

Funding Strategies for Long-Term, Fixed-Rate Assets

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FHLBBoston

This webinar is being recorded

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Agenda

- I. Overview of funding strategy model
 - Objectives and key issues
 - How to interpret model output
- II. Effective funding strategies for holding long-term, fixed-rate assets
 - 30-Year FRM
 - 15-Year FRM
 - 5/20 CRE Loan
 - 5-Year Auto Loan
- III. Spread-to-Benchmark advance special
- IV. Upcoming advance special

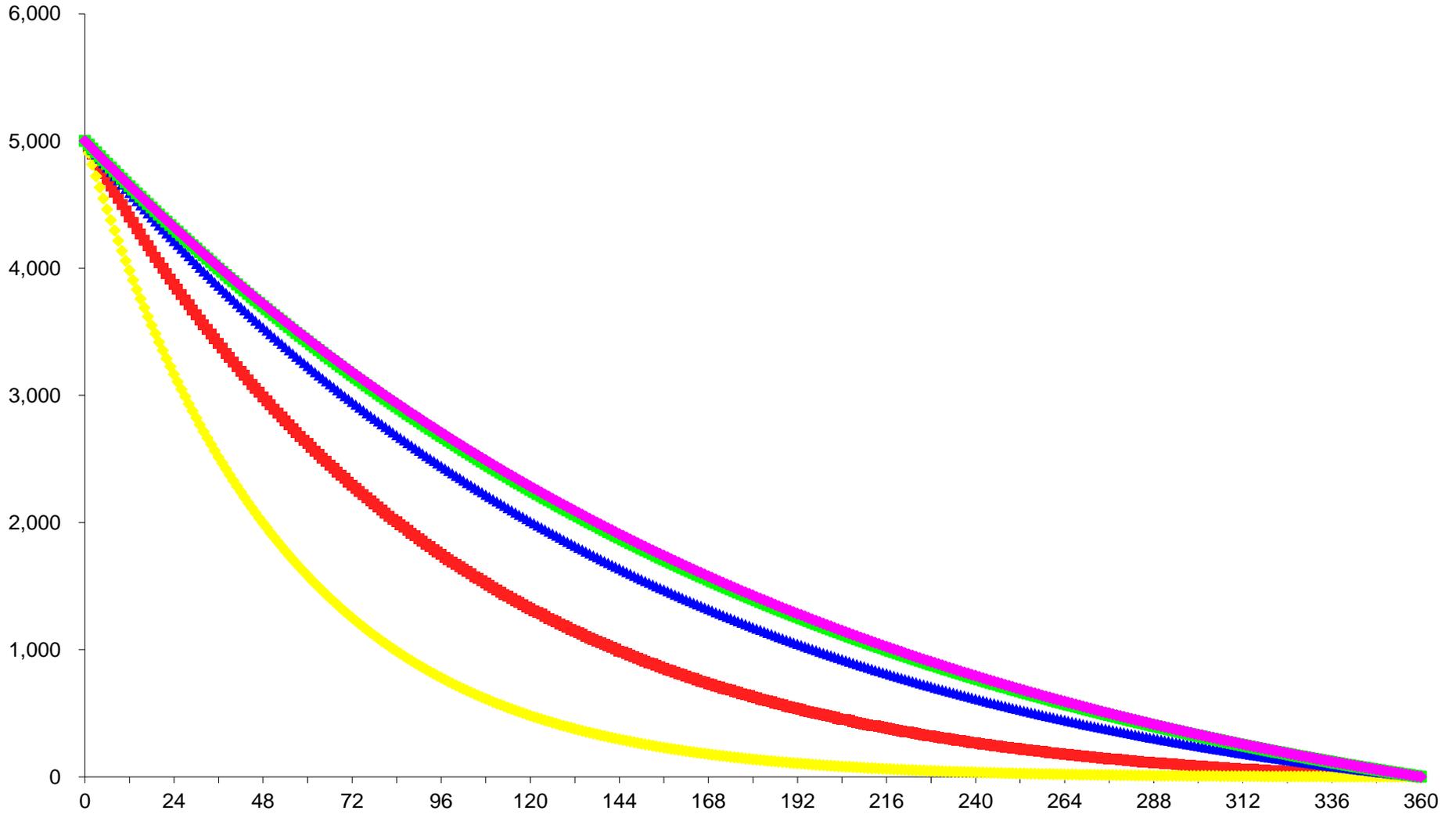
Objectives and Key Issues

- Achieve a reasonable spread without excessive risk
 - Strike a balance between
 - High spread, high interest-rate risk
 - Low spread, low interest-rate risk
 - Spread on the transaction is *at the margin*
 - Spread is pre-tax, without additional overhead expenses
- Reduce overall interest-rate risk
- Generate additional profits

