Balance Sheet Strategy:

What Board Members & Senior Management Should Know in Any Environment

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Scott Hildenbrand
Principal/Chief Balance Sheet Strategist
(212) 466-7865
shildenbrand@sandleroneill.com

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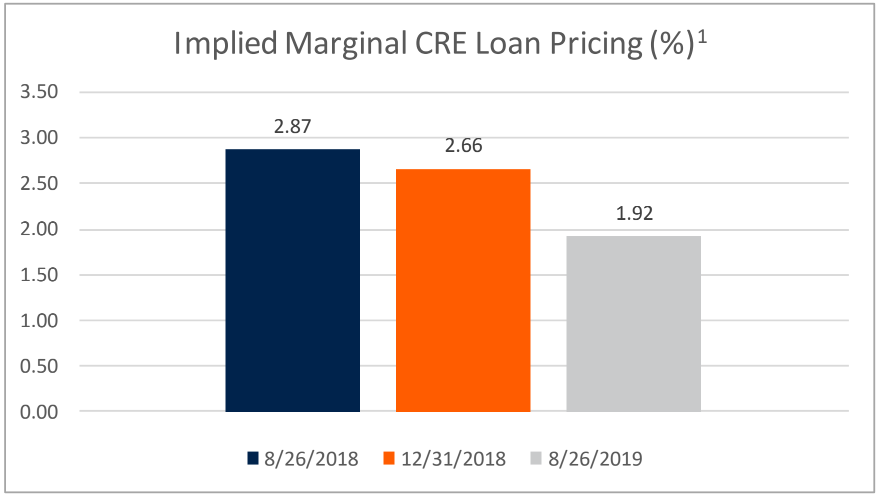
Balance Sheet Trends and Themes

- Liquidity and cost of funds continues to be a focus
- Yield curve inversion & the prospect of lower rates
- Boards and management struggling with ROA vs. ROE
- Investment portfolio: loss trades and deleverage strategies
- New hedge accounting simplifications must be understood
- Using ALCO meetings as a weapon

Yield Curve Reactions

Index	2yrs Ago	1yr Ago	6mo Ago	3mo Ago	8/26/19
3M Treasury	1.00%	2.09%	2.44%	2.34%	1.98%
2 Year Treasury	1.33%	2.62%	2.48%	2.16%	1.52%
5 Year Treasury	1.76%	2.71%	2.45%	2.12%	1.40%
10 Year Treasury	2.17%	2.81%	2.64%	2.32%	1.52%
3M-5 Year Treasury Spread	0.76%	0.62%	0.01%	(0.22)%	(0.58)%
2-10 Year Treasury Spread	0.84%	0.19%	0.16%	0.16%	0.00%



1 Assumes: marginal loan yield = yield on 5Y UST +225 bps on 8/26/18 and +250 bps on 12/31/18 and 8/26/2019. Marginal cost of funds = yield on 3M T-Bill.
Source: Bloomberg & Sandler O'Neill + Partners

Recent Strategic Actions: Loss Trades & Wholesale Delevers

	Loss Trade	Wholesale Delever
Description	Take one-time loss, reinvest at higher yield to improve forward earnings	Remove inefficient wholesale leverage; pair one-time gains and losses
Impact		
Reported Net Income	Dilutive, until earned back	Depends on spread[1]
Core Net Income	Accretive[2]	Depends on spread[2]
Net Interest Margin	Accretive	Accretive
TBV/share	Minimal impact[3]	Minimal impact[4]
TCE Ratio	Minimal impact	Accretive[5]
Regulatory Capital Ratios	Dilutive, until earned back	Accretive[5]
Considerations	- Loss classified as 'non-core' - Focus on breakeven period	- Gains/losses classified as 'non-core'

[1] Unwinding a negative/positive spread will be earnings accretive/dilutive.
Assumes that gains/losses on sale of securities and/or gains/losses on debt extinguishment offset.
[2] Assumes gains/losses on sale of securities and/or gains/losses on debt extinguishment are excluded from core net income.
[3] Assumes unrealized losses are already included in tangible common equity.
[4] Assumes minimal gains/losses on extinguishment of debt.
[5] Assumes accretion from smaller balance sheet offsets dilution from prepayment penalty, if incurred.

