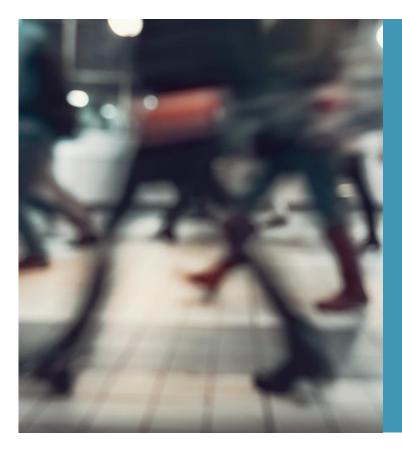
PIPER SANDLER



VIRGINIA BANKERS ASSOCIATION

2022 CFO Conference & Ethics Session

Common Mistakes: Avoid Pitfalls in your Balance Sheet Strategy

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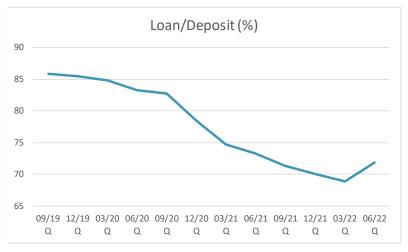
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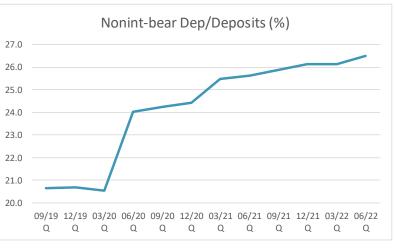
Current Themes in the Industry

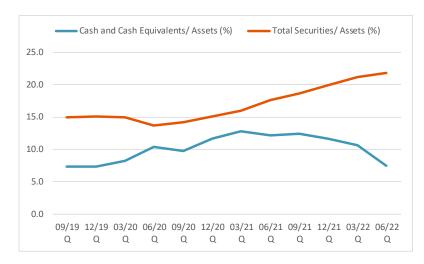
- Inflation vs. Recession: Rates up or down from here?
- Balance sheet mix matters most
- Understanding yield curve risk is a must
- Betas on BOTH sides of the balance sheet matter
- There are two types of ALCO's in this country
- Way too much time and energy spent on "AOCI"

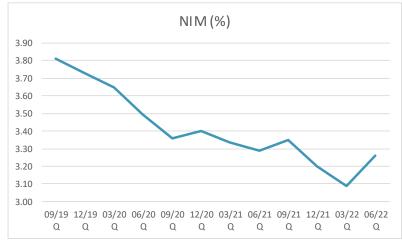
Why Balance Sheet Mix Change Matters

	09/19 Q	12/19 Q	03/20 Q	06/20 Q	09/20 Q	12/20 Q	03/21 Q	06/21 Q	09/21 Q	12/21 Q	03/22 Q	06/22 Q
Loan/Deposit (%)	86	86	85	83	83	78	75	73	71	70	69	72
Cash and Cash Equivalents/ Assets (%)	7.3	7.4	8.2	10.3	9.7	11.6	12.8	12.1	12.4	11.7	10.6	7.5
Total Securities/ Assets (%)	15.0	15.1	14.9	13.7	14.2	15.1	16.0	17.7	18.6	19.9	21.2	21.8
Nonint-bear Dep/Deposits (%)	20.7	20.7	20.5	24.0	24.2	24.4	25.5	25.6	25.9	26.1	26.1	26.5
NIM (%)	3.81	3.73	3.65	3.50	3.36	3.40	3.34	3.29	3.35	3.20	3.09	3.26





