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October 17, 2024

Leverage Strategies for Depository Institutions

Speaker

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ALM First

Agenda

- Business Model of Banking
- Economic Overview and Industry Trends
- How to Effectively Fund and Leverage the Balance Sheet Cheaply
  - Current Capital and Wholesale Funding Position
  - Using Interest Rate Swaps to Lower Funding Costs
  - Leverage Proforma Analysis

"Dear Mister Fantasy play us a tune
Something to make us all happy
Do anything take us out of this gloom
Sing a song, play guitar
Make it snappy" –
"Dear Mr. Fantasy" - Traffic

Basic Business Model of Banking

Depository Business Model

- Financial intermediation
  - Accepting deposits to provide liquidity
  - “Buying” & “selling” money

Deposits & Funding

- Deposits
- Borrow
- Raise debt/capital

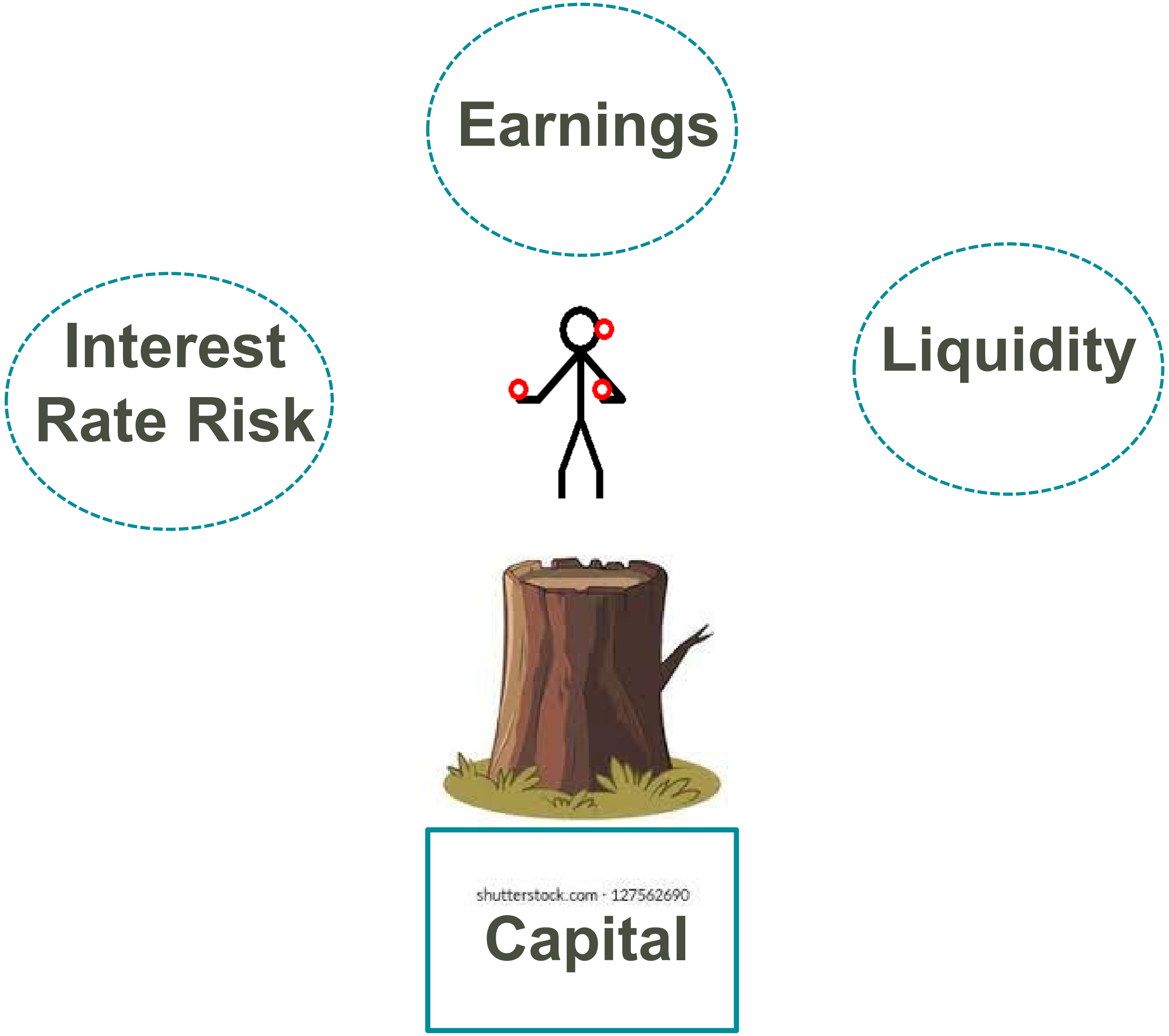
Depositories

- Manage risk
- Earn return

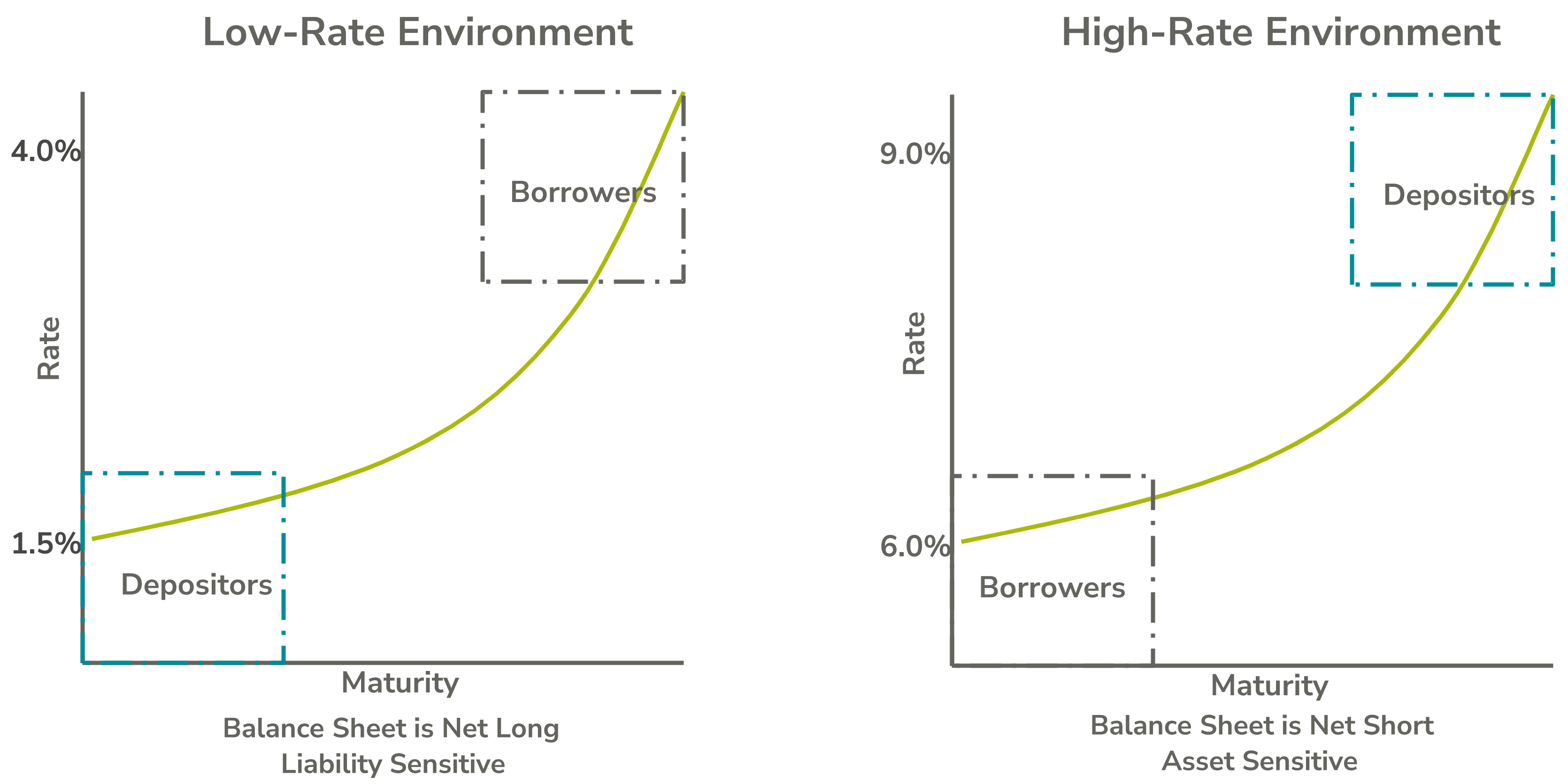
Loans & Investments

- Provide liquidity
- Other services

Daily Depository Opportunities & Challenges



Borrowers vs. Depositors – The Thrift Dilemma



Depositors & borrowers maximize their own utility

The future net interest income of a Bank will be a result of its future average balance sheet and the direction of interest rates!