Thoughts on Downside Protection

On Balance Sheet Options:	
Investment Portfolio Tactics	• Lockout • Don't just add duration • Minimize optionality risk • Loss trades
Deposit Product Offerings	• Indexed based CDs • Indexed based MMDA
Wholesale Funding	• Fund with short term wholesale • Convert fixed-rate debt to floating • Callable CDs

Off Balance Sheet Options:	
Floors or Collars	• Consider the benefits of each
Receive-Fixed Swap	• Provide certainty of rate protection • No option risk and positively convex
Cancelable Pay-Fixed Swap	• Bank has the right to terminate the swap at par after a lockout period

Portfolio Opportunities

High Level Segment Commentary:	
Buy Front Sequential CMOs	• Add structure • Lower coupons perform well and maintain liquidity when rates rise
Buy Discount Agency CMBS	• Add lockout • Prepayment penalties serve as downside protection
Buy Discount Agency MBS	• Enhance cash flow • Yield increases if rates go down, constant if rates move higher
Sell Short Municipals into Historic Tights	• Retail bid is strong, new issuance is low • Clean-up odd lots or pare exposure • Better value further out on the curve
Optimize Corporate Portfolios	• Consider higher-quality corporates, agency CMBS, or longer-dated munis • High-quality CLOs, FFELP, or SBA floaters could also make sense

New Hedge Accounting Rules & Strategy Implications

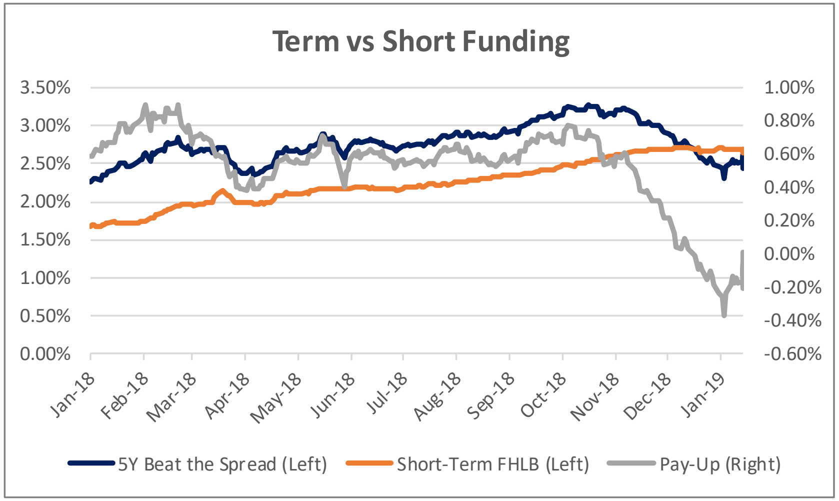
Rule Simplification	Strategy Implication
Key Cash Flow Hedge Accounting Simplifications:	
Concept of benchmark rate removed & effectiveness testing is a binary assessment	Money Market Deposit Account proxy hedge
Option Premium Amortization & Time Value Exclusion	Use of floors and collars to protect NIM from falling rates
Key Fair Value Hedge Accounting Simplifications:	
Shortcut hedge accounting backup relief	Single Asset Hedging
"Last of Layer" rule for pool of prepayable assets	Hedging pools of residential mortgages

Beat the Spread – New Funding Opportunities

Banks can hedge the rollover risk of short-term funding to extend liability duration:

- Enter into a Pay-Fixed Receive 3 Month Libor interest rate swap
- Take out 3 month advance, settling on the effective date of the swap
- Designate the swap as a cash flow hedge against changes in advance rates (3 month Libor)
- Roll the 3 month advance each quarter matching the reset dates of the swap

The inverted swap curve allows banks to extend liability duration and lower cost of funds at the same time