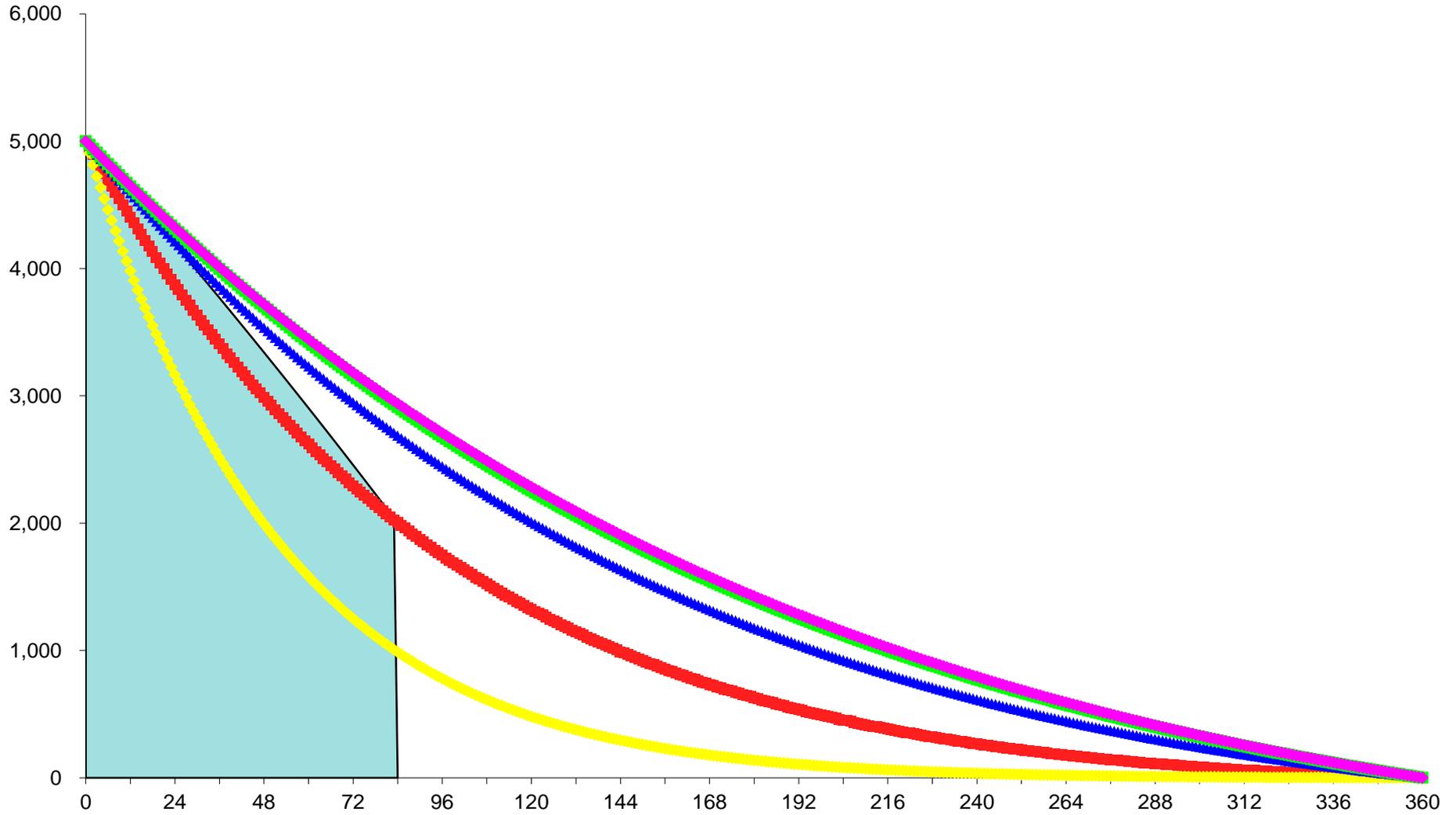
Gathering Inputs

- Asset characteristics
 - Loan type
 - Term
 - Gross/net coupon
 - Price paid or points received
- Member objectives for interest-rate hedge or earnings
 - Manage interest-rate risk
 - Maximize net interest income over a specified time horizon

What Does the Model Output Include?



What Does the Model Output Include?



Strategy Summary – Years 1 through 7

Strategy: 173 bps - \$2.00 MM 7 Yr Bullet and \$3.00 MM 7 Year amort.

Rate Scenario	Initial Net Spread	<u>TRANSACTION RESULTS</u>					
		Average Long Term Assets	Average Capital/ Assets	Average Asset Yield	Average Cost of Funds	Average Net Interest Spread	7 Year Total Net Interest Income
Base Case/ Rates Flat	1.73%	3,312	10.78%	3.75%	2.53%	1.22%	\$337
Up 100 bp	1.73%	3,758	10.78%	4.10%	2.51%	1.60%	\$451
Up 300 bp	1.73%	3,896	10.78%	4.12%	2.57%	1.55%	\$452
Up 500 bp	1.73%	3,911	10.78%	4.12%	2.68%	1.44%	\$424
Down 50 bp	1.73%	2,511	10.77%	2.89%	2.53%	0.36%	\$104
Down 100 bp	1.73%	1,926	10.76%	2.27%	2.53%	-0.26%	-\$62
Down 150 bp	1.73%	1,553	10.76%	1.87%	2.53%	-0.66%	-\$167

Detailed Balance Sheet & Income Statement

Yearly Detail for Each Rate Scenario

Interest Rate Scenario : Up 300 bp

Year	Mtg	S-T Inv	Total Assets	Fxd/Am Adv	Opt Adv	S-T Liabs	Total Liabs	Total Equity
1	4,836	6	4,841	4,817	-	0	4,817	25
2	4,491	2	4,493	4,411	-	5	4,416	77
3	4,166	-	4,166	3,997	-	44	4,041	125
4	3,860	-	3,860	3,574	-	117	3,691	169
5	3,572	-	3,572	3,141	-	221	3,363	209
6	3,301	-	3,301	2,699	-	355	3,055	246
7	3,045	-	3,045	2,248	-	519	2,767	278

Asset Yield	Cost of Funds	NI Spread	Mtg	S-T Inv	Tot Inc	Fxd/Am Adv	Opt Adv	S-T Liabs	Tot Exp	NI Inc
4.12	2.43	1.69	199	0	200	117	-	0	117	82
4.12	2.46	1.66	185	0	185	108	-	0	109	77
4.13	2.50	1.63	172	-	172	99	-	2	101	71
4.12	2.56	1.57	159	-	159	90	-	4	94	65
4.13	2.63	1.49	147	-	147	81	-	8	88	59
4.12	2.73	1.39	136	-	136	71	-	12	83	53
4.12	2.87	1.26	126	-	126	62	-	18	79	46
Totals			1,125	0	1,125	629	-	43	673	452

The Net Interest Spread Will Fluctuate – Why?

- Long-term asset balance changes
- The 1-month rate changes based on the rate environment
 - Funding shortfall is funded with 1-month advances
 - Excess cash is reinvested at the short-term rate
- Mix of advances and short-term funding changes over time
 - Classic advances mature
 - Amortizing advance balances decline
 - The mix and related cost changes

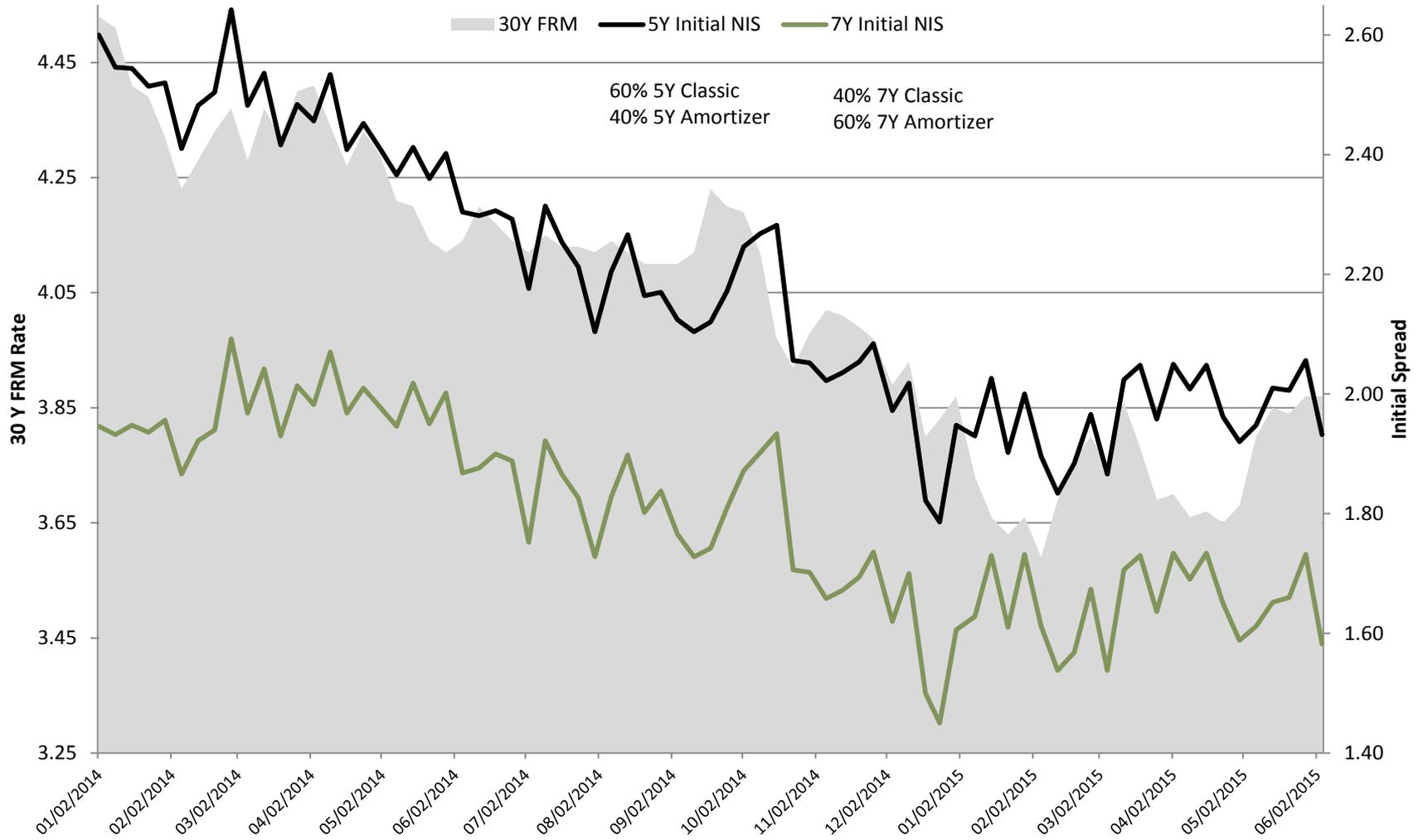
Managing Effective Funding Strategies Over Time

