## Balance Sheet Strategies for this Low Rate Environment

## PRESENTED BY:



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- Not FDIC Insured • No Bank Guarantee • May Lose Value


## Background - David Farris

- Spent the first 12 years of career consulting for community banks and S\&L's
[] Focus on mortgage-backed securities (MBS) and managing interest rate risk
- Spent next 10 years as portfolio manager for a non-agency mortgage REIT
[. Traded and managed portfolio of agency and non-agency MBS and managed interest rate risk
- Partner at Credentia Group, LLC, a private hedge fund
[3 Trading agency and non-agency MBS products
[] Managed investment strategies and risk
- Joined Asset Management Group with Country Club Bank in 2019
[] Provides asset liability management advice
[] Interest rate risk
[1] Liquidity risk
[ Investment and funding programs
[ Overall balance sheet strategies
- Capital Markets Group, a Division of Country Club Bank
[] Registered Investment Sales Officer
[] Providing Investment Portfolio Management and Sales to Institutional and retail accounts


## What Has Happened

## Interest Rates and the DJIA



10 Year Treasury Regression

10Y Regression May. 2010 - May. 2020


Source: Bloomberg, LLC.

## Municipal Bond Spreads Widened Dramatically



## Bank Yields, COF \& Spread vs Market Rates



## Decision Matrix as Rates Move Further from the Mean

|  | Yield Curve | Liability Strategy | Loan <br> Strategy | Credit <br> Strategy | Investment Strategy | Off Bal Sheet Strategy | Leverage Strategy |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| +2 Std | Inverted | Shortest Specials; Shortest Adv | More Fixed; Prepay Penalty Prime Index | Tighter Credit Standards Don't Reach | Max Duration Min Optionality | Asset: Var > Fix <br> Liab: Fix > Var | Max Leverage (Max Invest) |
| +1 Std | Flattening | Shorter Specials; Shorter Adv | Prefer Fixed; | Begin Tighter Credit | Extend Dur Less Options | Hedge Int. Rate Exposure as Needed | Incr Leverage (More Invest) |
| -1 Std | Steepening | Longer Specials; Longer Adv | Prefer Floating: | Begin Easier Credit | Shorten Dur More Options | Hedge Int. Rate Exposure as Needed | Incr Leverage (More Loans) |
| -2 Std | Very Steep | Longest Specials; Longest Adv | More Variable; Tsy Index; No Caps | Easiest Credit Standards | Min Duration Max Optionality | Asset: Fix > Var <br> Dep: $\quad$ Var > Fix | Max Leverage (Max Loans) |

## Sell Fast Paying MBS

- FNMA 30 Year 4.00\%
- Based on the 1,3 and 6 month average speeds, the buyer of these bonds is willing to accept a NEGATIVE YIELD.
- You come out ahead even if you sell these now and stay in cash.



## Sell Fast Paying MBS

FNMA 30 Yr 4.00\%
Original Face: \$5,000,000
Current Face (Apr): \$3,183,935
Current Face (May): \$2,909,212
One Month Paydown: \$274,722
Market Price: $\quad 106.26$
Book Price: $\quad 102.26$
Potential Gain: 4.00\%
Income LOST to Prepayments:
$4 \%$ X $274,722=\$ 10,989$

# We recommend selling MBS now at market prices rather than receiving principal returned in prepayments at Par 

## Other Potential Sale Targets

## - US Treasury Securities

- Agency Bullets
- Agency ARMs with Short Months to Reset
- Pre-Refunded Municipal Bonds
- Shorter Term Municipal Bonds
- Longer Term Municipal Bonds to Reduce Exposures to Certain Credits


## Reinvest in Lower Risk Higher Yield MBS

## Reinvestment Option \#1

- Buy FN 20Yr Fixed 2.50\%
- Yield UP from < 0\% to $1.50 \%$
- Reduce Premium 2-08 Points
- Decrease Prepayment Risk
- Yield Still >0\% Down 300 bps


Source: Bloomberg, LLC.

