48	68
Year-4 NII	271	286	149	-7	-32
Year-5 NII	265	290	168	30	-10

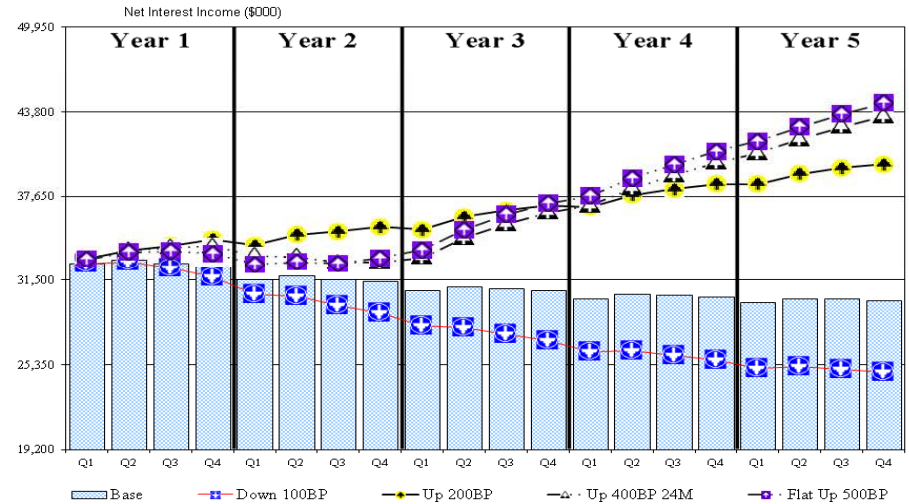
This model assumes \$5M of Resi 5/1 ARM (@ 2.50%), \$2.5M of Resi 7/1 ARM (@ 3%) and \$2.5M of 30 Yr Jumbo (@ 3.875%) funded with short term funding (@ 25 bps).



**Base Model as of 1/31/2014**



**\$125MM MBS/CMO Extension**



**NII SUMMARY**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
<b>Year-1 NII</b>	127,104	128,660	134,224	133,620	132,956
<b>Year-2 NII</b>	116,962	123,921	139,274	133,311	133,502
<b>Year-3 NII</b>	108,475	120,950	144,554	141,673	145,495
<b>Year-4 NII</b>	102,221	118,897	150,555	155,654	159,924
<b>Year-5 NII</b>	98,234	117,758	156,530	169,433	174,250

**NII SUMMARY**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
<b>Year-1 NII</b>	129,753	131,174	135,399	134,794	133,788
<b>Year-2 NII</b>	119,561	126,435	139,504	132,204	131,439
<b>Year-3 NII</b>	110,810	123,464	145,049	139,908	142,524
<b>Year-4 NII</b>	104,313	121,411	151,337	154,471	157,584
<b>Year-5 NII</b>	100,134	120,272	157,582	168,801	172,506

**CHANGE / DIFFERENCE IN RESULTS**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
<b>Year-1 NII</b>	2,650	2,514	1,175	1,174	833
<b>Year-2 NII</b>	2,599	2,514	230	-1,107	-2,062
<b>Year-3 NII</b>	2,335	2,514	494	-1,765	-2,971
<b>Year-4 NII</b>	2,092	2,514	782	-1,183	-2,340
<b>Year-5 NII</b>	1,899	2,514	1,052	-632	-1,744