- Manage the transaction over time and ladder in new funding as advances mature or interest-rate risk intensifies
- Evaluate changes in rates and build in protection by extending the funding to more closely match balance sheet exposure



Effective Funding Strategies for Holding Long-Term, Fixed-Rate Assets

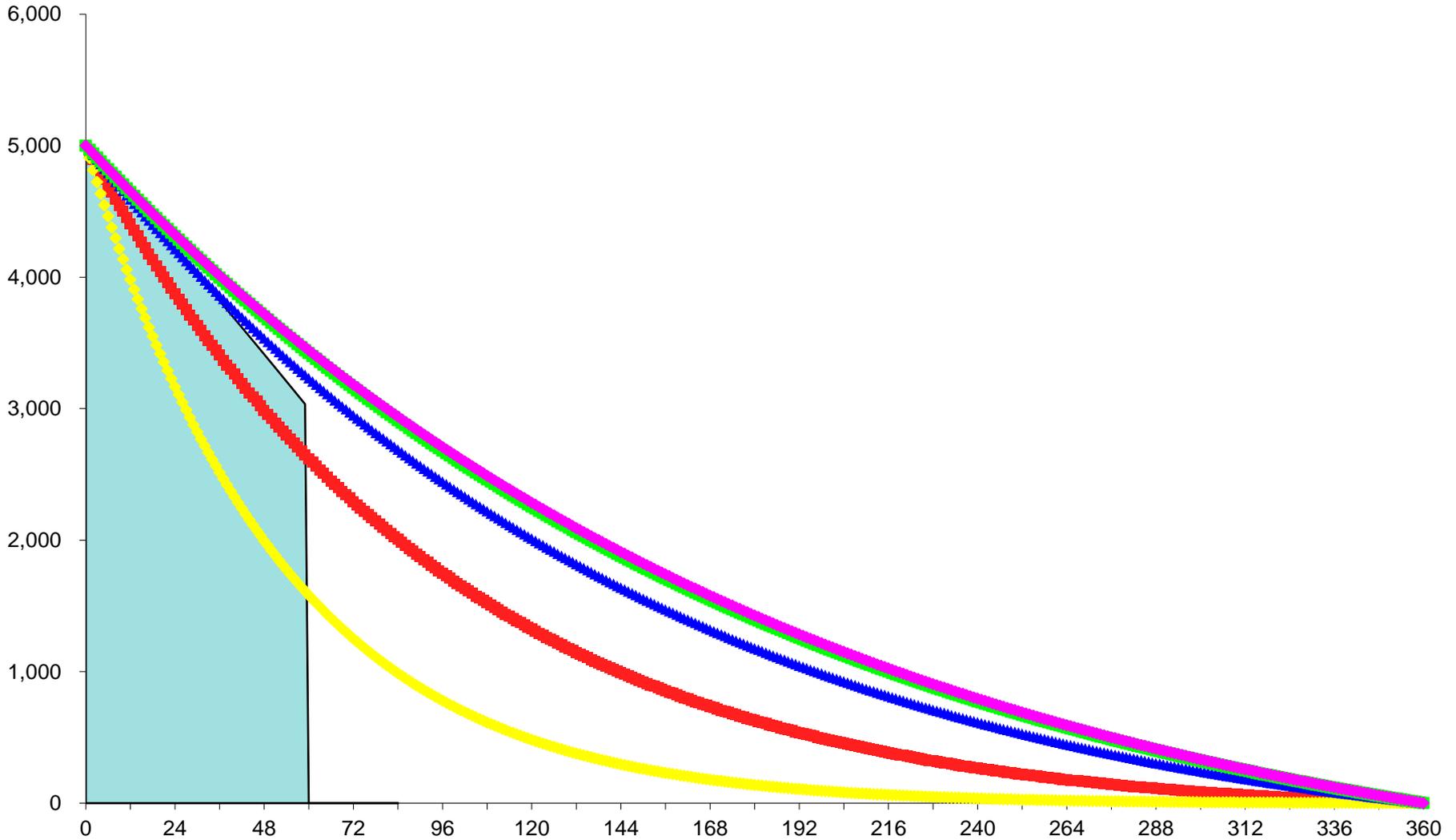
30-Year Mortgage Rates and Initial Spreads



30-Year Fixed-Rate Mortgages

- Residential mortgages are the hardest to fund because the borrower has an option to prepay
- Prepayment assumptions for a MBS with similar collateral are used as a benchmark to estimate prepayments
- Risk of extension versus risk of prepayment impacts the performance of the strategy
 - If rates rise, mortgage is likely to extend, and funding costs for unhedged balance will be more expensive
 - If rates fall, mortgage is likely to prepay, and any excess long-term funding will be reinvested at prevailing market rates

30-Year Fixed-Rate Mortgages



30-Year Fixed-Rate Mortgages

Strategy: 209 bps - \$3.00 MM 5 Yr Bullet and \$2.00 MM 5 Year amort.