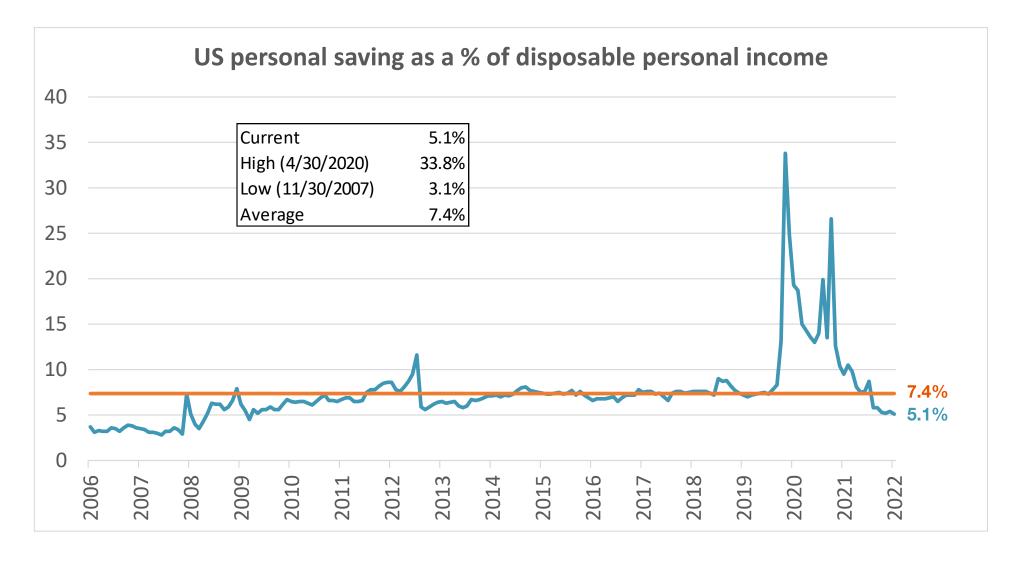




Yield Curve Risk vs. Interest Rate Risk

Index	12/31/21	3/31/22	6/30/22	8/18/22
Fed Funds Target	0.25%	0.50%	1.75%	2.50%
2 Year Treasury	0.73%	2.33%	2.95%	3.22%
3 Year Treasury	0.96%	2.51%	3.01%	3.22%
5 Year Treasury	1.26%	2.46%	3.04%	3.00%
7 Year Treasury	1.44%	2.43%	3.07%	2.94%
10 Year Treasury	1.51%	2.34%	3.01%	2.85%
2-10Yr Treasury Spread	0.78%	0.01%	0.06%	-0.37%
FFT-5Yr Treasury Spread	1.01%	1.96%	1.29%	0.50%

Market Liquidity and US Personal Savings



Weaponizing your ALCO

Concept

- Determine part(s) of the yield curve that matter to your company
- Use economic data for pricing, not strategy development

Strategy

- Understand your exposure to develop sound strategies
 - Pick 2-3 realistic yield curve shifts
 - Quantify these impacts for ALCO and identify potential remedies
 - Given macro uncertainty, financial institutions are migrating to neutral
- Stick to "inside-out" approach
 - Realistic modeling leads to effective strategy development

Content

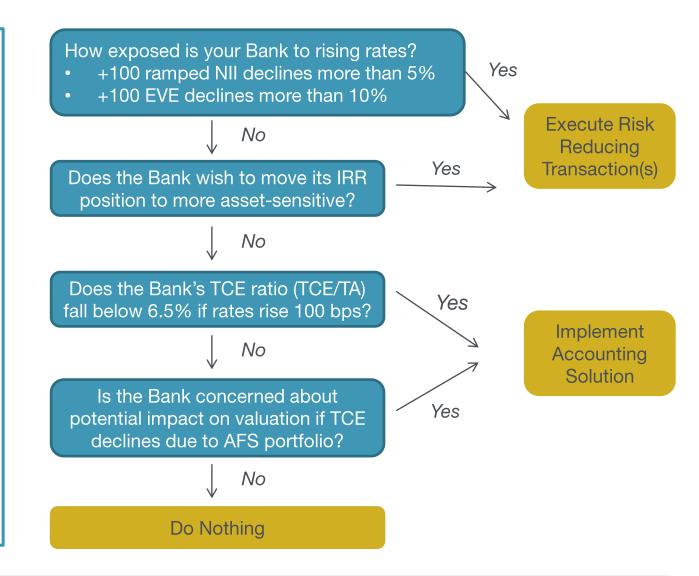
- Create a 3-5 page actionable ALCO summary deck
- Equate sensitivity to rate changes to something that will get your committee's attention
 - BPS of NIM, ROA, EPS, etc.

AFS and Unrealized Losses

Key considerations:

- Sensitivity to TCE & TBV
- Liquidity profile (and various measurements)
- Realized vs. unrealized mark-to-market
- Accounting vs. economic solutions
- Bond valuation vs. bank valuation, etc.

