

VBA SCHOOL OF BANK MANAGEMENT

Financial Management II/Asset Liability Management: Brad E. Schwartz

Home Study Problem Due Date: October 3, 2022

Home Study Zoom Review Call – TBA, September ____

This is an individual assignment. You are to work on the assignment alone and not discuss the questions, or potential answers, with colleagues in the program. Any evidence of shared work will be considered an honor violation (i.e., cheating) and will result in a zero and VBA notification. You can reach me by email with any questions prior to the due date at Brad.Schwartz@Townebank.net.

Using the attached sample ALCO package report on Sample Bank, answer the following questions as if you are preparing to submit your answers to the ALCO committee. Your submission should be a minimum of two pages and a maximum of four pages, double-spaced, prefer a 12 point font. Concise and direct with supporting details is great.

Questions

1. Utilizing the traditional measures of effective GAP and Repricing GAP, is sample bank meeting all their ALCO benchmarks? If not note where they are out of policy compliance? What would tell the ALCO committee your biggest concerns were related to being out of policy compliance. (10 points)
2. Based on the earnings simulation, if rates rise 200 basis points over 12 months what happens to the forecasted return on assets and return on equity compared to the unchanged rate scenario? Why does this happen? Is this bank asset or liability sensitive? (10 points)
3. What change in forecasted interest rates, up, down or no change, improves earnings the most on a 12-month horizon? What causes this improvement? (10 points)
4. What change in forecasted interest rates, up, down or no change, improves earnings the most on a 24 month horizon? Why is the 24-month earnings forecast lower than the 12-month forecast? Explain what happens in year 2? (20 points)
5. You have been hired as the new CFO of Sample Bank to improve their financial condition and to prepare them for an expected rise in interest rates. Based on the limited information you have in your report detail at least four actions you would take to improve the balance sheet and rate sensitivity of our new bank with limited negative or hopefully a positive impact on the current profitability and the happiness of your shareholders. (50 points)

Summary ALCO - Asset/Liability Mix

Sample Bank - Anywhere, USA, xx

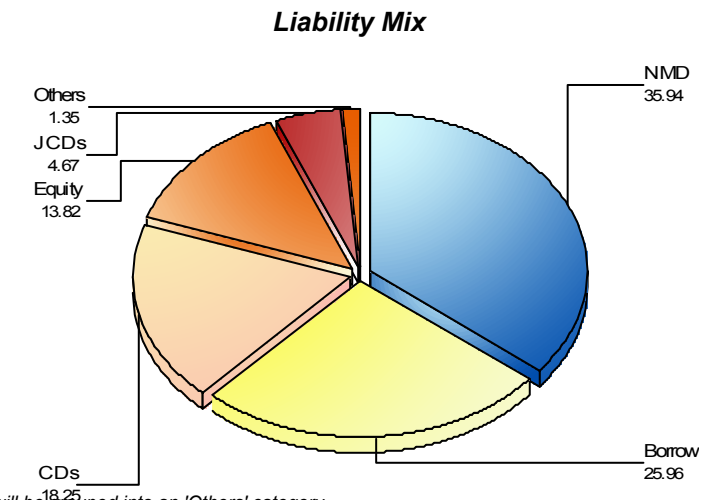
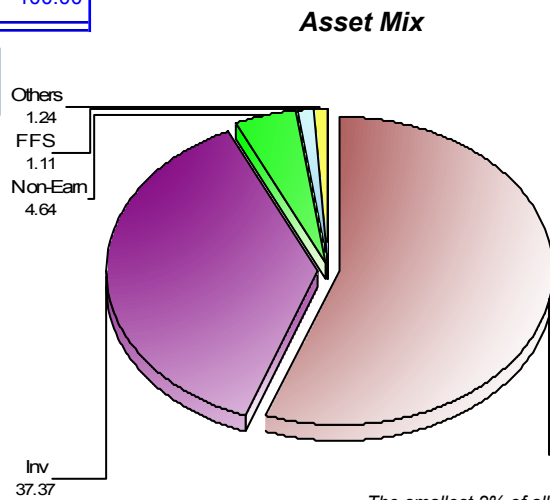
09/30/2020