Depository Checklist

- Price assets accurately
- Fund cheaply
- Leverage appropriately
- Utilize ROE/RAROC models to identify relative value
- Hedge IRR when necessary

Economic Overview

Year In Review

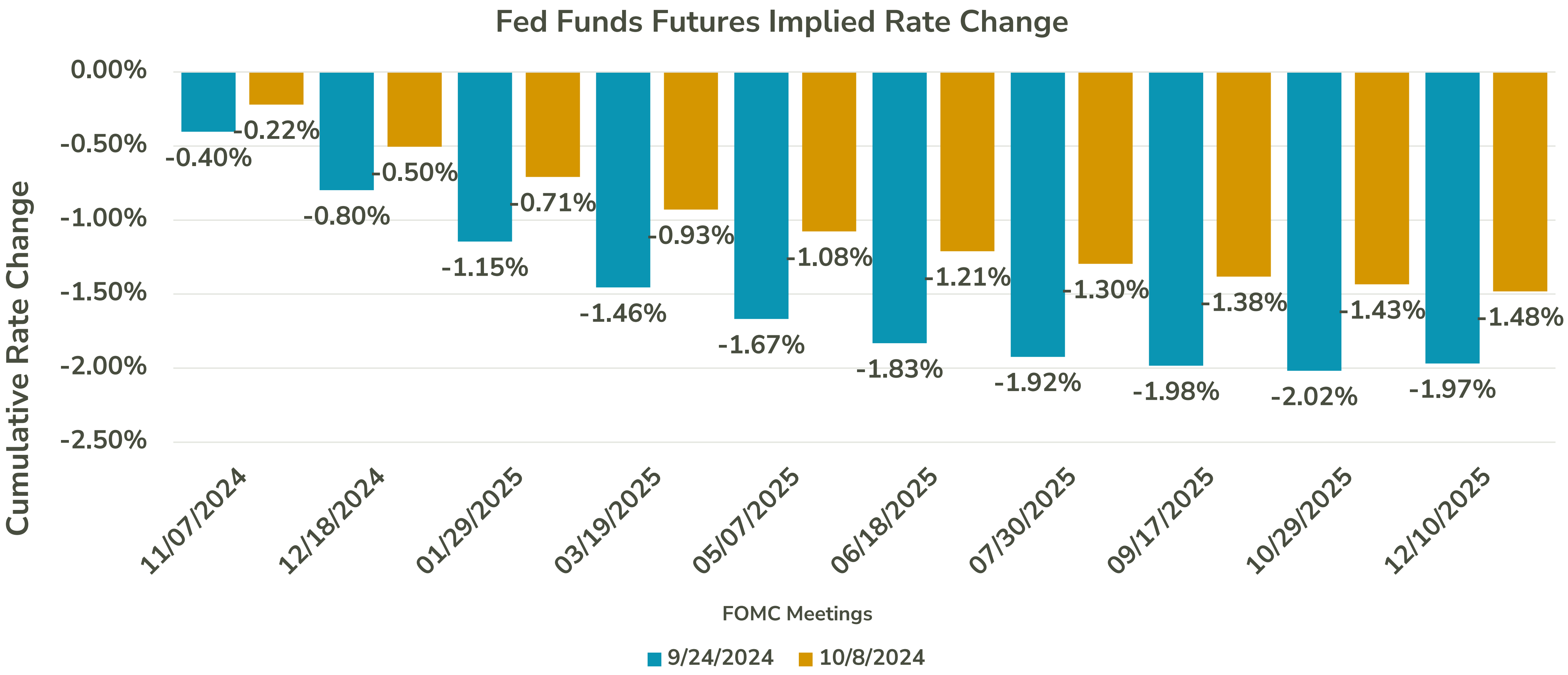
- **Volatility in market pricing for Fed policy persists**
  - Fed funds futures pricing for 2024 rate cuts:
    - 12/31/23 – 158 bps of rate cuts
    - 4/30/24 – 28 bps of rate cuts
    - 8/2/24 – 116 bps of rate cuts
- **Market and Fed focus shifts from inflation worries to labor market softening**
  - Rising unemployment rate and slowing monthly job growth has shifted tone from Fed to more balance risks to growth
  - Inflation remains above Fed's target but trending lower
- **Earnings challenges for depository institutions**
  - Net interest margin (NIM) compression and rising credit costs have pushed average earnings lower for the industry
  - Industry remains well capitalized, but commercial real estate exposure remains a concern for some community and regional banks

