Maximizing Opportunities while Avoiding Potholes

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Current Balance Sheet Management Themes

Index	2013	2014	2015	2016	2017	4/30/18
Fed Funds Target	0.25%	0.25%	0.50%	0.75%	1.50%	1.75%
2 Year Treasury	0.33%	0.53%	0.72%	0.81%	1.88%	2.49%
10 Year Treasury	2.49%	2.48%	2.15%	1.82%	2.41%	2.95%
2-10 Year Treasury Spread	2.16%	1.95%	1.43%	1.01%	0.53%	0.46%

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

Source: Bloomberg. Quarterly averages for each year, Fed Funds Target is end of period.

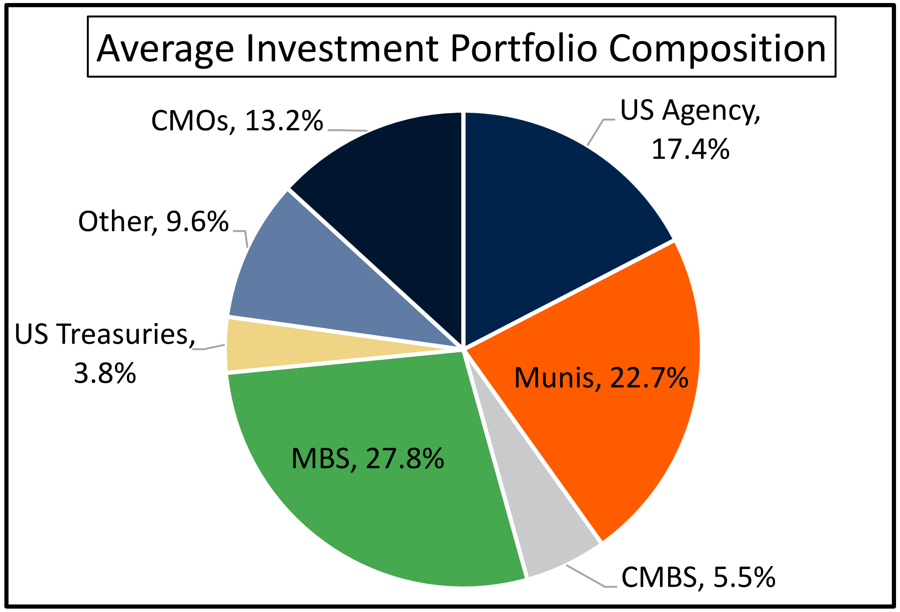
Liquidity Discussion

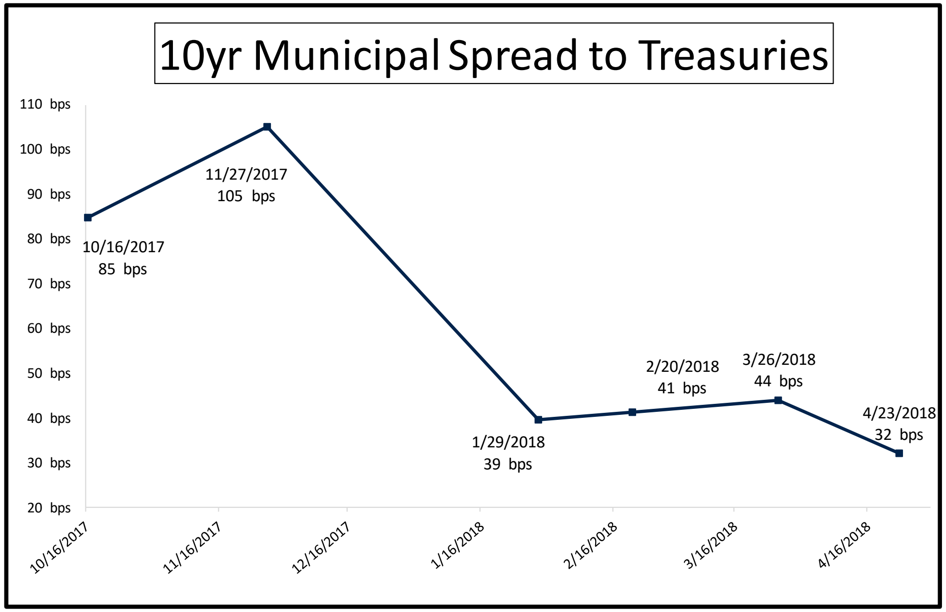
- Market drives deposit pricing—the Federal Reserve is just one factor:
  - Banks are raising capital and looking to grow
  - Mergers and acquisitions: Core Deposit premiums on the rise
  - Follow your top ten competitors: Loans/ Deposits, Securities/ Assets, etc.