Page 1 of 1

Balances (\$000's)	Book Value	% of Book TA	Total is % of Segment			**Rate Sensitive < 1 Year	*Book Yield/Rate	*Reinv. Rate	Full Indx. Rate	*12 Mo. Proj. Yield/Rate	Avg. Life	Effective Duration	Effective Convexity
			Fixed	Var.	Non Int.								
Cash & Due	\$3,503	0.60			100.00							0.00	0.00
Investments (Includes MTM)	\$217,324	37.37	96.57		3.43	13.37	2.79 ①	1.49 / 0.00	2.58	5.10	3.32	(1.00)	
Funds Sold	\$6,433	1.11		100.00		100.00	0.09	0.09 / 0.09	0.09	0.04	0.02	(0.02)	
Loans	\$323,616	55.64	72.09	24.41	3.49	40.15	4.87	4.32 / 5.10	4.75	2.97	2.28	(0.18)	
Other Earning	\$3,732	0.64	100.00				2.90	2.90 / 0.00	2.90	12.63	0.00	0.00	
Non-Earning	\$27,005	4.64			100.00								
Total Assets	\$581,613	100.00	76.84	14.69	8.47	28.44	3.98	3.14 / 4.72	3.83	3.56	2.50	(0.47)	
Non-Maturing Deposits	\$209,045	35.94		83.89	16.11	14.45	0.28	0.28 / 0.28	0.28	6.02	3.58	(1.55)	
Certificates of Deposit	\$106,166	18.25	96.49	3.62	(0.11)	48.45	1.44	0.50 / 0.60	1.07	1.59	1.23	(0.30)	
Jumbo CDs	\$27,168	4.67	100.00			88.52	1.59	0.49 / 0.00	0.68	0.58	0.46	(0.11)	
Borrowed Funds	\$151,000	25.96	70.86	29.14		39.07	1.95	0.82 / 0.25	1.43	6.70	4.13	0.68	
Other Paying													
Non-Paying	\$7,851	1.35			100.00								
Total Liabilities	\$501,230	86.18	47.21	44.53	8.26	32.86	1.18	0.52 / 0.28	0.87	4.90	3.02	(0.51)	
Total Equity Capital	\$80,383	13.82									(0.14)	(0.02)	
Total Liab & Capital	\$581,613	100.00											

Liquidity Ratios	Constant	ALCO Benchmark
Investments / Deposits	63.47	< 85.00%
Loans / Deposits	94.52	< 100.00%
Loans / Assets	55.64	< 90.00%
Loans / Capital	402.59	< 600.00%
Net Borrowed Funds / Capital	179.85	< 250.00%
Reliance on Wholesale Funding	30.61	< 35.00%
Dependency Ratio	28.28	< 40.00%
Liquid Assets / TA	6.70	> 5.00%
Jumbo CDs / TA	4.67	< 15.00%
Available Line of Credit	\$30,000	

✓ Ratio is outside benchmark.



The smallest 2% of all categories will be grouped into an 'Others' category.

① Investments using Accounting yield.

* Yields/Rates are reported on EA & PL.

Note: Values are rounded before printing, but full precision values are used in all calculations.

Although the information in this report has been obtained from sources believed to be reliable, its accuracy cannot be guaranteed. The Baker Group Software Solutions, Inc. - IRRM (Ver 4.0 R7) Copyrighted 1994 - 2020 12/28/2020 12:38:09PM - BRADEN / SAMPLE1

** Percentages based on maturing, repricing, and paydown balances.

Summary ALCO - Gap Measures

Sample Bank - Anywhere, USA, xx

09/30/2020

Page 1 of 1

Effective Gap (\$000's)	12 Month Cumulative	12 Month ALCO Benchmark	24 Month* Cumulative
RS Assets/RS Liabilities	100.45	70 to 130%	114.91
GAP	742		30,480
GAP/Equity	0.92	+/- 300%	37.92
RS Assets/Total Assets	28.44	25 to 60%	40.40
RS Liabs./Total Assets	28.32 ✓	35 to 55%	35.16
GAP/Total Assets	0.13	+/- 15%	5.24

Repricing Gap Position (\$000's)	12 Month Cumulative	12 Month ALCO Benchmark	24 Month* Cumulative
RS Assets/RS Liabilities	53.39 ✓	70 to 130%	71.23
GAP	(144,431)		(94,909)
GAP/Equity	(179.68)	+/- 300%	(118.07)
RS Assets/Total Assets	28.44 ✓	40 to 60%	40.40
RS Liabs./Total Assets	53.28	35 to 55%	56.72
GAP/Total Assets	(24.83) ✓	+/- 15%	(16.32)