Current Economic Themes

- **Fed starts heavy**
  - FOMC announced a larger 50-basis point cut at the 9/18 meeting
    - Governor Bowman dissented in favor of smaller cut (first governor to dissent since 2005)
    - Updated “dot plot” reinforced that it was not a unanimous decision
  - Median FOMC participant forecast showed 100 bps of cuts this year and another 100 bps in 2025

- **September jobs report shakes market narrative**
  - Growth in nonfarm payrolls exceeds expectations by more than 100k (+254k)
    - Previous 2 months revised higher by 72k jobs
  - Unemployment rate falls from 4.22% to 4.05%
  - Average hourly earnings growth higher than expected at 0.4% m/m
    - Prior month revised higher to 0.5% m/m

Updated Fed Vs. Market Pricing for Fed Funds Rate



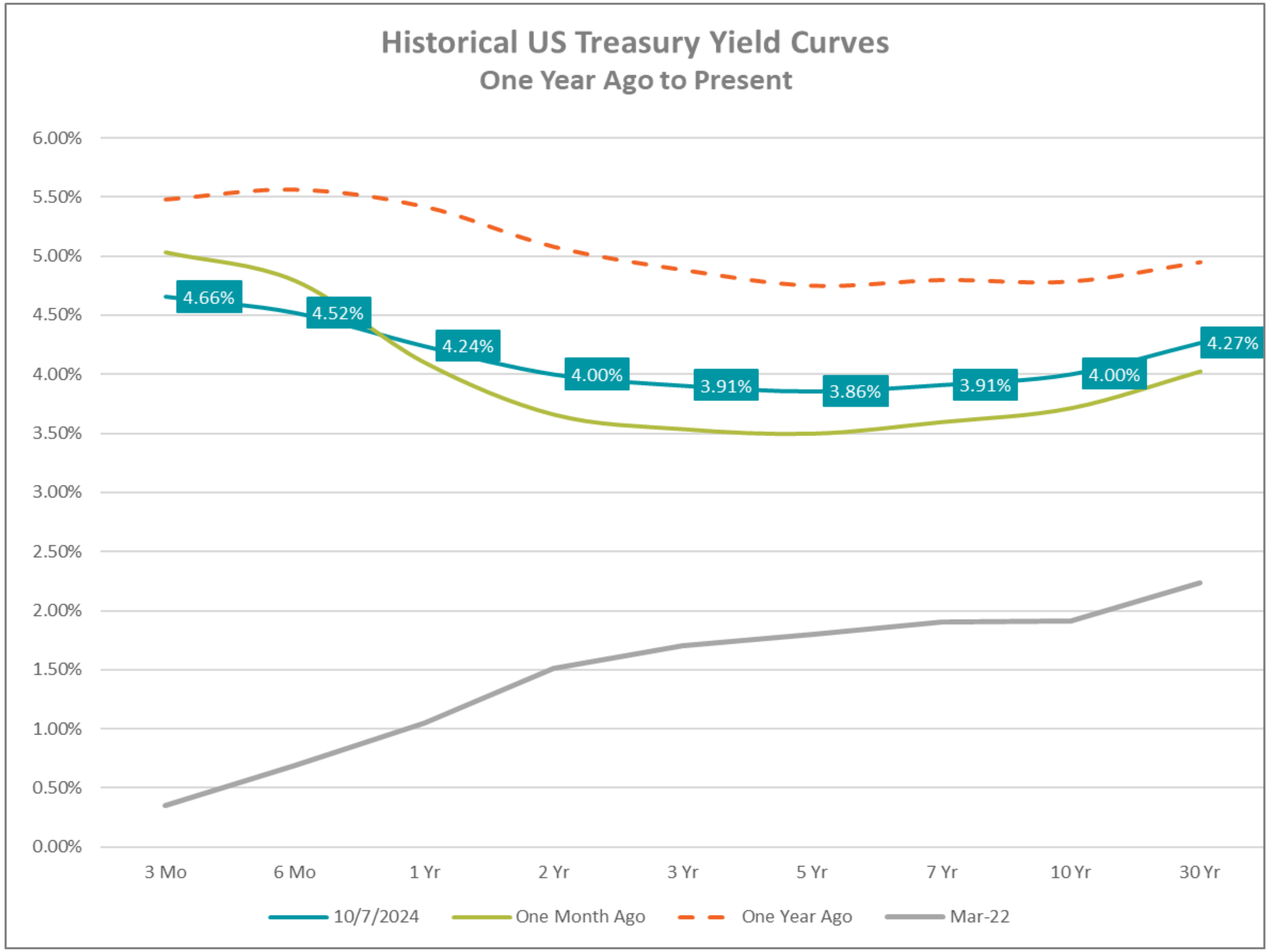
Source: Bloomberg

Yield Curve Changes