Source: FHLB Rates: FHLB DM & Brokered CD Rates: Janney funding desk

Hedging Fixed-Rate Bonds

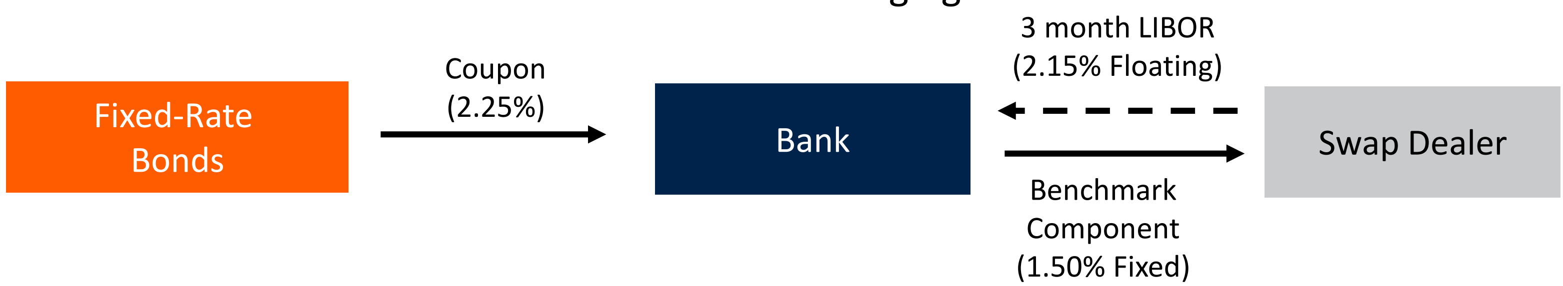
Situation

Bank is interested in reducing the duration of fixed-rate securities it is considering purchasing

Bank Solution:

1. Bank identifies a fixed-rate bond for hedging – either from existing portfolio or purchase candidate
2. Bank enters into a pay-fixed interest rate swap with the dealer hedging the fixed-rate cash flows
3. The Bank sets the maturity date of the swap *early enough to avoid any call features*
4. The swap is designated as a partial-term fair value hedge

Portfolio hedging



Since pay leg is *lower* than receive leg of swap – net impact to income is positive

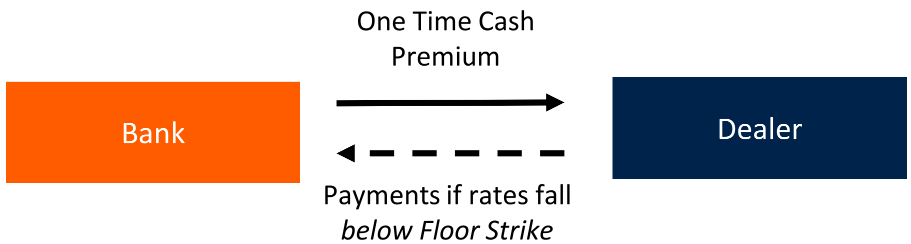
New Accounting Rules Used:

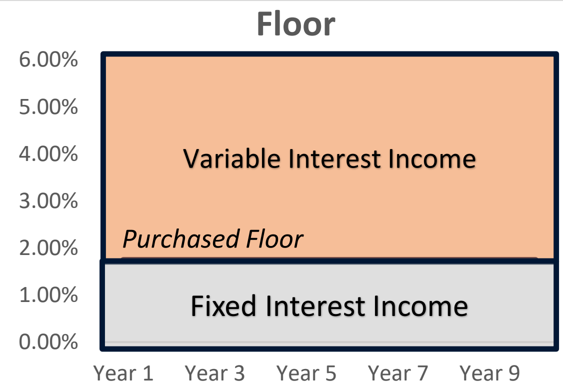
1. Hedge interest rate risk attributable to benchmark rates only
2. Partial-term Fair Value hedge designation
3. Short cut hedge accounting