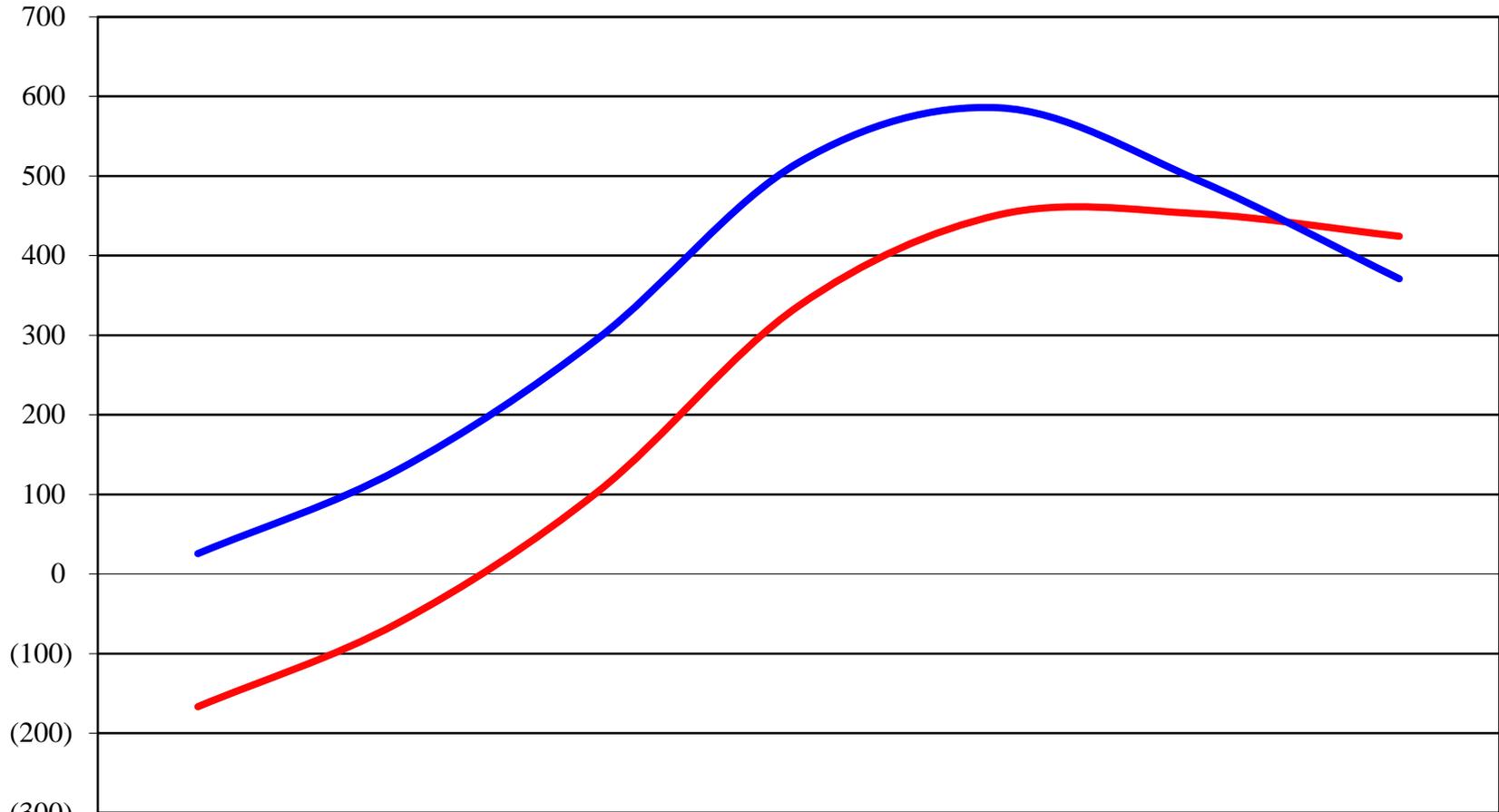
Rate Scenario	Initial Net Spread	<u>TRANSACTION RESULTS</u>					
		Average Long Term Assets	Average Capital/ Assets	Average Asset Yield	Average Cost of Funds	Average Net Interest Spread	7 Year Total Net Interest Income
Base Case/ Rates Flat	2.09%	3,312	10.79%	3.80%	1.85%	1.95%	\$517
Up 100 bp	2.09%	3,758	10.79%	4.07%	1.99%	2.08%	\$586
Up 300 bp	2.09%	3,896	10.79%	4.12%	2.43%	1.69%	\$494
Up 500 bp	2.09%	3,911	10.78%	4.12%	2.91%	1.22%	\$371
Down 50 bp	2.09%	2,511	10.78%	3.16%	1.94%	1.21%	\$296
Down 100 bp	2.09%	1,926	10.78%	2.59%	2.03%	0.56%	\$131
Down 150 bp	2.09%	1,553	10.78%	2.18%	2.08%	0.10%	\$26

30-Year FRM

Comparison of 5- and 7-Year Funding

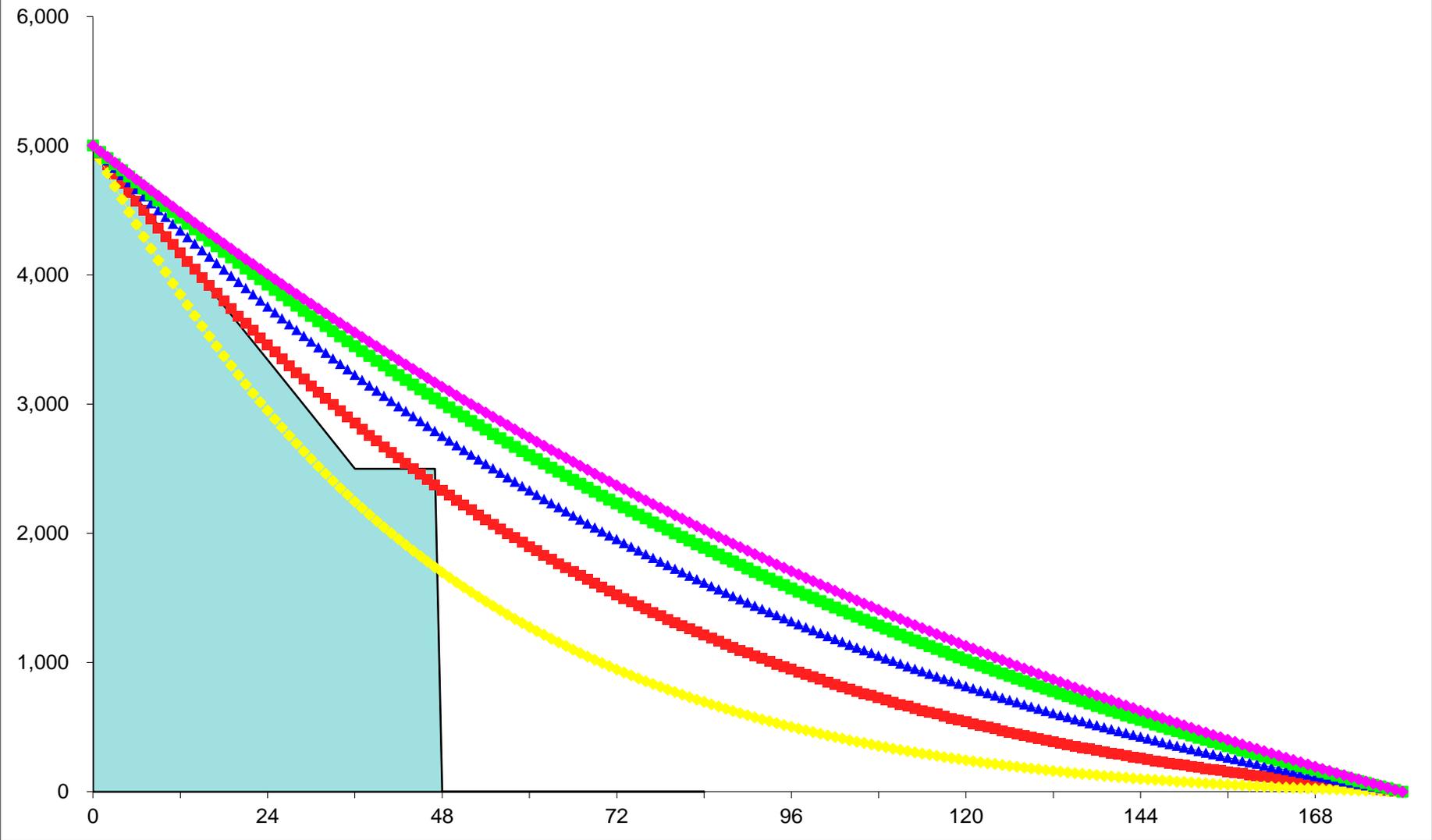


Total Net Interest Income Years 1-7



	-150 bp	-100 bp	-50 bp	0	+100 bp	+300 bp	+500 bp
Strategy 1	(167)	(62)	104	337	451	452	424
Strategy 2	26	131	296	517	586	494	371