- The US Treasury Yield curve has certainly **"twisted"** since March 2022, and has led to an **"inverted"** yield curve with short-term rates higher than long-term rates, after we witnessed a **"bear flattener"** in 2022 (i.e. short-term rates rising faster than long-term rates).
- The inversion is even more pronounced between the 3-Month to 5-Year point of the curve where most depositories compete on pricing for loans and deposits.

	UST Curve			
Tenor	Current 10/7/2024	One Month Ago	One Year Ago	March 2022*
3 Mo	4.66%	5.03%	5.48%	0.35%
6 Mo	4.52%	4.79%	5.56%	0.69%
1 Yr	4.24%	4.10%	5.42%	1.05%
2 Yr	4.00%	3.66%	5.08%	1.51%
3 Yr	3.91%	3.54%	4.88%	1.70%
5 Yr	3.86%	3.50%	4.75%	1.80%
7 Yr	3.91%	3.60%	4.80%	1.90%
10 Yr	4.00%	3.71%	4.79%	1.91%
30 Yr	4.27%	4.03%	4.95%	2.24%
Spreads:				
3Mth - 5Yr	-0.80%	-1.53%	-0.73%	1.45%
2Yr - 10Yr	0.00%	0.05%	-0.30%	0.40%

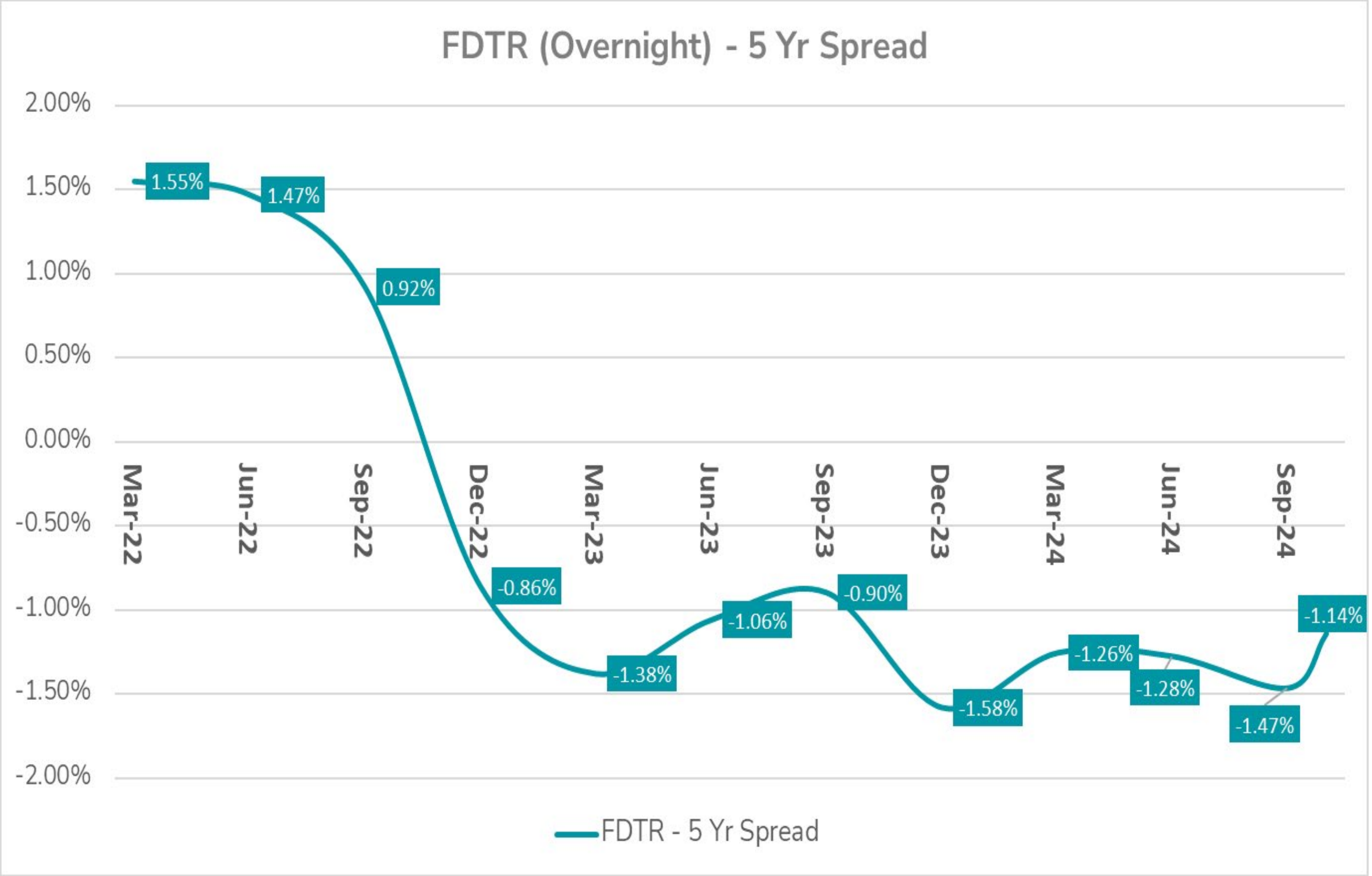
* Beginning of the most recent FOMC tightening cycle.