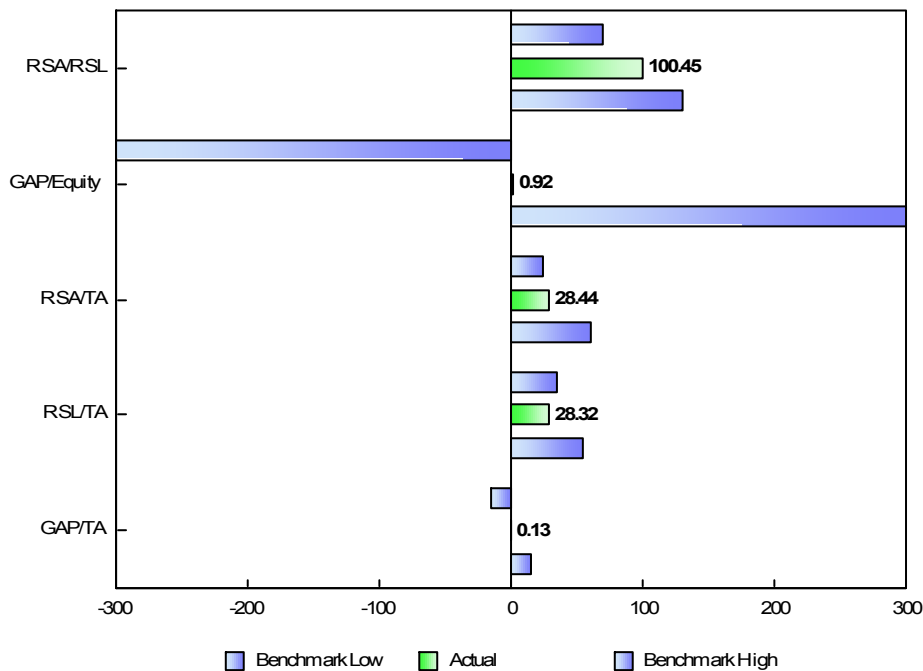
Effective Gap considers effective maturities of core deposits, it reports non-maturing demand accounts according to the preferred maturity distribution table.

✓ Ratio is outside benchmark.

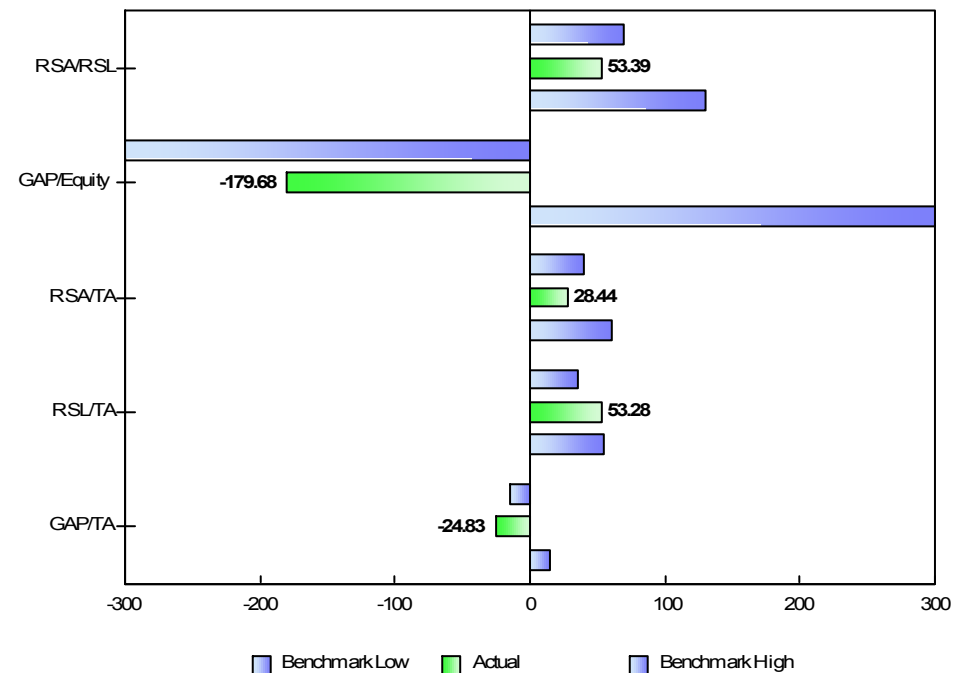
Repricing Gap does not consider effective maturities of core deposits, it reports non-maturing demand accounts according to repricing opportunity.

✓ Ratio is outside benchmark.

Cumulative Effective Gap Measures
12 Month Horizon



Cumulative Repricing Gap Measures
12 Month Horizon



* The 24 month period could be extended if the 24th month is in the middle of a bucket period.

Although the information in this report has been obtained from sources believed to be reliable, its accuracy cannot be guaranteed.
The Baker Group Software Solutions, Inc. - IRRM™ (Ver 4.0 R7) Copyrighted 1994 - 2020 12/28/2020 12:38:11PM - BRADEN / SAMPLE1