15-Year Fixed-Rate Mortgages

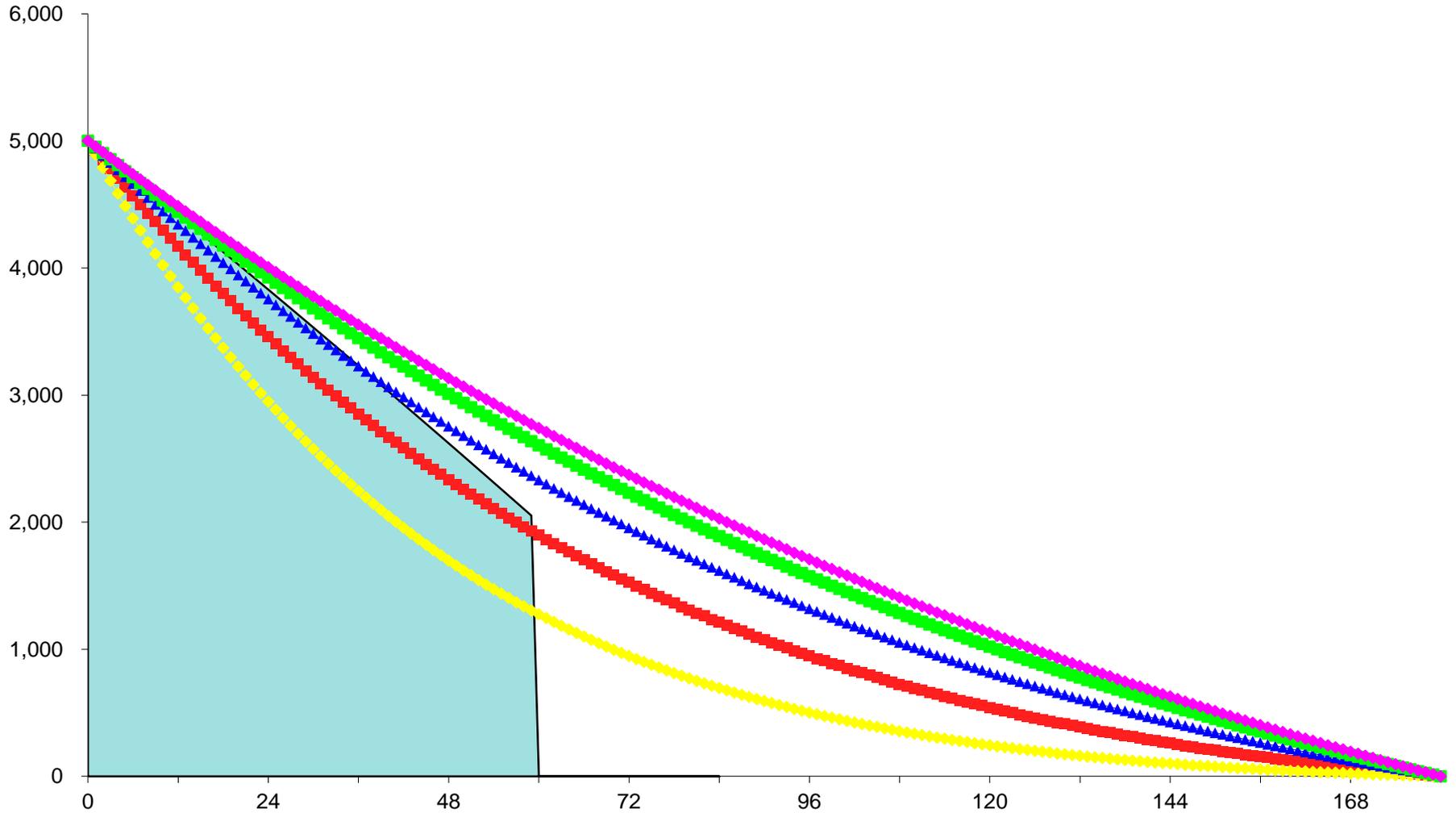


15-Year Fixed-Rate Mortgages

Strategy: 182 bps - \$2.50 MM 4 Yr Bullet and \$2.50 MM 3 Year amort.

Rate Scenario	Initial Net Spread	<u>TRANSACTION RESULTS</u>					
		Average Long Term Assets	Average Capital/ Assets	Average Asset Yield	Average Cost of Funds	Average Net Interest Spread	7 Year Total Net Interest Income
Base Case/ Rates Flat	1.82%	2,778	10.80%	3.35%	1.40%	1.95%	\$396
Up 100 bp	1.82%	3,113	10.79%	3.37%	1.63%	1.75%	\$397
Up 300 bp	1.82%	3,316	10.79%	3.37%	2.37%	1.01%	\$253
Up 500 bp	1.82%	3,416	10.78%	3.37%	3.22%	0.16%	\$56
Down 50 bp	1.82%	2,271	10.80%	3.06%	1.46%	1.60%	\$292
Down 100 bp	1.82%	1,870	10.80%	2.73%	1.56%	1.17%	\$200
Down 150 bp	1.82%	1,532	10.80%	2.39%	1.63%	0.75%	\$122