Source: Bloomberg October 7, 2024

Yield Curve vs Interest Rate Risk

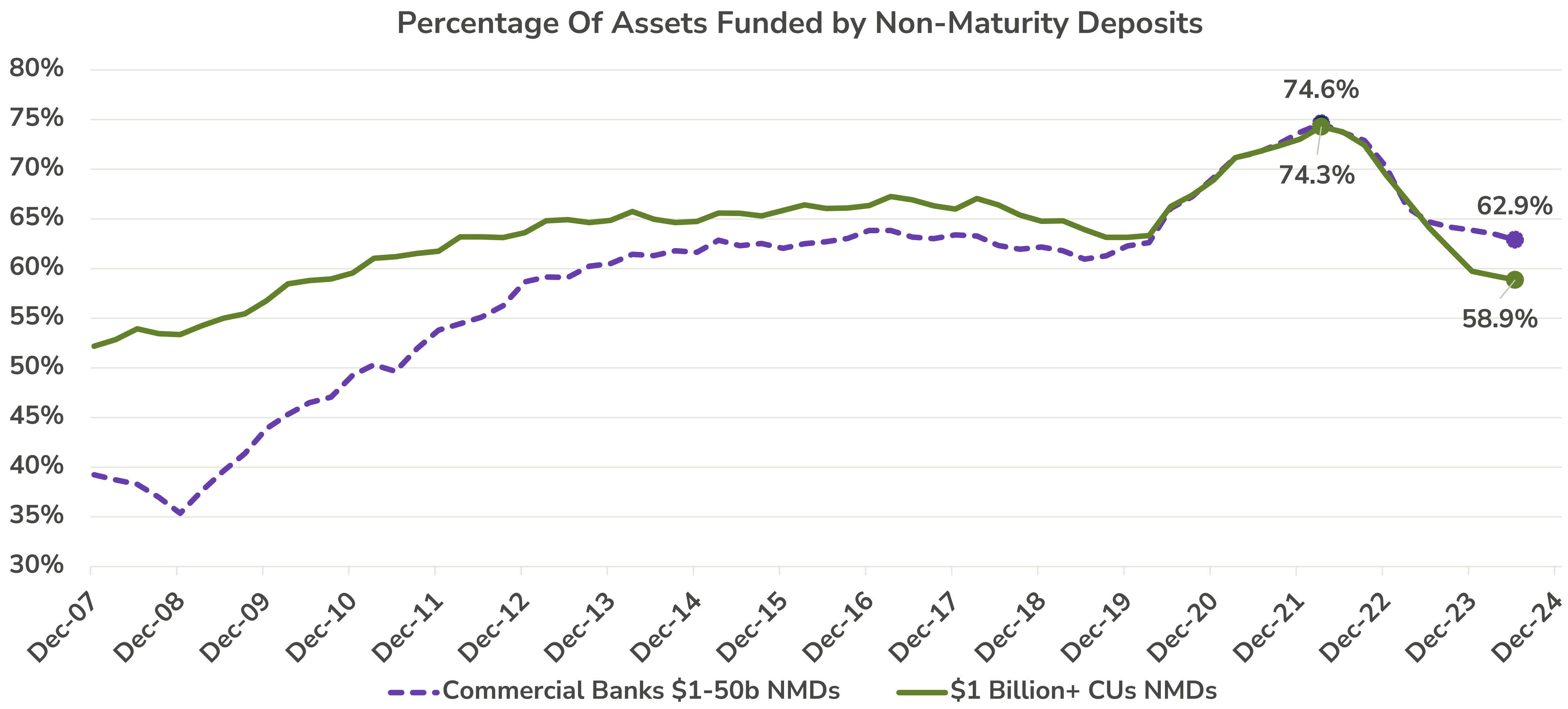
If the yield curve inversion between the FDTR (Overnight) and 5-Year UST point of the curve is expected to continue for the foreseeable future **until the FOMC officially lowers short-term rates further,** then this will continue to ultimately lead to higher funding costs for depositories and NIM pressures.