## Reinvest in Lower Risk Higher Yield MBS

## Reinvestment Option \#2

- Buy FN 30Yr 7/1 Hybrid ARM
- Yield UP from $<0 \%$ to $1.42 \%$
- Reduce Premium 1-17
- Decrease Prepayment Risk
- 3.09\% WAC
- 100\% Tier 1 Servicer
- 7 Years to the Reset Borrowers Shouldn't be Focused on Refi for awhile
- Max Loan Size 504k (lower than average)


Source: Bloomberg, LLC.

## Reinvest in Lower Risk Higher Yield MBS

## Reinvestment Option \#3

- Buy FN CMBS SARM
- Yield UP from $<0 \%$ to $0.82 \%$
- Reduce Premium 5-25
- Decrease Interest Rate Risk


Source: Bloomberg, LLC.

## Affect of Trades on Interest Rate Sensitivity \& Returns Market Value of Equity (MVE)

| Yield Pickup: |
| :--- |
| FN 2.5\% |
| $1.50 \%$ |
| FN ARM |
| $1.42 \%$ |
| SARM |
| $\frac{0.82 \%}{\text { Total }}$ |
| $1.27 \%$ |
|  |
| Versus 0\% to |
| $0.50 \%$ on FN 4\% |
| Depending on |
| Prepayments |


| 1 | Rate Shift | Face | DN 200 | DN 100 | BASE | UP 100 | UP 200 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\underline{2}$ | MVE Chg In Value \$ |  | $(4,089)$ | $(3,557)$ |  | 6,335 | 11,323 |
| 3 | Sell FN 4.00\% | 20,000 | (427) | (319) |  | 574 | 1,297 |
| 4 | Buy FN 2.50\% | 7,000 | 368 | 255 |  | (342) | (724) |
| 5 | Buy FN ARM | 7,000 | 258 | 183 |  | (308) | (694) |
| $\underline{6}$ | Buy SARM | 6,000 | 10 | 5 |  | (5) | (10) |
| $\underline{7}$ | Effect of Trade on MVE |  | 209 | 124 |  | (81) | (130) |
| 8 | New MVE Chg In Value \$ |  | $(3,880)$ | $(3,433)$ | - | 6,253 | 11,193 |

## TRADE RESULTS:

- Take a Gain
- Pick Up Yield
- Reduce Prepayment Risk
- Interest Rate Risk is Unchanged


## Common Interest Rate Sensitivity of a Bank Market Value of Equity (MVE)

| 1 | Book |
| :---: | :---: |
| 2 | Assets 400,000 |
| 3 | Asset Price |
| 4 | Cum Change In Value \$ |
| 5 | Cum Change In Value \% |
| 6 |  |
| 7 | Liabilities 352,000 |
| 8 | Liability Price |
| 9 | Cum Change In Value \$ |
| 10 | Cum Change In Value \% |
| 11 |  |
| 12 | MV Equity 48,000 |
| 13 | MV Equity \% 12.0\% |
| 14 | Cum Change In Value \$ |
| 15 | Cum Change In Value \% |

## Take Advantage of Hedges Built into the Risk Position

- The Portfolio Gains as Rates Increase (Line 2)
- This Allows for the Portfolio to Lengthen Out on the Asset Side (Line 6)
- The Result is Lower Gains as Rates Increase (Line 8) But Gains Remain

| 1 | Avg Elas | DN 200 | DN 100 | BASE | UP 100 | UP 200 |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| 2 | MVE Chg In Value \$ |  | $(4,089)$ | $(3,557)$ | - | $\mathbf{6 , 3 3 5}$ |
| $\mathbf{3}$ | MVE Chg In Value \% |  | $-7.2 \%$ | $-6.3 \%$ | $0.0 \%$ | $11,2 \%$ |
| 4 |  |  |  |  |  | $20.0 \%$ |
| 5 | Buy FN 20yr 2.50\% | 20,000 | 21,851 | 21,528 | 20,800 | 19,822 |
| 6 | Cumulative Chg in Value | $4.1 \%$ | 1,051 | 728 |  | $\mathbf{( 9 7 8 )}$ |
| 7 |  |  |  |  |  |  |
| 8 | MVE Chg In Value \$ |  | $(3,038)$ | $(2,829)$ |  |  |
| 9 | MVE Chg In Value \% | $-5.4 \%$ | $-5.0 \%$ |  | $\mathbf{5 , 3 5 7}$ | $\mathbf{9 , 2 5 5}$ |