15-Year Fixed-Rate Mortgages



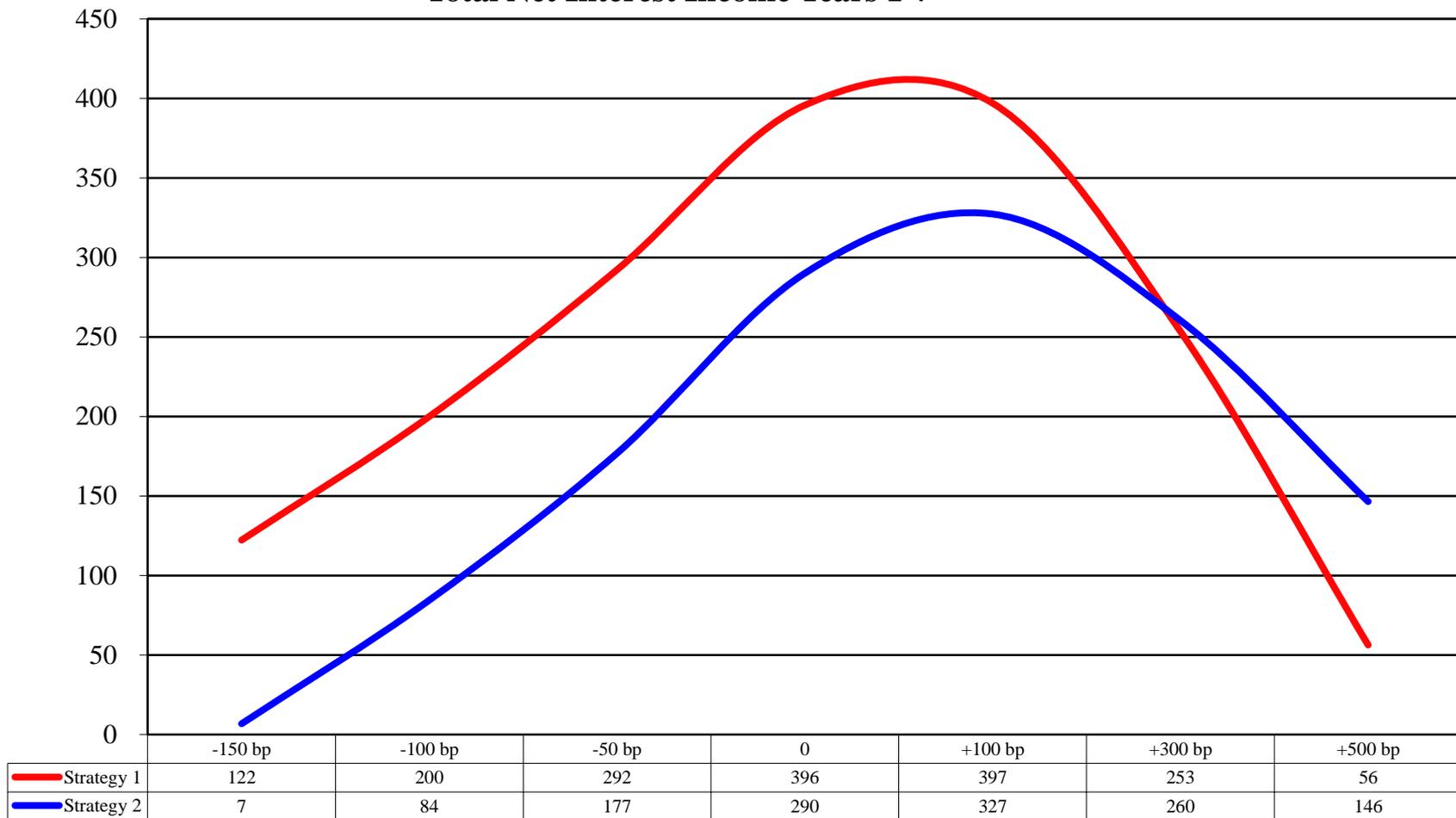
15-Year Fixed-Rate Mortgages

Strategy: 145 bps - \$2.00 MM 5 Yr Bullet and \$3.00 MM 5 Year amort.

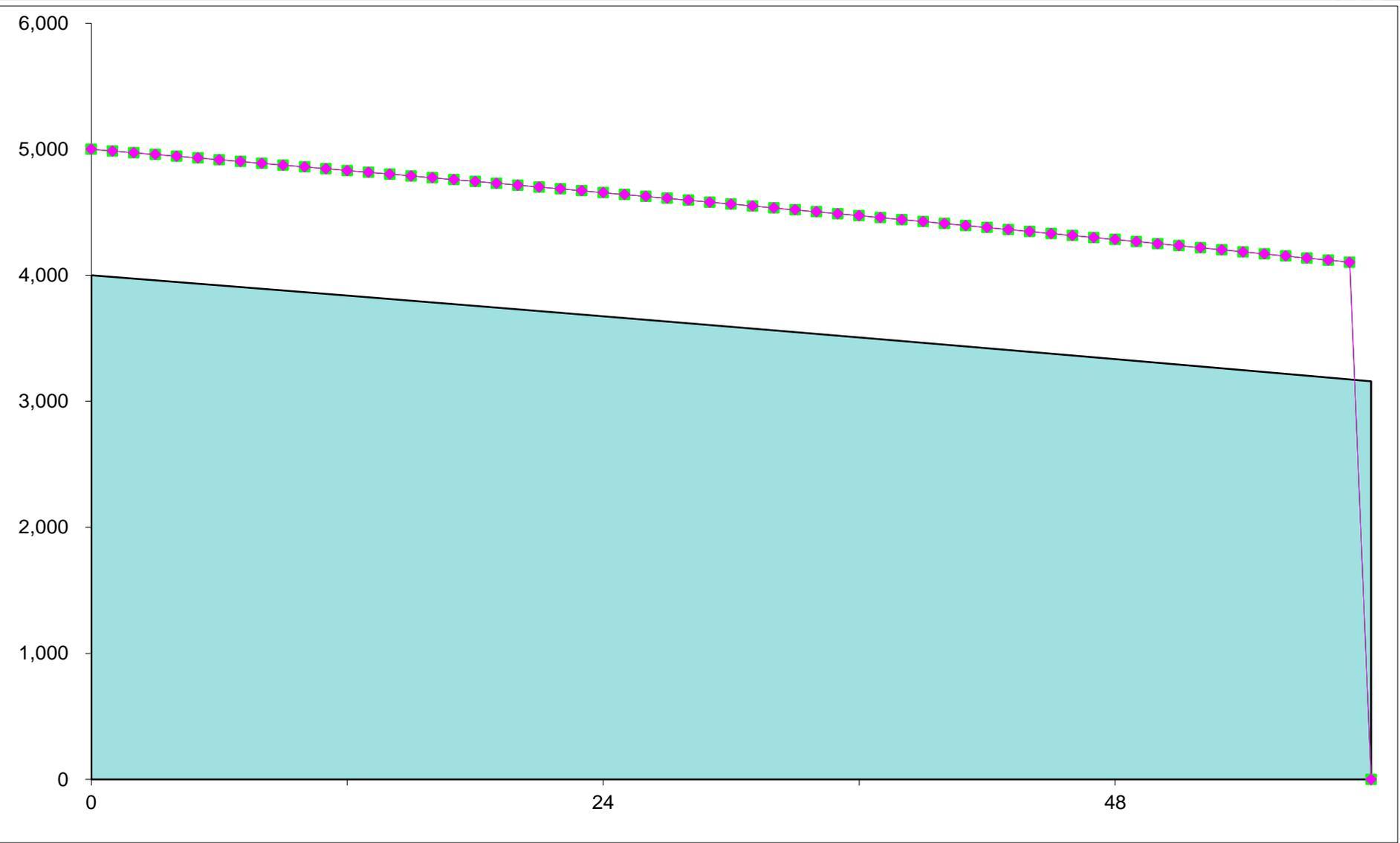
Rate Scenario	Initial Net Spread	<u>TRANSACTION RESULTS</u>					
		Average Long Term Assets	Average Capital/ Assets	Average Asset Yield	Average Cost of Funds	Average Net Interest Spread	7 Year Total Net Interest Income
Base Case/ Rates Flat	1.45%	2,778	10.79%	3.12%	1.82%	1.31%	\$290
Up 100 bp	1.45%	3,113	10.79%	3.33%	1.93%	1.40%	\$327
Up 300 bp	1.45%	3,316	10.78%	3.37%	2.33%	1.04%	\$260
Up 500 bp	1.45%	3,416	10.78%	3.37%	2.85%	0.53%	\$146
Down 50 bp	1.45%	2,271	10.79%	2.71%	1.87%	0.84%	\$177
Down 100 bp	1.45%	1,870	10.78%	2.35%	1.93%	0.41%	\$84
Down 150 bp	1.45%	1,532	10.78%	2.00%	1.97%	0.03%	\$7