Summary ALCO - Earnings Simulation - 12 Month Horizon

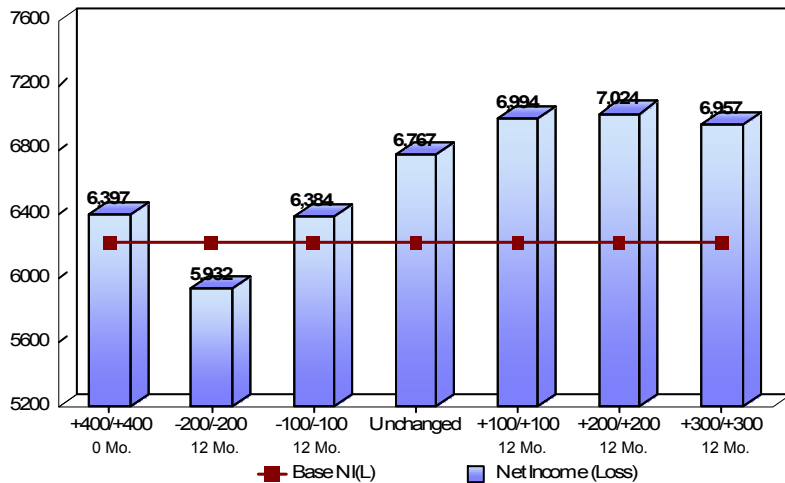
Sample Bank - Anywhere, USA, xx

09/30/2020

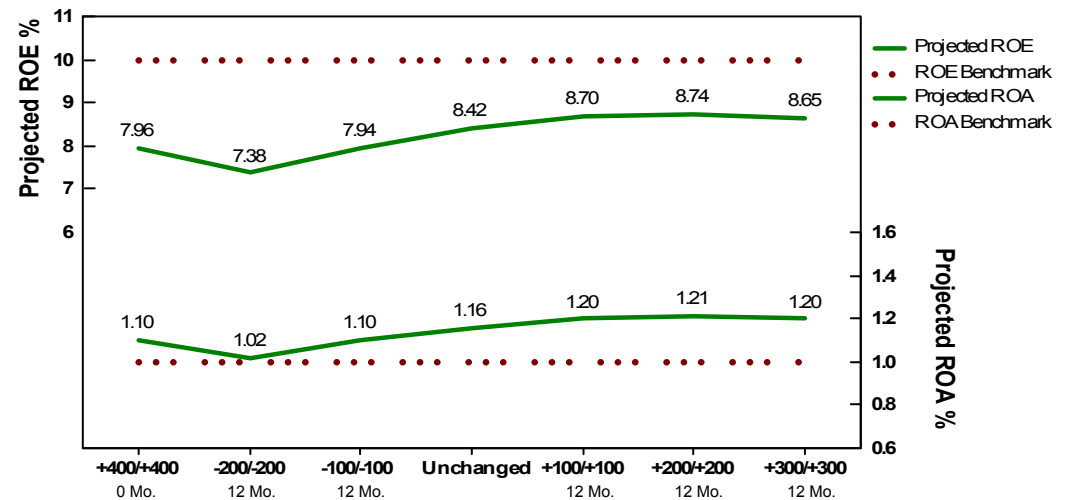
Page 1 of 1

Interest Rate Risk (\$'s) Shift Horizon	YTD Annualized	Constant Balance Sheet **	Immediate	Parallel	Parallel	Unchanged Rate Scenario	Parallel	Parallel	Parallel
			+400/+400 bp ⁽⁷⁾ 0 Mo.	-200/-200 bp ⁽²⁾ 12 Mo.	-100/-100 bp ⁽³⁾ 12 Mo.		+100/+100 bp ⁽⁵⁾ 12 Mo.	+200/+200 bp ⁽⁶⁾ 12 Mo.	+300/+300 bp ⁽⁷⁾ 12 Mo.
12 Month Horizon in \$'s									
Change in Interest Income *	\$22,396	\$21,171	3,191,869	(1,803,892)	(1,171,032)	(472,567)	206,987	669,419	1,022,148
Change in Interest Expense	\$6,238	\$5,415	2,976,034	(1,449,352)	(1,370,632)	(1,142,771)	(740,975)	(315,964)	119,837
			215,835	(354,540)	199,600	670,204	947,962	985,383	902,311
Projected Impact in \$000's									
Net Interest Income *	\$15,421	\$15,756	15,972	15,402	15,956	16,427	16,704	16,742	16,659
Net Interest Margin *	2.97	2.96	3.00 ✓	2.89 ✓	3.00 ✓	3.09	3.14	3.14	3.13
ALCO Benchmark	> 3.00%								
NIC as a % of NII			1.37	(2.25)	1.27	4.25	6.02	6.25	5.73
ALCO Risk Limits			> (20.00)%	> (20.00)%	> (15.00)%	> (10.00)%	> (15.00)%	> (20.00)%	> (20.00)%
			6,397	5,932	6,384	6,767	6,994	7,024	6,957
Net Income (Loss)	\$6,931	\$6,221							
Return on Assets	1.21	1.07	1.10	1.02	1.10	1.16	1.20	1.21	1.20
ALCO Benchmark	> 1.00%								
Return on Equity	8.62	7.74	7.96 ✓	7.38 ✓	7.94 ✓	8.42 ✓	8.70 ✓	8.74 ✓	8.65 ✓
ALCO Benchmark	> 10.00%								

Net Income (Loss)



Projected ROE and ROA
12 Month Horizon



* Income is tax adjusted and calculated before Provisions.