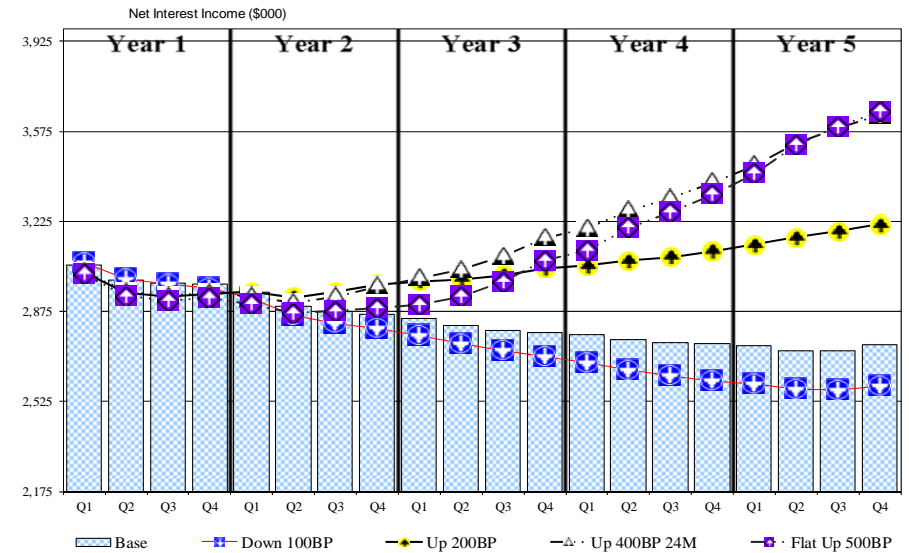
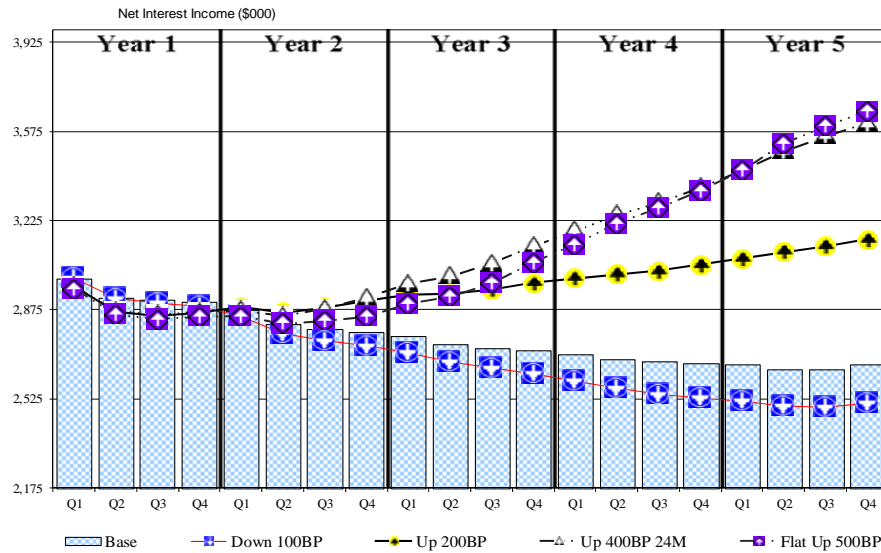
Extend \$125MM of overnight investments into a 50/50 split of 15 Yr MBS at 2.31% and 4 Yr CMO at 2.22%.

# Purchase "Discounted" 30-Year MBS Funded with Laddered FHLB Advances



Base Simulation

MBS Purchases



NII SUMMARY

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
Year-1 NII	11,710	11,727	11,548	11,557	11,497
Year-2 NII	11,115	11,272	11,542	11,518	11,347
Year-3 NII	10,646	10,943	11,808	12,162	11,862
Year-4 NII	10,237	10,710	12,094	13,081	12,958
Year-5 NII	10,011	10,592	12,453	14,081	14,198

NII SUMMARY

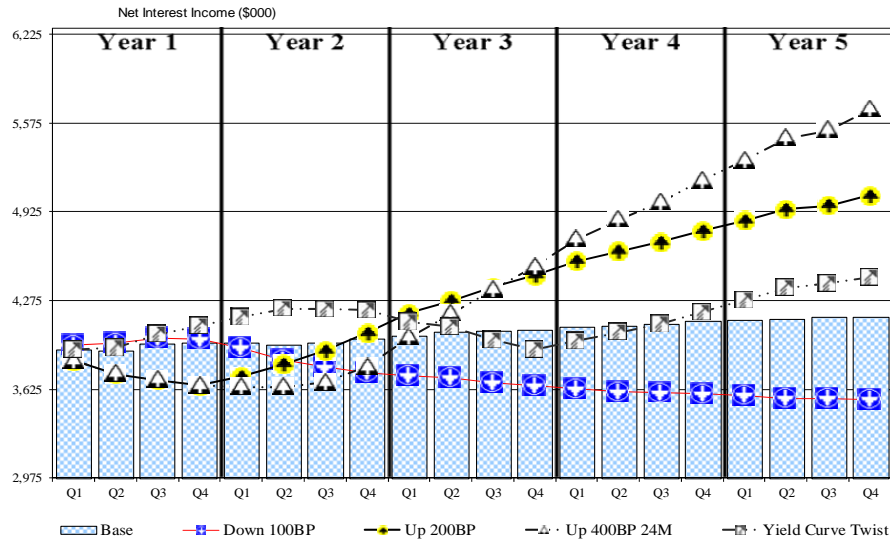
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
Year-1 NII	12,010	12,034	11,855	11,864	11,799
Year-2 NII	11,427	11,599	11,811	11,750	11,538
Year-3 NII	10,956	11,279	12,052	12,290	11,897
Year-4 NII	10,556	11,066	12,323	13,158	12,904
Year-5 NII	10,321	10,948	12,700	14,197	14,181