## Take Advantage of Hedges Built into the Risk Position

- Analyze the Bank's Overall Risk Position of their Balance Sheet
- A Risk Position Similar to our Example may Provide Opportunity to Invest Longer
- Longer Duration Investment will Even Out "Short" Position of Overall Risk Position
- Protects Income from a Further Drop in Rates
- Increases Income in the Base Case
- Extending from 0\% in Funds to a $1.50 \%$ Yield on a Security adds $\$ 300 \mathrm{k}$ in Income
- Interest Rate Risk on the Security is $\$ 978 k$ UP100 but Drops to $\$ 730$ after One Year
- How Potential Investments Fit Into the Banks Overall Risk Position Provides an Important Piece of Information for Banks Deciding Whether to:

1) Invest Now When Rates are Low, Increase Income \& Interest Rate Risk OR
2) Stay in Cash and Forego Current Earnings

|  | Maturity | TREASURY | Brokered <br> CD <br> Fixed | Brokered <br> CD <br> Callable | FHLB TOPEKA | FHLB DMOINES | QwickRate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 36mo | 0.22\% | 0.50\% | 0.55\% | 0.70\% | 0.61\% | 0.32\% |
|  | 39 mo | 0.22\% | 0.53\% | 0.58\% | 0.79\% |  |  |
|  | 42 mo | 0.23\% | 0.55\% | 0.60\% | 0.79\% |  |  |
|  | 46 mo | 0.26\% | 0.60\% | 0.65\% | 0.79\% |  |  |
|  | 48 mo | 0.26\% | 0.65\% | 0.70\% | 0.79\% | 0.70\% | 0.40\% |
|  | 50 mo | 0.27\% | 0.67\% | 0.72\% | 0.86\% |  |  |
|  | 52 mo | 0.28\% | 0.68\% | $0.73 \%$ | 0.86\% |  |  |
|  | 54 mo | 0.28\% | 0.70\% | 0.75\% | 0.86\% |  |  |
|  | 5YR | 0.32\% | 0.75\% | 0.80\% | 0.86\% | 0.80\% | 0.53\% |
|  | 5.5yr | 0.34\% | 0.80\% | 0.90\% | 0.92\% |  |  |
|  | 6YR | 0.38\% | 0.90\% | 1.00\% | 0.92\% | 0.92\% |  |
|  | 7YR | 0.52\% | 0.95\% | 1.05\% | 1.08\% | 1.08\% |  |
|  | 8YR | 0.52\% | 1.05\% | 1.15\% | 1.20\% | 1.19\% |  |
|  | 9YR | 0.60\% | 1.15\% | 1.25\% | 1.31\% | 1.30\% |  |
|  | 10YR | $0.67 \%$ | 1.25\% | 1.35\% | 1.40\% | 1.39\% |  |
|  | 12YR | 0.63\% |  | 1.50\% |  | $1.59 \%$ |  |
|  | 15YR |  |  | 1.65\% | 1.96\% | 1.86\% |  |

Indicative rates only, subject to change and availability. For illustration purposes only as of June 15, 2020

## Advantages of Issuing CALLABLE CDs

- Allows the Bank to aggressively issue longer term funding at historically low rates with the ability to call and reissue if rates go even lower or funding is no longer needed
- Callable CDs are callable by the BANK, not the investor - this is the ONLY Call Option you control!
- Callable any time after initial lockout period, typically 6 months but can structure to banks needs
- The bank creates cheap, long-term options for its balance sheet
- Improved interest rate risk profile in down rate scenarios versus non-callable term funding
- No provision for early withdrawal. Can't redeem prior to maturity unlike QwickRate or other sources
- No collateral posting required
- No FHLB Stock purchase required
- Provides additional liquidity by keeping borrowing lines available
- No additional ongoing fees such as subscription fees for listing service deposits
- Target specific maturities or call schedules. Lock in spread on a loan that may prepay in future
- Customize interest payments, monthly, quarterly, other. Flexible settlement dates typically 2-4 weeks
- Doesn't cannibalize retail funding markets
- THE MOST FLEXIBLE ASSET/LIABILITY TOOL IN YOUR TOOLBOX


