

Balance Sheet Strategies

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Current Balance Sheet Management Themes

Index	2013	2014	2015	2016	2017	2/23/18
Fed Funds Target	0.25%	0.25%	0.50%	0.75%	1.50%	1.50%
2 Year Treasury	0.33%	0.53%	0.72%	0.81%	1.88%	2.24%
10 Year Treasury	2.49%	2.48%	2.15%	1.82%	2.41%	2.87%
2-10 Year Treasury Spread	2.16%	1.95%	1.43%	1.01%	0.53%	0.63%

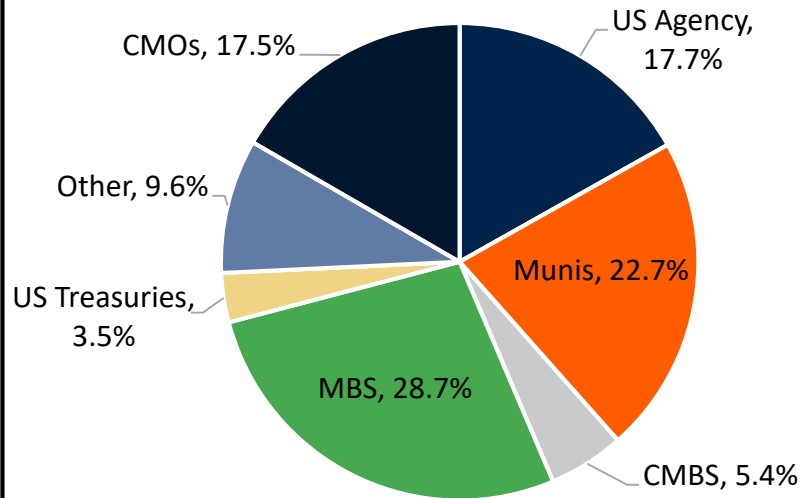
- Fed is projected to hike rates three times this year
- Expect volatility across the yield curve
- Liquidity will continue to be a key exam focus
- Credit remains pristine, but for how long?
- Capital markets continue to be wide open
- New hedge accounting simplifications must be understood

Liquidity Discussion

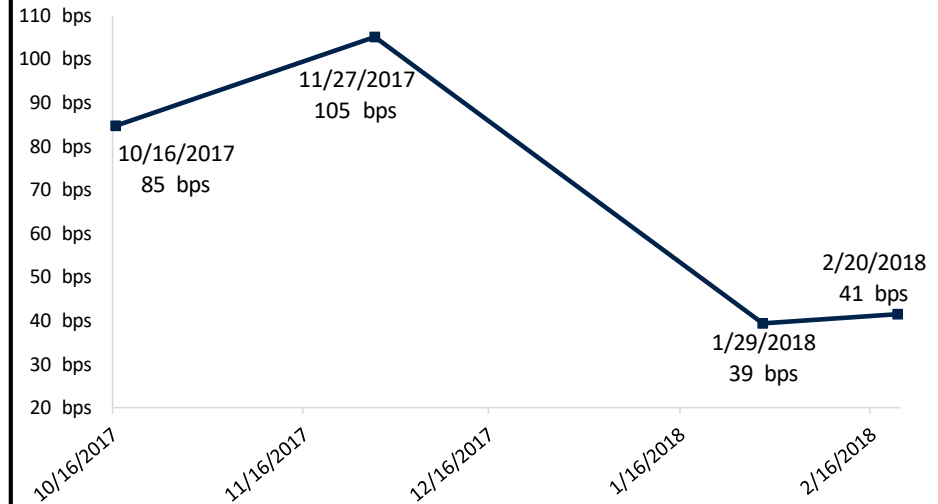
- FDIC supervisory insights on community bank liquidity risk (summer 2017)
- Capital raising- both equity and debt
- Deposit premiums on M&A deals
- Pay attention to top 10 competitors: loans/deposits, securities/assets, and reliance on wholesale funding
- Deliver deposit products that your clients want
- Lean on your bond portfolio

Investment Portfolio Discussion

Average Investment Portfolio Composition



10yr Municipal Spread to Treasuries



- Average nominal yield on bank investment portfolios is about 2.20% - 2.30%
- Substantial spread compression in LIBOR and prime-based floating rate assets
- Flatness of yield curve offers little additional return for extending duration
- Impact of Fed's balance sheet unwind?
- Belly of the curve: Attractive yields without extending duration too far
- Keep an eye on municipal spreads to treasuries

Hedge Accounting Discussion

- **Cash Flow Hedges:**

- Quantitative effectiveness only needs to be tested at inception unless hedging relationship factors change
- Concepts of ineffectiveness and benchmark rates are removed

- **Fair Value Hedges:**

- Can isolate benchmark interest rate risk
- Partial term hedges allow more structuring flexibility
- “Last of Layer” approach allows hedges on a portion of a closed pool of prepayable assets

Strategy Discussion

- **Liability Sensitive Banks:**

- Hedge existing or new assets (ex. corporate bonds)
- Evaluate costs and benefits of term vs. interest rate protection on wholesale funding
- Hedge future issuance of debt
- Hedge index-based MMDA

- **Asset Sensitive Banks:**

- Extend asset duration through bonds or loans (convexity vs. duration)
- Swap callable brokered CDs to floating rate
- Evaluate selling puttable option on wholesale funding

Asset Hedging Made Easier: Convert a Pool of Corporates to Floating

Step-by-Step To Hedge a Pool of Corporate Bonds:

1. Identify a pool of fixed-rate corporate bonds
2. Enter into a pay-fixed interest rate swap with a maturity date set *before* the earliest call in the pool
3. Swap is designated as a partial-term hedge against changes in fair value due to changes in benchmark rates

5 Year Partial Term Hedge (Swap Matures 2/26/2023)



Floating Rate Coupon + Discount Accretion = Initial Floating Rate Yield
 $3.02\% + 0.16\% = 3.18\%$

Compare 1.20% DM to 3M LIBOR vs 0.67% DM for 5Y A-Rated Corp Floater

New Accounting Rules Used and Why We Use Them:

- Hedge interest rate risk attributable to benchmark rates only
 - Allows pooling securities with varying credit spreads
- Partial-term Fair Value hedge designation
 - Allows pooling securities with varying maturity and call dates

Structuring Consideration: No Free Lunch – Yield Today vs. Risk Tomorrow

- The Bank can structure a higher floating rate yield by making the swap shorter but this introduces **more back end rate risk**

Hedge Term	3Y	5Y	10Y (To the Call)
Front End DM	1.30%	1.20%	1.09%
Comparable Floater DM (To the Call)	0.52%	0.67%	0.95%
Unhedged Fixed Rate Tail	7Y	5Y	0Y

Rates as of 2/26/2018 Subject and indicative
 Sample Bonds actual results will vary
 Assumes 3 month LIBOR of 1.98%

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