CHANGE / DIFFERENCE IN RESULTS

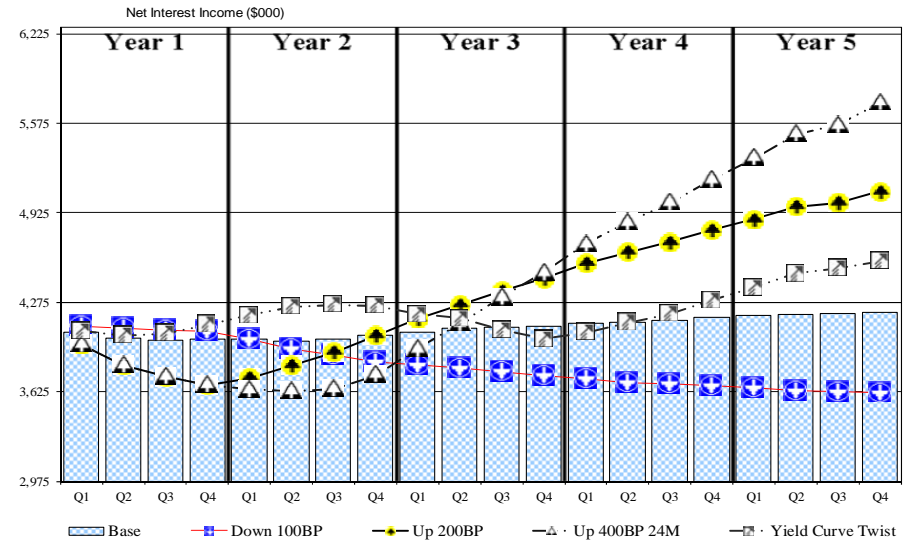
	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
Year-1 NII	300	307	308	308	302
Year-2 NII	313	327	269	232	190
Year-3 NII	310	336	243	128	35
Year-4 NII	319	357	229	78	-54
Year-5 NII	310	357	247	116	-17

\$10MM of 30Y Jumbo MBS @ 3.74% is funded with \$4MM of 1Y FHLB, \$3MM 2Y FHLB, and \$3MM 3Y FHLB.

**Base Simulation**



**\$35MM Pre-Investment Strategy**



**NII SUMMARY**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
<b>Year-1 NII</b>	15,897	15,730	14,911	14,911	15,956
<b>Year-2 NII</b>	15,300	15,861	15,472	14,748	16,787
<b>Year-3 NII</b>	14,756	16,161	17,284	17,062	16,098
<b>Year-4 NII</b>	14,431	16,383	18,689	19,741	16,313
<b>Year-5 NII</b>	14,237	16,577	19,826	21,958	17,489

**NII SUMMARY**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
<b>Year-1 NII</b>	16,326	16,101	15,200	15,200	16,265
<b>Year-2 NII</b>	15,687	16,065	15,494	14,671	16,936
<b>Year-3 NII</b>	15,133	16,364	17,223	16,863	16,434
<b>Year-4 NII</b>	14,766	16,586	18,714	19,723	16,671
<b>Year-5 NII</b>	14,533	16,780	19,927	22,099	17,970

**CHANGE / DIFFERENCE IN RESULTS**

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Yield Curve Twist</u>
<b>Year-1 NII</b>	429	371	289	289	309
<b>Year-2 NII</b>	387	203	21	-76	150
<b>Year-3 NII</b>	378	203	-61	-198	336
<b>Year-4 NII</b>	334	203	25	-18	358
<b>Year-5 NII</b>	296	203	101	141	481