** Indicates which column is used for calculating base case.

(Short End = 1yr; Long End = 10yr)

Although the information in this report has been obtained from sources believed to be reliable, its accuracy cannot be guaranteed.
The Baker Group Software Solutions, Inc. - IRRM™ (Ver 4.0 R7) Copyrighted 1994 - 2020 12/28/2020 12:38:15PM - BRADEN / SAMPLE1

Summary ALCO - Earnings Simulation - 24 Month Horizon

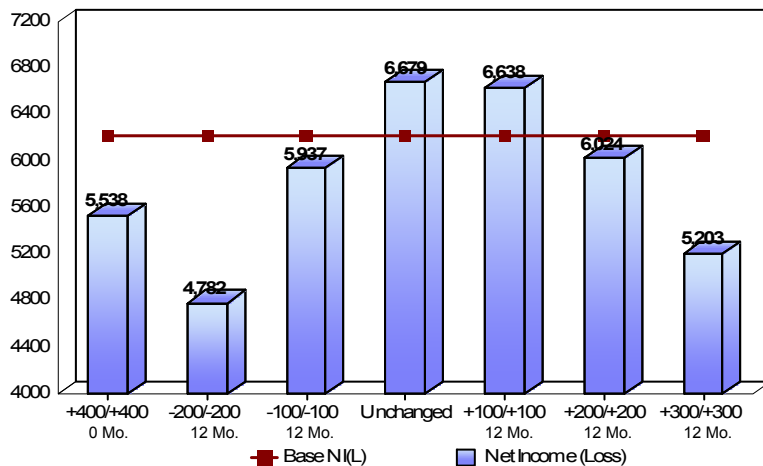
Sample Bank - Anywhere, USA, xx

09/30/2020

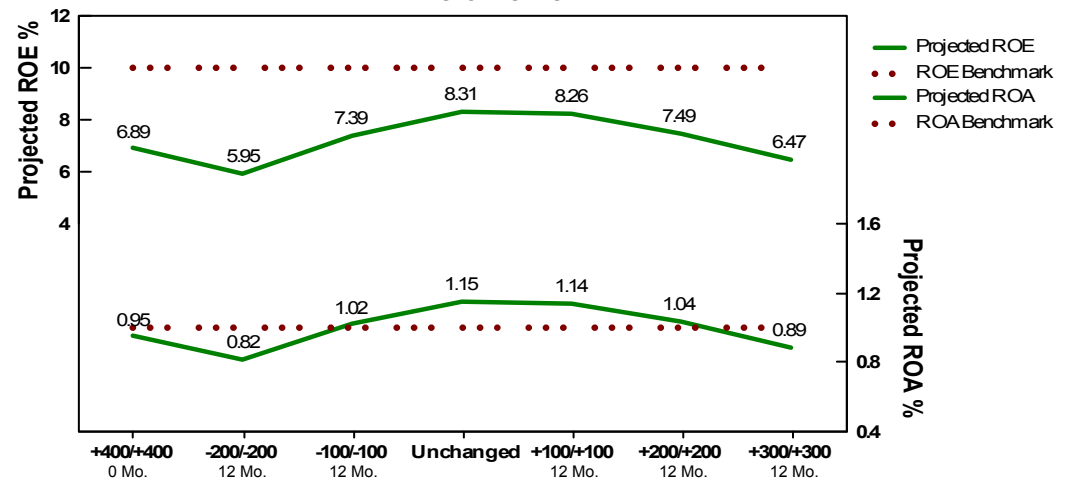
Page 1 of 1

Interest Rate Risk (\$'s) Shift Horizon	YTD Annualized	Constant Balance Sheet **	Immediate	Parallel	Parallel	Unchanged Rate Scenario	Parallel	Parallel	Parallel
			+400/+400 bp ⁽⁷⁾ 0 Mo.	-200/-200 bp ⁽²⁾ 12 Mo.	-100/-100 bp ⁽³⁾ 12 Mo.		+100/+100 bp ⁽⁵⁾ 12 Mo.	+200/+200 bp ⁽⁶⁾ 12 Mo.	+300/+300 bp ⁽⁷⁾ 12 Mo.
24 Month Horizon in \$'s									
Change in Interest Income *	\$22,396	\$21,171	8,298,686	(5,761,831)	(3,586,934)	(1,486,989)	630,422	2,123,833	3,310,781
Change in Interest Expense	\$6,238	\$5,415	8,921,497	(3,641,535)	(3,437,606)	(2,718,868)	(828,527)	1,380,082	3,657,567
Cumulative 24 Mo. NIC			(622,811)	(2,120,296)	(149,328)	1,231,879	1,458,949	743,751	(346,786)
13-24 Mo. NIC			(838,646)	(1,765,756)	(348,928)	561,675	510,987	(241,632)	(1,249,097)
13-24 Mo. Projected Impact in (\$000's)									
Net Interest Income *	\$15,421	\$15,756	14,918	13,991	15,408	16,318	16,267	15,515	14,507
Net Interest Margin *	2.97	2.96	2.80 ✓	2.63 ✓	2.89 ✓	3.07	3.06	2.91 ✓	2.73 ✓
ALCO Benchmark	> 3.00%								
NIC as a % of NII			(5.32)	(11.21)	(2.21)	3.56	3.24	(1.53)	(7.93)
ALCO Risk Limits			> (20.00)%	> (20.00)%	> (15.00)%	> (10.00)%	> (15.00)%	> (20.00)%	> (20.00)%
Net Income (Loss)	\$6,931	\$6,221	5,538	4,782	5,937	6,679	6,638	6,024	5,203
Return on Assets	1.21	1.07	0.95 ✓	0.82 ✓	1.02	1.15	1.14	1.04	0.89 ✓
ALCO Benchmark	> 1.00%								
Return on Equity	8.62	7.74	6.89 ✓	5.95 ✓	7.39 ✓	8.31 ✓	8.26 ✓	7.49 ✓	6.47 ✓
ALCO Benchmark	> 10.00%								

Net Income (Loss)



Projected ROE and ROA
24 Month Horizon



* Income is tax adjusted and calculated before Provisions.

** Indicates which column is used for calculating base case.

(Short End = 1yr; Long End = 10yr)

Although the information in this report has been obtained from sources believed to be reliable, its accuracy cannot be guaranteed.
The Baker Group Software Solutions, Inc. - IRRM... (Ver 4.0 R7) Copyrighted 1994 - 2020 12/28/2020 12:38:17PM - BRADEN / SAMPLE1