- Strategies being utilized:
  - Pre-crisis CD specials: Same impact today?
  - Deliver products that your clients want (ex. MMDA deposits linked to Fed Funds)

- What needs to be explored?
  - Wholesale Funding: If and when it should be utilized
  - Investment Portfolio: Liquid and predictable cash-flows
  - New hedge accounting simplifications: Will change the competitive landscape

Investment Portfolio Discussion





- Average nominal yield on bank investment portfolios is about 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

Source: SNL Financial. Includes all banks 1 to 10 billion in assets for the most recent quarter as of April 27, 2018.
Indicative spreads based on mid-market levels for interpolated benchmark securities. Actual spreads may vary for specific bonds.
BQ municipal yields apply a 35% tax rate and 10 bps TEFRA prior to 01/01/2018 and 21% tax rate and 6 bps TEFRA after 01/01/2018.

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

Case Study: Hedging Future Issuance of Debt

Challenges:

- Continuing rise of short term rates and fierce market competition is negatively impacting cost of funds
- Flattening of the yield curve makes the cost of protecting against rising rates lower, but the risk of above market rates if rates fall is higher
- The Bank has 50% of their FHLB advances maturing over the next 12 months and plans on replacing the funding
- Customers seeking long-term fixed rate loans

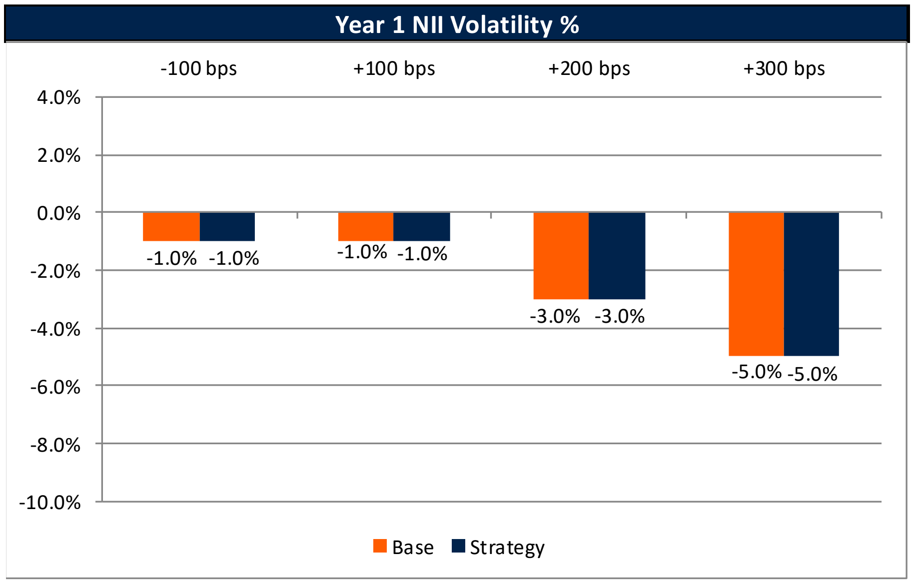
Opportunity:

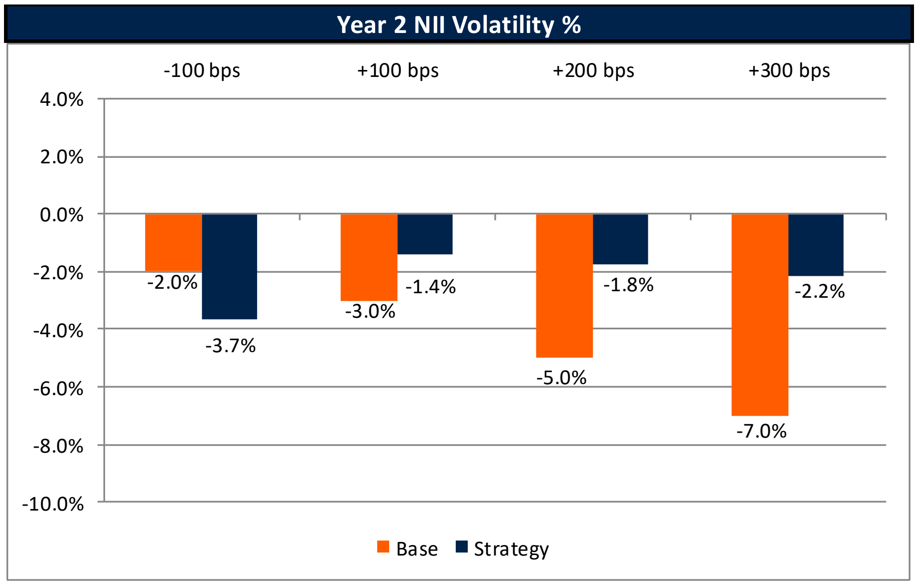
- Utilize derivatives to reduce the impact of market risk on the Bank's ability to execute the current business plan by locking in *today's* curve expectations for a portion of the expected funding needs

Case Study: Hedging Future Issuance of Debt

Strategy:

- Enter into a 1 year forward starting pay-fixed interest rate swap to hedge the refinance risk of the future issuance of debt
- Designate the swap as a cash flow hedge





Sample strategy actual results will vary
Cash Flow hedge designation is available under ASC 815
Sandler O'Neill is not an accounting adviser - please consult your auditors regarding proper hedge accounting documentation

Case Study: Convert a Pool of Fixed-Rate Assets to Floating

Challenges:

- As the Fed continues to raise rates, the Bank is faced with severe margin compression
- Because funding has become difficult and capital is on the lighter side, the Bank wants to work with the existing Balance Sheet instead of spending leverage

Opportunity:

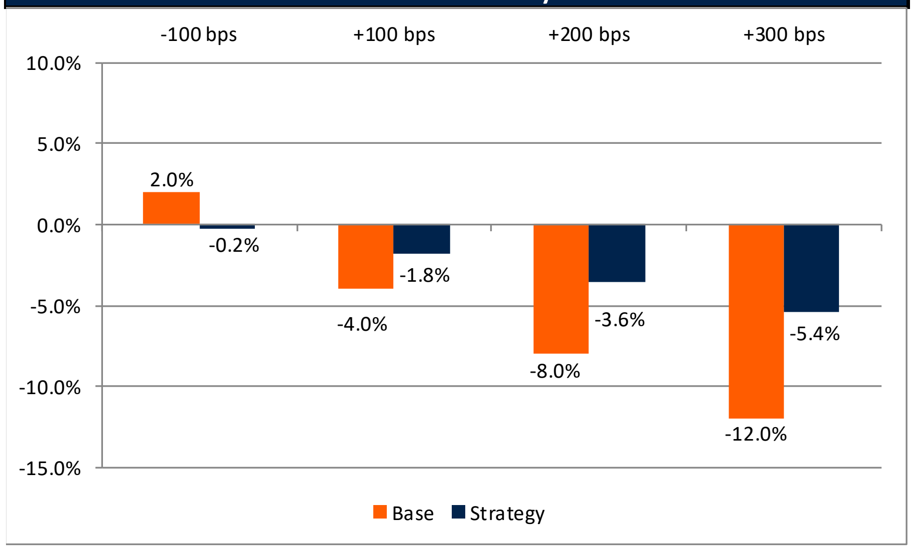
- Take advantage of the flatness of the curve to manage margin compression in an efficient and cost-friendly manner
- By early adopting, the new hedge accounting guidelines give the Bank more flexibility to manage the specific risk on the balance sheet