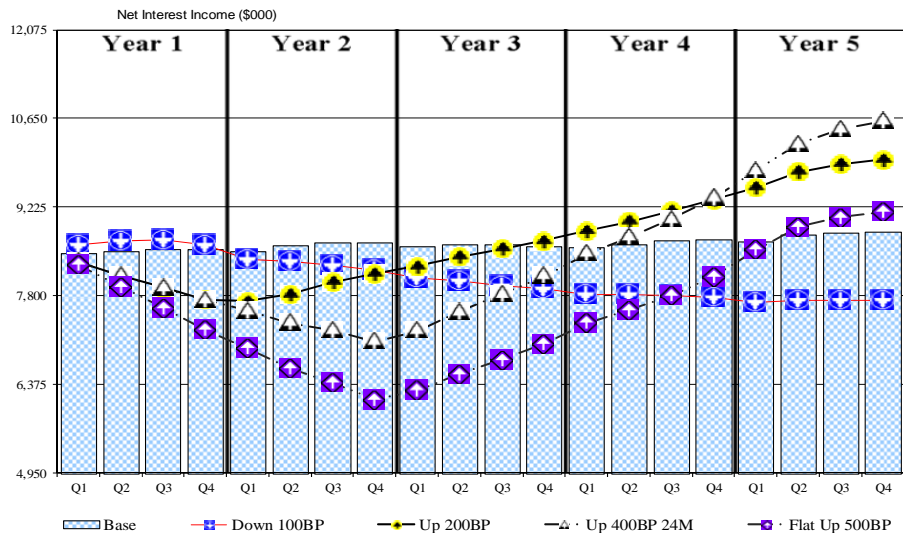
Pre-invest \$35MM into a 15 Yr MBS at 2.32% and funded with overnight borrowings. The overnight borrowings are paid down with investment cash flow.

# Other Strategies to Consider

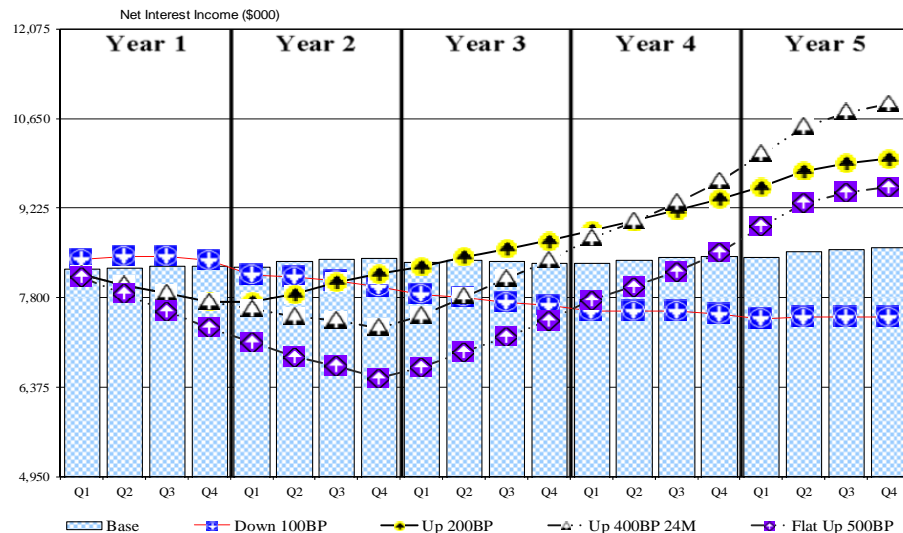


# Extension of FHLB Advances to Lock in Funding

Base



\$50MM FHLB Extension



NII SUMMARY

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
Year-1 NII	34,618	34,068	32,140	32,125	31,104
Year-2 NII	33,246	34,422	31,711	29,230	26,129
Year-3 NII	31,991	34,417	33,936	30,726	26,615
Year-4 NII	31,210	34,577	36,350	35,609	30,839
Year-5 NII	30,860	35,071	39,235	41,128	35,651

NII SUMMARY

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
Year-1 NII	33,708	33,174	31,776	31,761	30,886
Year-2 NII	32,324	33,530	31,803	29,864	27,172
Year-3 NII	31,067	33,522	34,026	31,815	28,231
Year-4 NII	30,288	33,684	36,442	36,701	32,458
Year-5 NII	29,938	34,179	39,327	42,220	37,270

CHANGE / DIFFERENCE IN RESULTS

	<u>Down 100BP</u>	<u>Base</u>	<u>Up 200BP</u>	<u>Up 400BP 24M</u>	<u>Flat Up 500BP</u>
Year-1 NII	-911	-894	-364	-364	-218
Year-2 NII	-922	-892	92	633	1,043
Year-3 NII	-925	-895	89	1,089	1,616
Year-4 NII	-922	-892	92	1,092	1,619
Year-5 NII	-922	-892	92	1,092	1,619

\$50MM of short term funding is extended into a 5 year FHLB advance @ 2.05%.

- ◆ Misinterpreting Your *True* Risk Profile Can Have Disastrous Results
  - Data
  - Assumptions
- ◆ ALCO is a *Profit Center*, Not a Regulatory Compliance Tool
- ◆ *Information* Drives Decision Making, Not Data
- ◆ ALCO's Focus Should be on *Forward Looking Strategies*, Not Historical Review







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