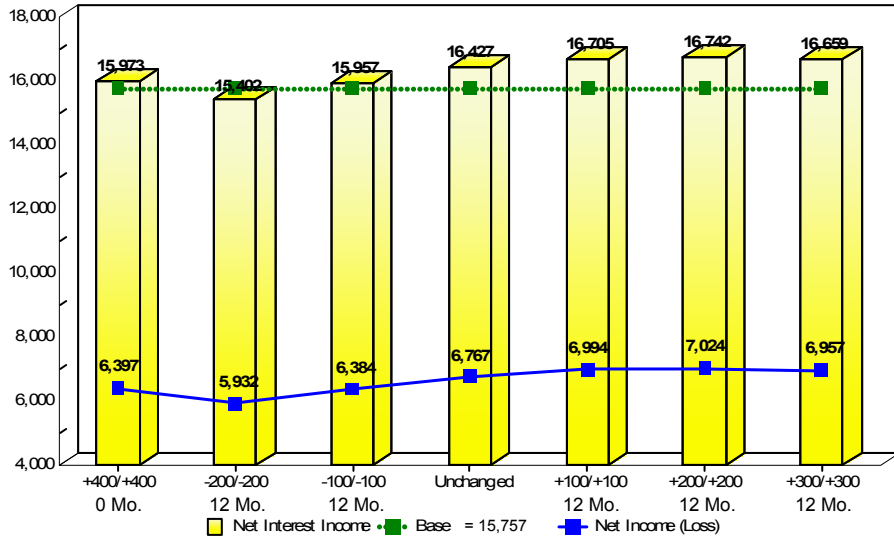
Summary ALCO - Income Analysis

Sample Bank - Anywhere, USA, xx

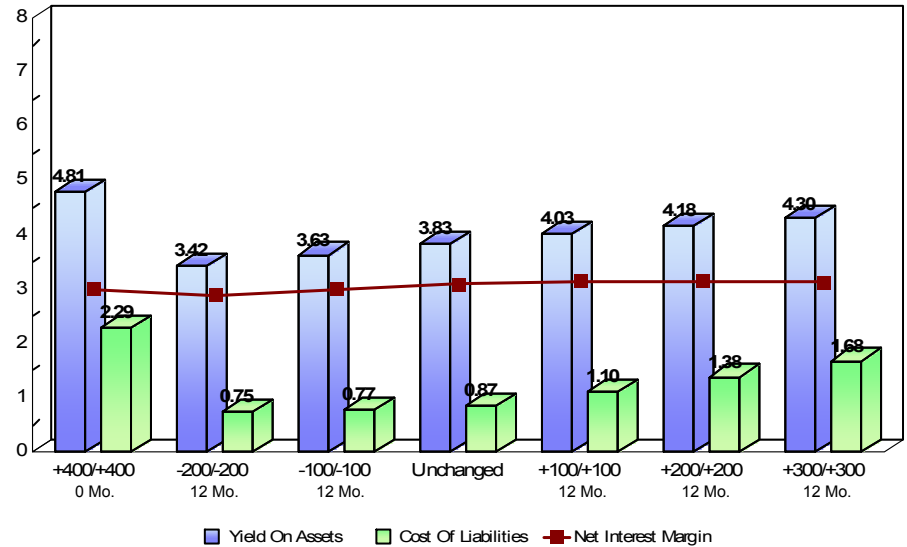
09/30/2020

Page 1 of 1