Case Study: Convert a Pool of Fixed-Rate Assets to Floating

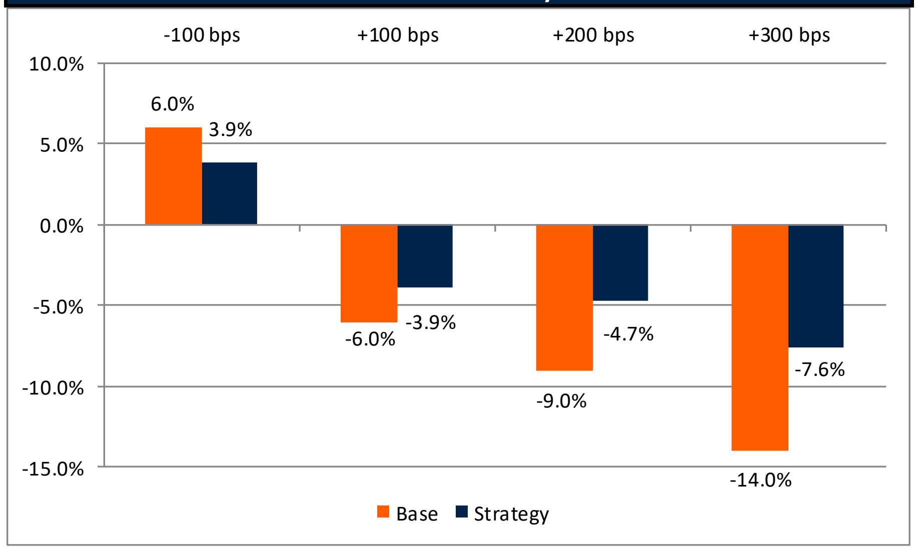
Strategy:

- Enter into a pay-fixed interest rate swap to convert a pool of fixed-rate assets to a floating rate
- Designate the swap as a fair value hedge, utilizing the last-of-layer approach

Year 1 NII Volatility %



Year 2 NII Volatility %



Sample strategy actual results will vary
Last-of-Layer Approach is available under ASU-2017-12
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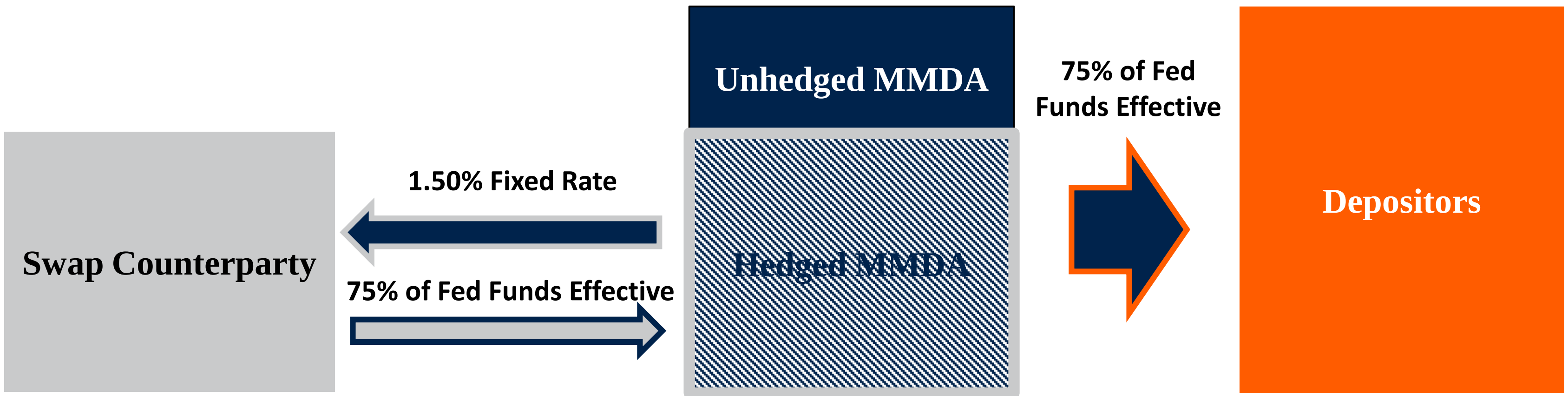
Case Study: Hedging Non-Maturing Deposits

- Money Market Deposit Accounts can be structured to be explicitly linked to a benchmark index
- Incorporating a benchmark index into the product makes applying hedge accounting simpler
- Enter into an interest rate swap to manage the product's interest rate risk



- Choose a benchmark index such as Fed Funds Effective or One Month LIBOR
- Pay a factor of the index (i.e. *75% of the One Month LIBOR*)
- Pay a spread above or below the index (i.e. *One Month LIBOR + 10 bps*)
- Set account maximum or minimum balances

Deliver the deposit product your customers want

Pricing is purely illustrative

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