15-Year FRM Comparison of Strategies

Total Net Interest Income Years 1-7



5/20 CRE Loan

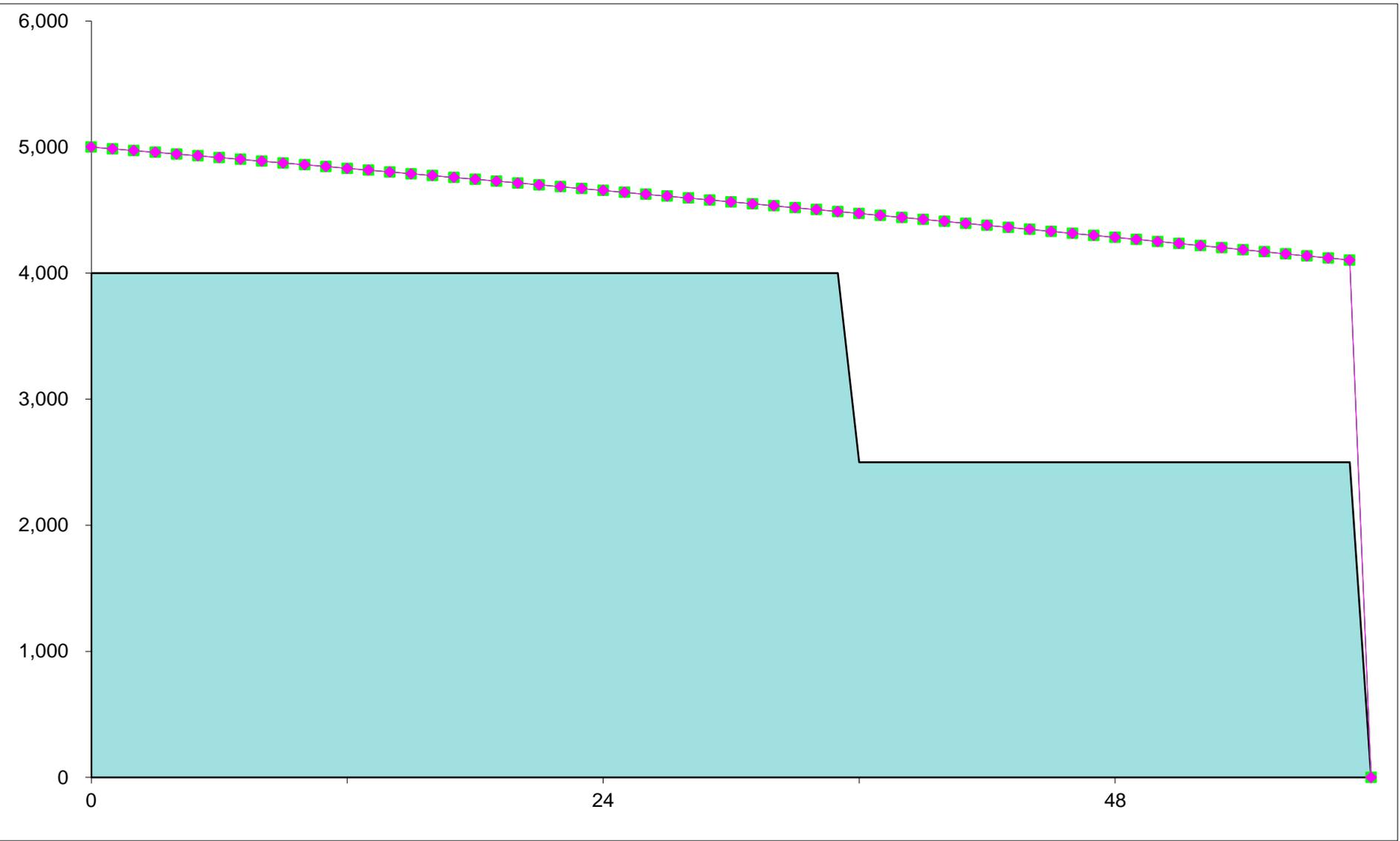


5/20 CRE Loan

Strategy: 203 bps - \$4.00 MM 5/20 Year amort amort and \$1.00 MM Short-Term Funding.

Rate Scenario	Initial Net Spread	<u>TRANSACTION RESULTS</u>					
		Average Long Term Assets	Average Capital/ Assets	Average Asset Yield	Average Cost of Funds	Average Net Interest Spread	5 Year Total Net Interest Income
Base Case/ Rates Flat	2.03%	4,565	10.77%	3.87%	1.89%	1.98%	\$467
Up 100 bp	2.03%	4,565	10.77%	3.87%	2.04%	1.84%	\$434
Up 300 bp	2.03%	4,565	10.76%	3.87%	2.34%	1.54%	\$365
Up 500 bp	2.03%	4,565	10.76%	3.87%	2.65%	1.22%	\$293
Down 50 bp	2.03%	4,565	10.77%	3.87%	1.85%	2.02%	\$476
Down 100 bp	2.03%	4,565	10.77%	3.87%	1.85%	2.03%	\$477
Down 150 bp	2.03%	4,565	10.77%	3.87%	1.85%	2.03%	\$477

5/20 CRE Loan



5/20 CRE Loan

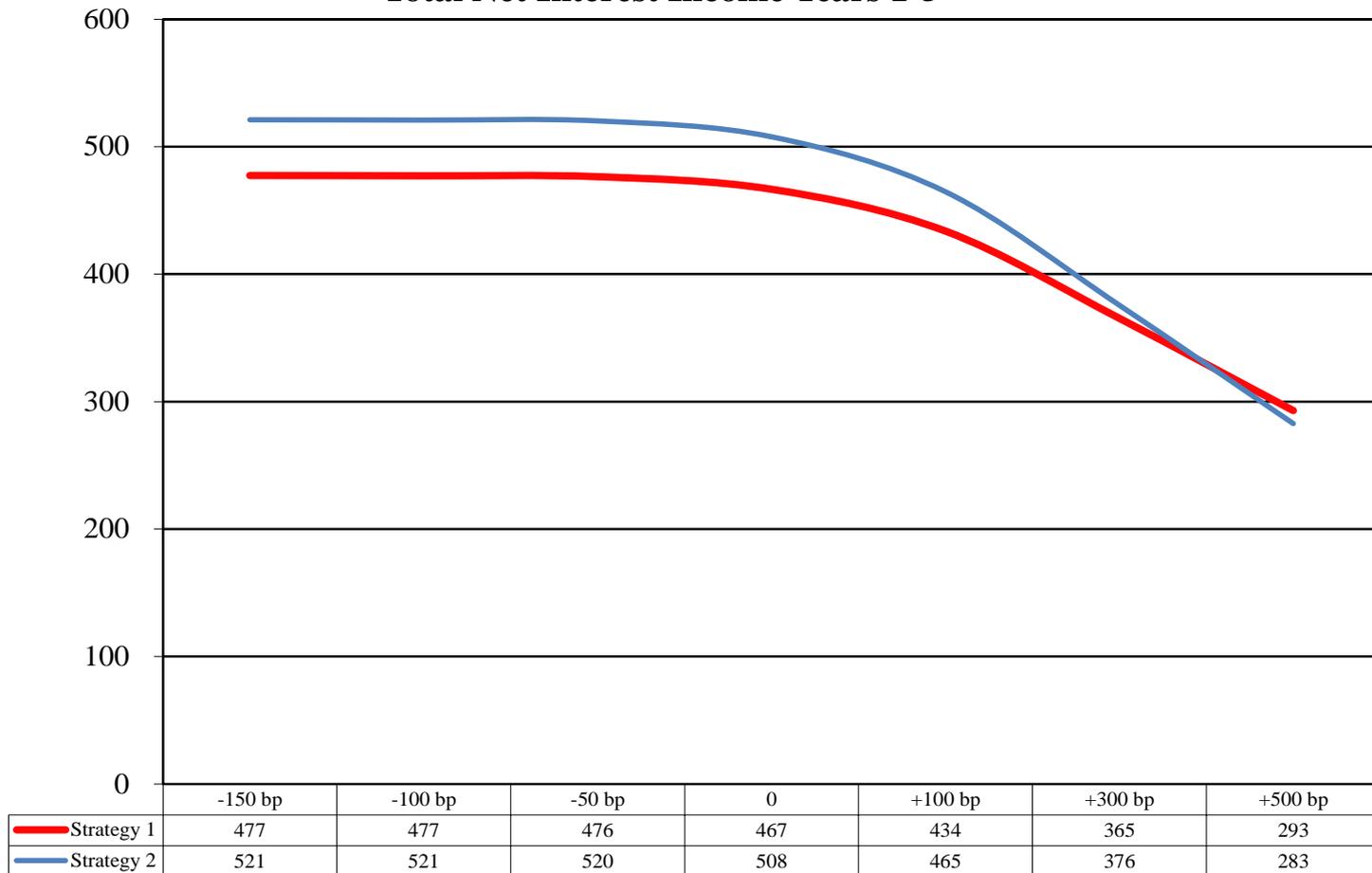
Strategy: 220 bps - \$1.50 MM 3 Yr Bullet, \$2.50 MM 5 Yr Bullet and \$1.00 MM Short-Term Funding.