## Advantages of Issuing CALLABLE CDs Now

- Improve Risk Position Now as Rates Go Up by Issuing Long-Term Callable CDs
- Issuing 5 Year Callable CDs will Improve Risk Profile in Up Rate Scenarios


## Market Value of Equity (MVE) Adjusted for Addition of Callable CDs

| 1 | Rate Shift | Face | DN 200 | DN 100 | BASE | UP 100 |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | UP 200

## Interest Rate Swaps vs Callable Brokered CDs

Would an Interest Rate Swap Work as Well as a Callable Brokered CD?
InstrumentCallable Brokered CD
Interest Rate Swap
Upfront Collateral Required ..... No
Additional Mark-to-Market Collateral Required ..... NoYes
Margin Call Risk ..... NoYes
ISDA Agreement in Place ..... NoYes
Loses Value if Rates Decrease ..... NoYes
LIBOR/SOFR Transition Issues ..... NoYes
Independent Third Party Valuations ..... NoYes
Board Reporting ..... NoYes
Additional Accounting Requirements ..... NoYes
Raises Liquidity YesYes
Interest Rate Risk Protection in Up Rate Scenario Yes ..... YesNo

## Interest Rate Swaps vs Callable Brokered CDs

- The Mark-to-Market Risk of Each is Similar in the Up Rate
- In the Down Rate the Swap Loses vs the Callable CD Which is Called

| 1 | Rate Shift |
| :--- | :--- |
| 2 | Five Yr Callable CD |
| 3 | Cum Chg In Value \$ |
| 4 | Cum Chg In Value \% |
| 5 |  |
| 6 | Five Yr Swap |
| 7 | Cum Chg In Value \% |


| Face | DN 200 | DN 100 | BASE | UP 100 | UP 200 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20,000 | 20,030 | 20,030 | 20,000 | 19,060 | 18,160 |
|  | (30) | (30) | - | 940 | 1,840 |
|  | -0.2\% | -0.2\% | 0.0\% | 4.7\% | 9.2\% |

$$
20,000 \frac{(\mathbf{2 , 0 6 0})}{-10.3 \%} \frac{(1,020)}{-5.1 \%}-\frac{\mathbf{9 2 4}}{0.0 \%} \frac{\mathbf{1 , 8 2 4}}{4.6 \%}
$$

## 1m LIBOR vs Bank COF vs 5 Year TSY



Interest Rates Source: Board of Governors of the Federal Reserve System (US)/Freddie Mac/FRED

## Interest Rate Swaps vs Callable Brokered CDs

- From 2009 until the end of 2015 1m LIBOR was ~20 bps, Comparable to Fed Funds
- Bank COF Trended Down During this Time Period and Began to Rise Slowly with Funds in 2016
- 1m LIBOR and Fed Funds Began their Trend Up in 2016
- Other Market Rates Began to Rise Earlier, in 2013
- Entering Into an Interest Rate Swap Would Not Have Been Advantageous Until 2016
- Issuing Long Term CDs Would Have Been Advantageous in 2012 - At All Time Lows In Rates (Like Today!) with the Opportunity to Invest in Higher Market Rates Beginning in 2013


## This may also Hold True Today:

- Issuing CDs will likely provide low cost funding for when better asset opportunities return
- It is Likely that Market Rates will Increase Before and in Anticipation of the Fed Raising the Funds Rate with the Fed Remaining Accommodative and Unlikely to Raise Prematurely
- Interest Rate Swaps will Provide Income Once the Fed Begins to Raise Rates Again BUT:

HOW LONG WILL THAT BE AFTER INVESTMENT OPPORTUNITIES HAVE ALREADY PRESENTED THEMSELVES?