Pricing is purely illustrative

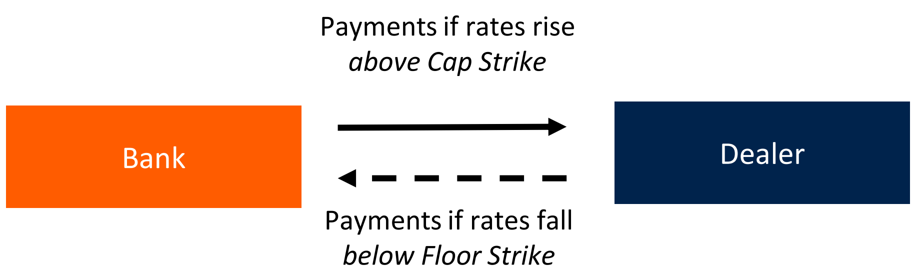
Hedging Falling Short Term Rates

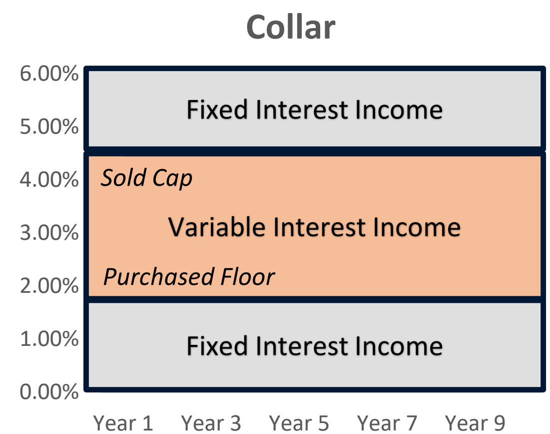
A Purchased Floor on floating-rate assets is an interest rate option that behaves as insurance against falling short-term rates



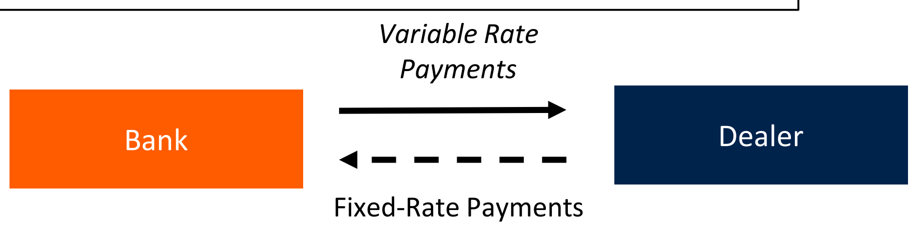


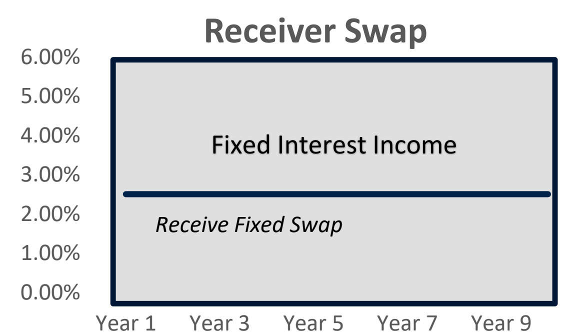
A Costless Collar on floating-rate assets is an interest rate option that behaves as a purchased floor and a sold cap where the premium prices offset





A Receive-Fixed Swap is a way to extend duration on variable-rate assets to protect against changes in rates impacting interest income





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Cap Case Study: Trust Preferred Shares Rate Insurance

Situation:

- A bank is concerned about the impact of large moves on cost of capital due to its floating-rate TRUPS

Solution:

- Hedge the TRUPS for 5 years using an At-The-Money (ATM) cap on LIBOR by paying a one time premium up front and receiving payments if LIBOR goes above the strike rate on any reset date

Considerations

- Because the cost of the cap is paid for upfront, the holding company has no future payment obligations or margin requirements
- Hedge accounting rules allow back-ended expense recognition

Feel free to reach out with any questions:

Scott Hildenbrand

Principal/Chief Balance Sheet Strategist

(212) 466-7865

shildenbrand@sandleroneill.com

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