Rate Scenario	Initial Net Spread	<u>TRANSACTION RESULTS</u>					
		Average Long Term Assets	Average Capital/ Assets	Average Asset Yield	Average Cost of Funds	Average Net Interest Spread	5 Year Total Net Interest Income
Base Case/ Rates Flat	2.20%	4,565	10.77%	3.87%	1.71%	2.16%	\$508
Up 100 bp	2.20%	4,565	10.77%	3.87%	1.90%	1.97%	\$465
Up 300 bp	2.20%	4,565	10.76%	3.87%	2.30%	1.58%	\$376
Up 500 bp	2.20%	4,565	10.76%	3.87%	2.71%	1.17%	\$283
Down 50 bp	2.20%	4,565	10.77%	3.87%	1.66%	2.22%	\$520
Down 100 bp	2.20%	4,565	10.77%	3.87%	1.65%	2.22%	\$521
Down 150 bp	2.20%	4,565	10.77%	3.87%	1.65%	2.22%	\$521

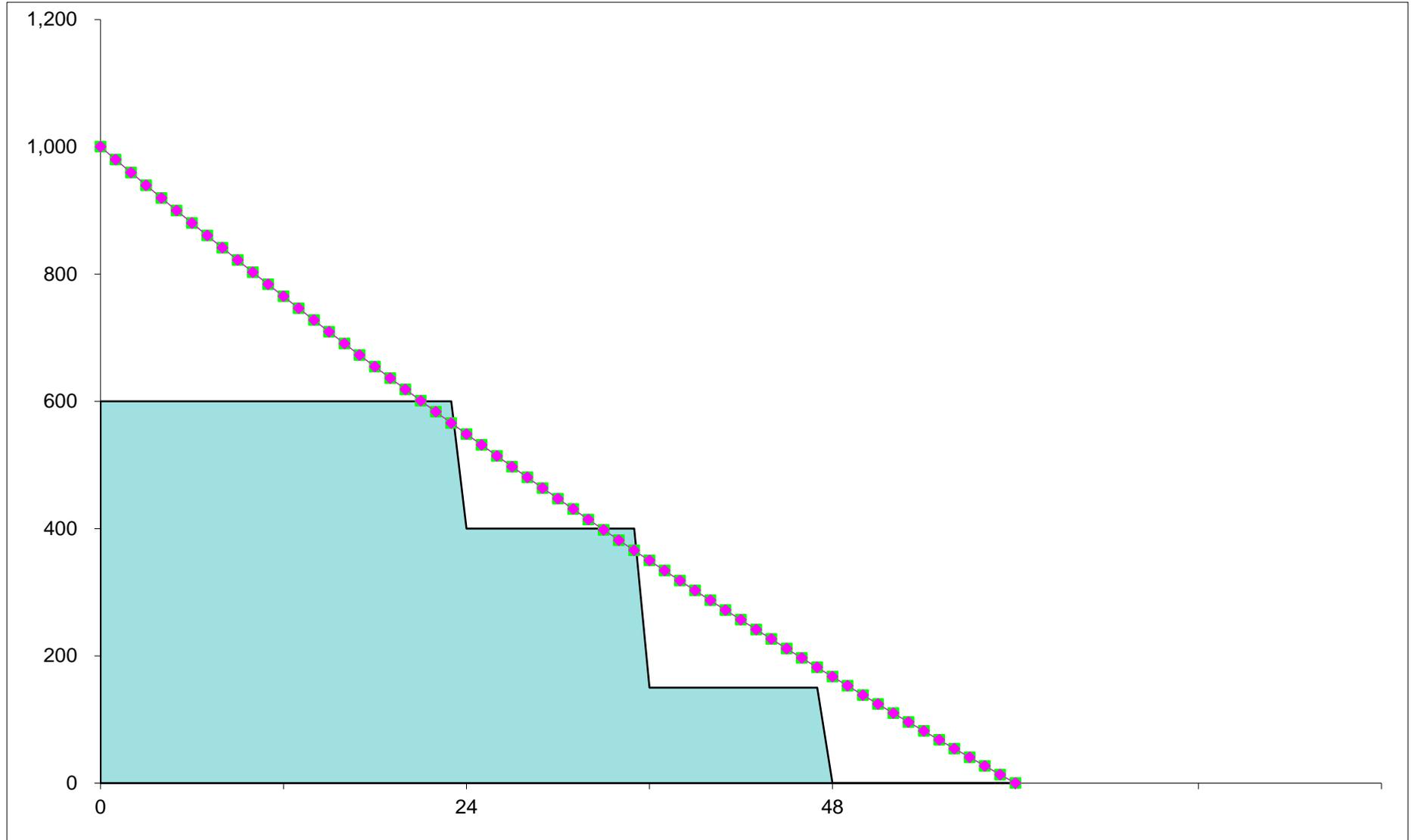
5/20 CRE Loan Comparison of Strategies



Total Net Interest Income Years 1-5



5-Year Auto Loans



5-Year Auto Loans

Strategy: 242 bps - \$0.20 MM 2 Yr Bullet, \$0.25 MM 3 Yr Bullet, \$0.15 MM 4 Yr Bullet and \$0.40 MM Short-Term Funding.

Rate Scenario	Initial Net Spread	<u>TRANSACTION RESULTS</u>					
		Average Long Term Assets	Average Capital/ Assets	Average Asset Yield	Average Cost of Funds	Average Net Interest Spread	5 Year Total Net Interest Income
Base Case/ Rates Flat	2.42%	473	10.82%	3.46%	1.34%	2.12%	\$52
Up 100 bp	2.42%	473	10.82%	3.47%	1.47%	2.00%	\$49
Up 300 bp	2.42%	473	10.82%	3.49%	1.74%	1.75%	\$44
Up 500 bp	2.42%	473	10.82%	3.51%	2.01%	1.49%	\$37
Down 50 bp	2.42%	473	10.82%	3.46%	1.30%	2.16%	\$53
Down 100 bp	2.42%	473	10.82%	3.45%	1.29%	2.16%	\$53
Down 150 bp	2.42%	473	10.82%	3.45%	1.29%	2.17%	\$53



For a customized funding strategy, please contact one of the
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Dan Redmond VP / Money Desk Manager



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- Upcoming advance special