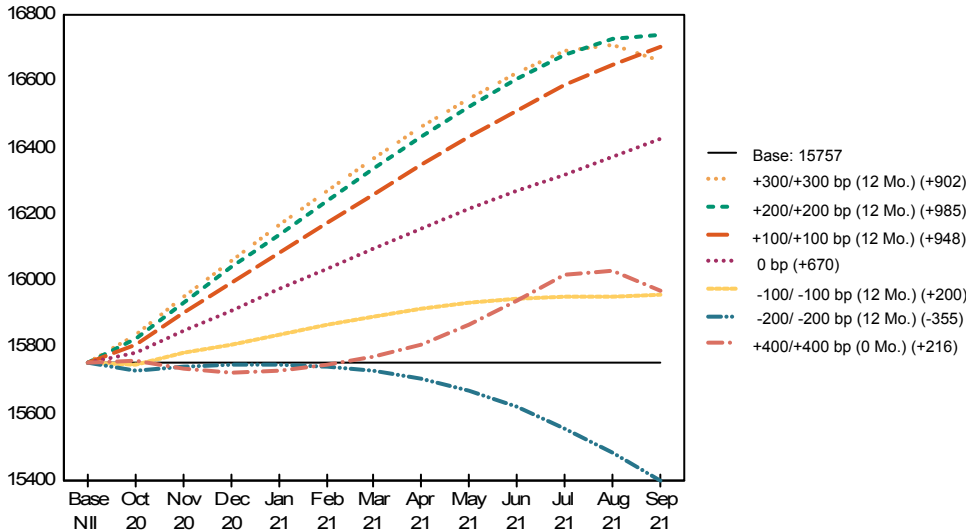
Income Projection - 12 month Horizon



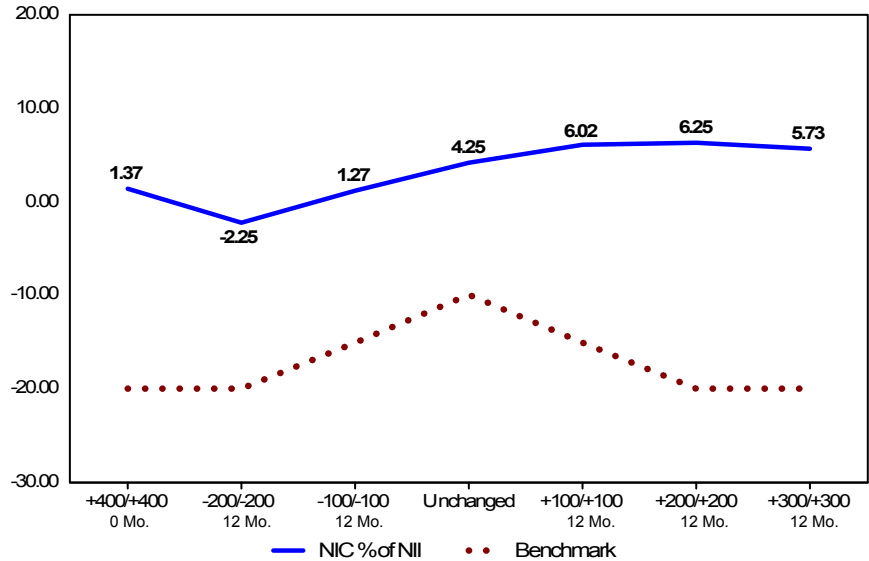
Projected Yields/Rates - 12 Month Horizon