## Bank Liquidity

## Bank Liquidity Trends Lower as Rates Increase

- Prepayments on Loans and Investments Slow
- Loan Demand Increases in a Stronger Economy with Higher Rates
- Deposits Turn Less Sticky when Market Rates Rise as Depositors Target Higher Returns


## Bank Liquidity Trends Higher as Rates Decrease

- Prepayments on Loans and Investments Increase
- Loan Demand Decreases in a Weaker Economy with Lower Rates
- Deposits are more Likely to Stay at the Bank and Wait for Higher Returns in Bonds or Opportunities to Invest in the Equity Markets


## Loan to Deposit Ratio versus Interest Rates

L/D Ratio moves with Interest Rates but with 9-12 Month Lag


## Bank Liquidity Tends to Trend Lower as Rates Increase



Interest Rates Source: Board of Governors of the Federal Reserve System (US)/Freddie Mac/FRED
Liquidity Ratio Source: S\&P Global
Liquidity Ratio shown represents average of all banks $<\$ 10 \mathrm{~B}$ in assets

## Many Banks Have Had a Surge in Deposits Since March

## Where did the Deposits Come From?

- Companies Have Deposited PPP Loan Proceeds into their Bank Accounts
- Companies Have Drawn on Short-Term Credit Facilities \& Placed Those Funds in Bank Deposits
- Clients have Opened up Accounts at Other Banks to Segregate Funds...
- While Others have Moved More Deposits to Primary Banking Relationships
- Clients have held on to Cash that Might have Otherwise been Invested in the Business


## Which of the Deposits are Core and Which are Transitory?

- Some Deposits Will get Drawn Down Quickly to Cover Operating Expenses/Losses
- Others Will Stay Longer as Companies Hold More Reserve Cash in Uncertain Times
- Some Deposits Leave the Bank for Higher Returns When Rates Go Back Up
- Clients Will put Money Back into their Businesses


## Many Banks Have Had a Surge in Deposits Since March

## Steps to Determine Which Commercial Deposits Might Remain with the Bank

- For each client, how many other bank relationships do they have?
- Is my bank the primary bank for that client?
- If not, where does my bank rank among the other banks used by that client?
- Is the client likely to change which banks they use for the services they need?
- Would the client change the mix of banks they do business with?
- Is my bank's current position with the client stable?
- Am I able to improve my bank's current position with the client?


## Advantages of Issuing CALLABLE CDs Now

- Funds for Callable CD Issuance WILL BE at the Bank
- No Deposit Study Needed to Determine how Long they may Remain at the Bank
- Interest Rates are at Historic Lows
- If We are Cautious Extending Assets, We Should be Aggressive Extending Funding
- Liquidity will begin to Fall as Rates Increase and Loan/Deposit Ratios begin to Rise 9-12 Months from the Bottom in Rates
- When Rates Begin to Rise, the Opportunity to Raise Low-Cost Funding Goes Away
- You May Not Need Liquidity Now BUT WILL HAVE IT WHEN NEEDED AT ALL TIME INTEREST RATE LOWS


## Conclusions

- Interest Rates are at Historic Lows
- Sell Fast Paying MBS
- Also Consider other Low Yielding Investments as Sale Candidates
- Consider a Reinvestment Mix of Higher Yielding, Lower Risk MBS
- Take into account the Banks Overall Risk Position when Making Investment Decisions
- Consider the Pros and Cons of Interest Rate Swaps versus Callable CDs
- Raise Additional Liquidity Now by Issuing Long Term Callable Brokered CDs
- Liquidity is Currently High but will begin to Fall as Rates Increase and Loan/Deposit Ratios begin to Rise 9-12 Months from the Bottom in Rates. When this happens, the Opportunity to take Advantage of Today's Rates will have Passed.
- TODAY'S RATE ENVIRONMENT IS AN OPPORTUNITY TO POSITIVELY AFFECT THE BALANCE SHEET FOR YEARS INTO THE FUTURE


## Thank You for Participating!

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