Decision tree on rate protection



Establishing a Disciplined Approach to Balance Sheet Hedging

Act, don't react

- Build the infrastructure
- Incorporate hedge strategy evaluation into ALCO

Keep it simple

- Identify the most plain vanilla strategy and hedge accounting application to meet your IRR goals
- Consider the availability of assets and liabilities to hedge

Don't bet on rates

Don't root for your hedge

Quantify your opportunity cost

Doing nothing is a decision, understand the cost

Questions and Themes – Common Mistakes

- Confuse vision and sight
- Yield curve risk vs interest rate risk
- Focus on unrealized losses
- Loss trades
- Deposit betas vs deposit mix shift
- Loan "betas" being calculated?
- Will CDs work
- Relying on embedded floors?
- ALCO offensive or defensive

Common Mistakes

- Reacting to what's in front of you, not proactively planning
- Choosing exposure based on rates and markets
- Skipping a structured process to measure risk
- Deciding that realized losses are always bad
- Concluding that higher deposit rates will solve everything
- Assuming that loan betas are always 100%
- Offering a "special in the window"
- Putting your interest rate risk on your customers
- Making ALCO a mundane approval processes

Key Takeaways

- Don't confuse sight for vision
- Understand the risk of balance sheet mix changes
- Don't confuse yield curve risk for interest rate risk
- Establish a hedging capability: You can't predict but you can prepare
- Change your ALCO meeting from defensive to offensive
- This volatility allows for the best ALCOs to differentiate themselves

Appendix

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Scott Hildenbrand is a managing director and the head of the financial strategies group at Piper Sandler. Hildenbrand also runs Piper Sandler Hedging Services, LLC, which is registered as a swap introducing broker with the Commodity Futures Trading Commission and is a member of the National Futures Association.

Previously, Hildenbrand was a principal and chief balance sheet strategist of Sandler O'Neill + Partners, L.P. He headed the balance sheet analysis and strategy group, working with financial institutions on balance sheet strategy development, which includes interest rate risk management, investment portfolio strategy, retail and wholesale funding management, capital planning, budgeting, and stress testing. Hildenbrand also worked closely with the firm's investment banking group to identify and develop strategic opportunities for clients involved in mergers and acquisitions.

Hildenbrand previously worked in Sandler O'Neill's interest rate products group, focusing on developing and implementing structured wholesale funding strategies for financial institutions. He spent his first four years at the firm in the asset/liability management group. Prior to joining Sandler O'Neill in 2004, Hildenbrand worked as a financial analyst in asset/liability management at Tower Federal Credit Union in Maryland.

In 2021 Hildenbrand was elected to the Financial Managers Society board of directors. Additionally, he serves as treasurer on the board of directors for Liam's Room, a non-profit organization that focuses on pediatric palliative care, a specialized approach to medical care for children with serious illnesses.

Hildenbrand holds a Master of Business Administration degree in finance from Loyola College in Maryland and a bachelor's degree with a concentration in accounting and finance from Gettysburg College. He is a frequent speaker at industry conferences and seminars.

Risk Considerations of Hedging with Derivatives

While derivative transactions hedging future liabilities have many benefits, they also require the Management and Board of Directors to carefully review the associated risks and considerations.

SOME OF THE RISK FACTORS MANAGEMENT AND THE BOARD SHOULD CONSIDER INCLUDE:

Market risk

 Risk that market moves in the opposite direction of the hedge leading to "buyer's remorse" and a net cost to the hedge over its life

Counterparty risk

- Risk that counterparty defaults and derivative's value must be written off
- Risk that counterparty margin posted does not cover market value
- · Chance of counterparty default may put hedge accounting treatment in jeopardy

Accounting risk

• If hedge accounting is jeopardized through some misalignment between the hedge and the hedged item, the derivative market value of the hedge may be forced to flow through earnings and regulatory capital

Regulatory risk

- Policies and procedures for monitoring initial and ongoing risk most scrutinized
- · Minimal risk when derivative strategy is used for hedging and not speculative use

Liquidity Risk

• Management must evaluate the effect an interest rate derivative strategy may have on liquidity calculations when collateral calls and periodic hedge payments are considered

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