**Net Interest Change (\$000's) per Time Bucket
Cumulative 12 Month**



**Net Interest Change as a % of Net Interest Income
12 Month Horizon**

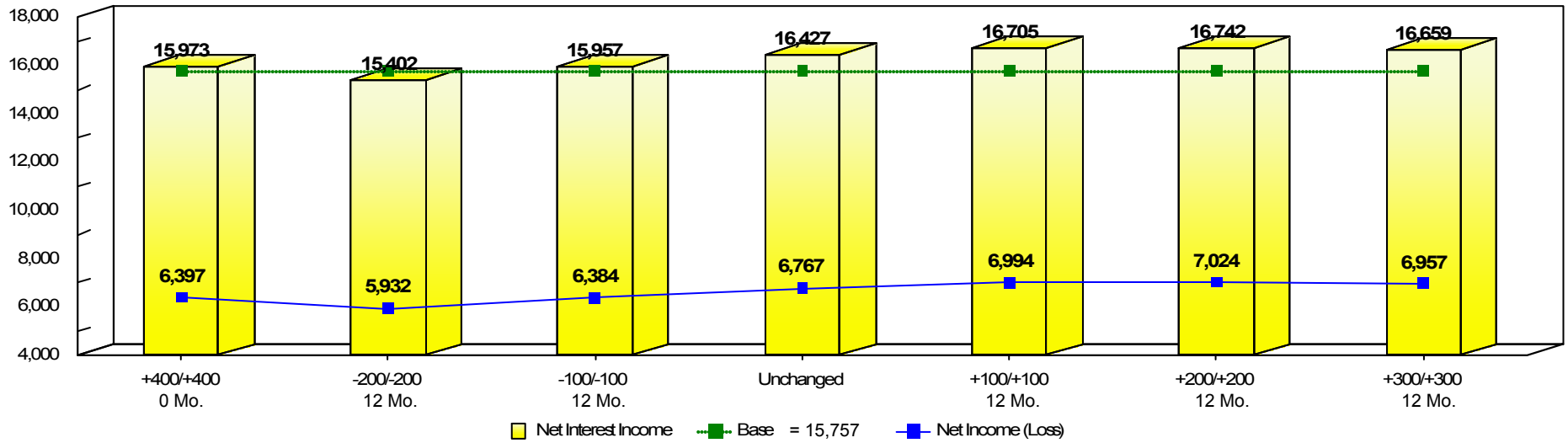


Although the information in this report has been obtained from sources believed to be reliable, its accuracy cannot be guaranteed.
The Baker Group Software Solutions, Inc. - IRRM™ (Ver 4.0 R7) Copyrighted 1994 - 2020 12/28/2020 12:38:19PM - BRADEN / SAMPLE1

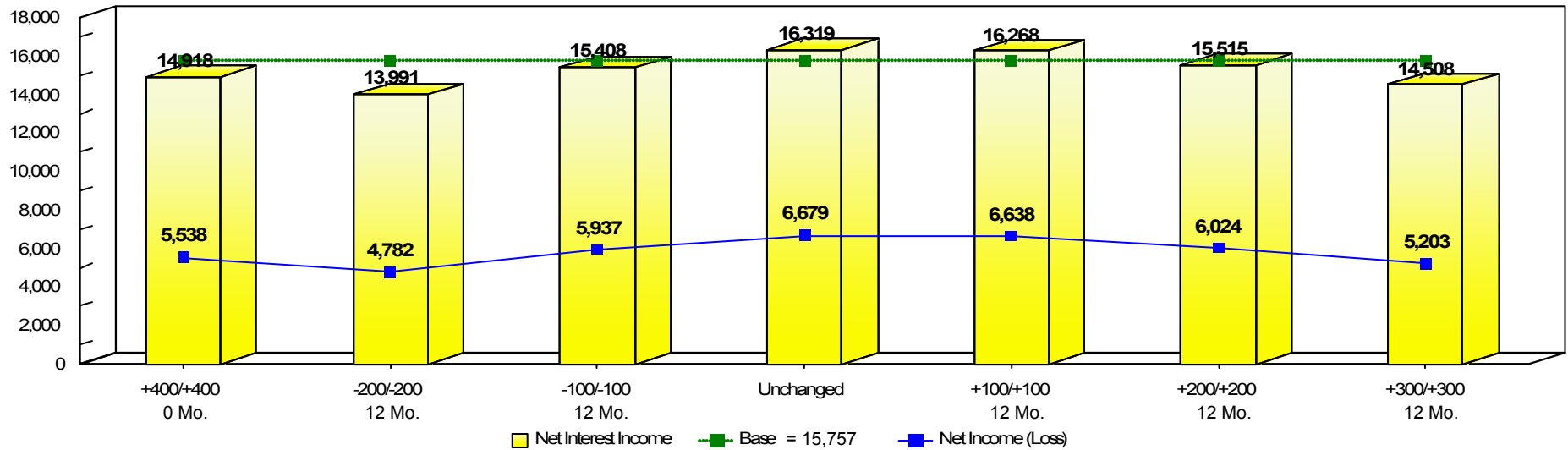
Income Projections

Sample Bank - Anywhere, USA, xx

12 Month Horizon (\$000's)



13 - 24 Month Horizon



Although the information in this report has been obtained from sources believed to be reliable, its accuracy cannot be guaranteed.
The Baker Group Software Solutions, Inc. - IRRM™ (Ver 4.0 R7) Copyrighted 1994 - 2020 12/28/2020 12:38:23PM - BRADEN / SAMPLE1