Source: Bloomberg October 7, 2024

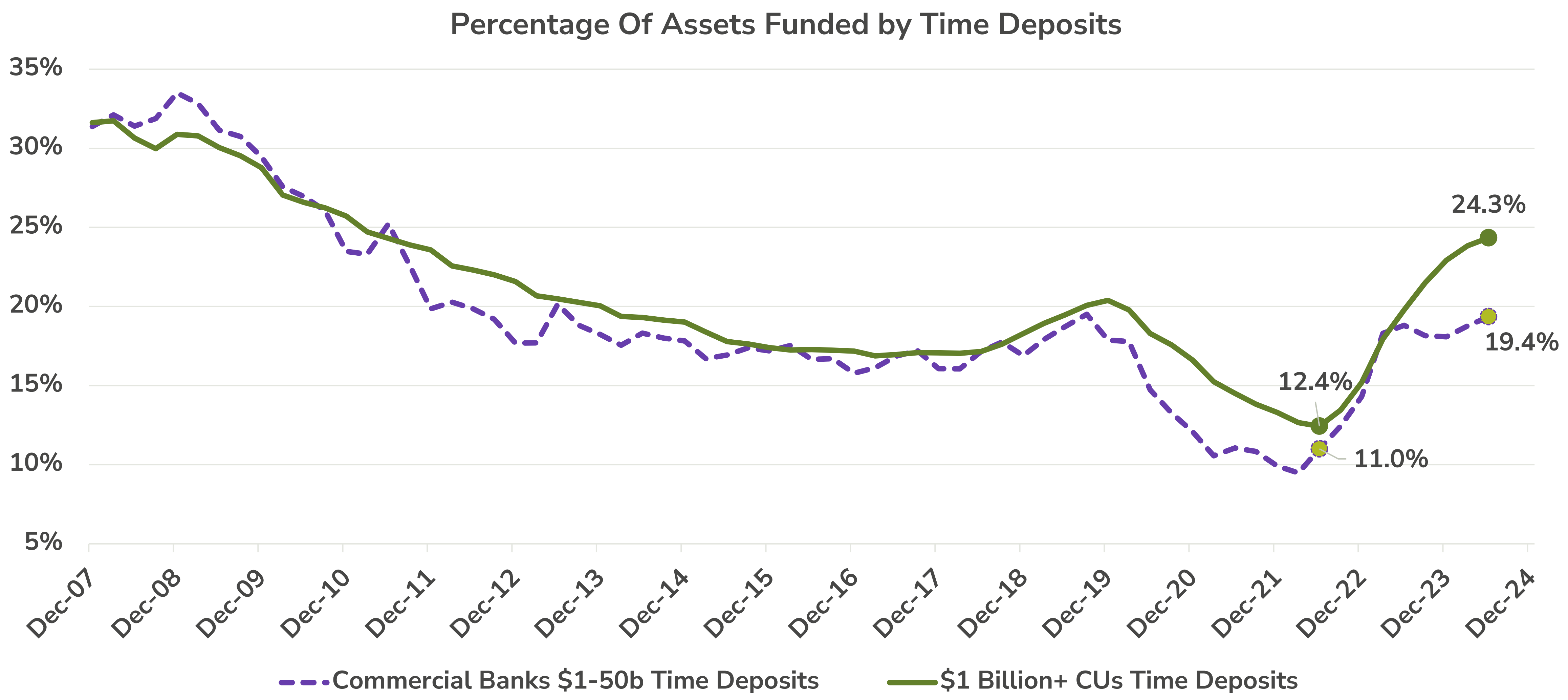
Industry Trends

Changing Funding Dynamics…



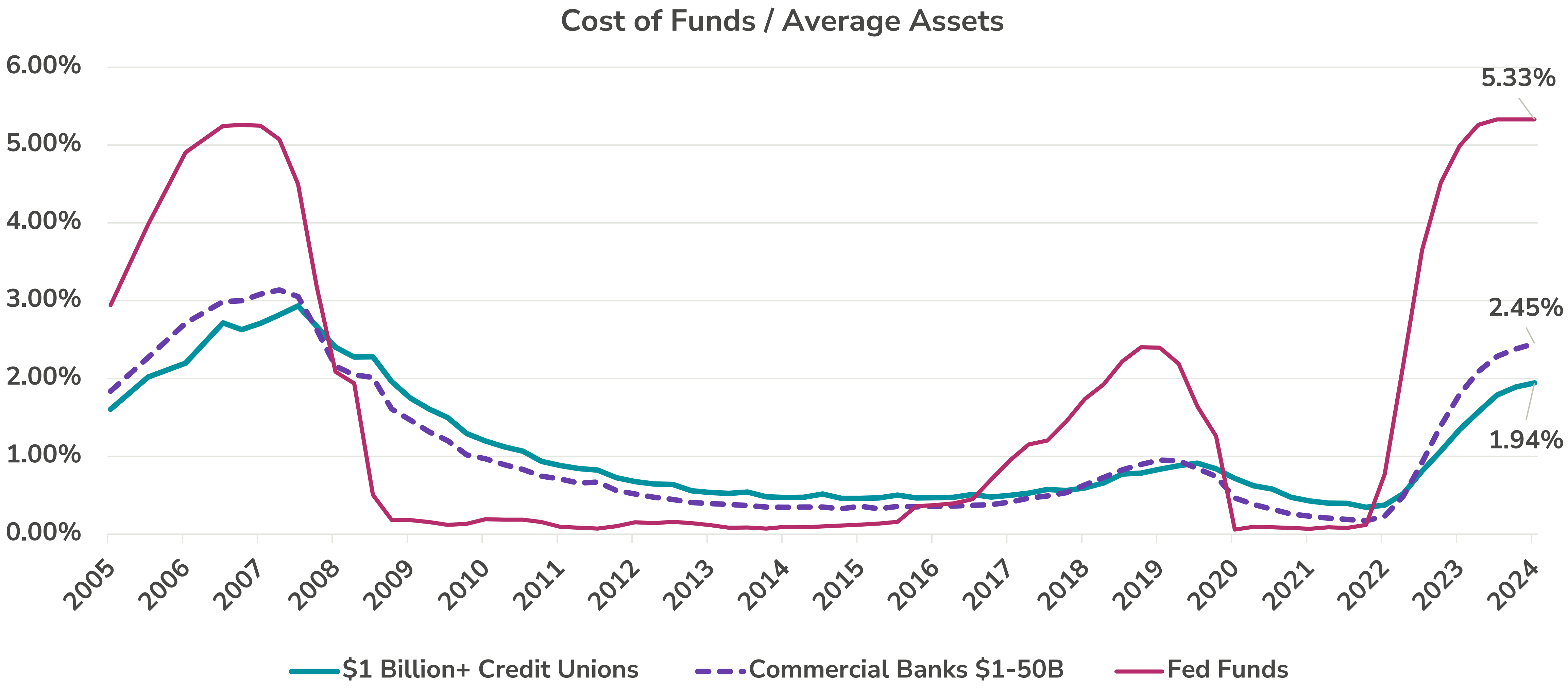
Source: S&P Global; ALM First

Higher Demand for Time Deposits



Source: S&P Global; ALM First

...And Rising Cost of Funds



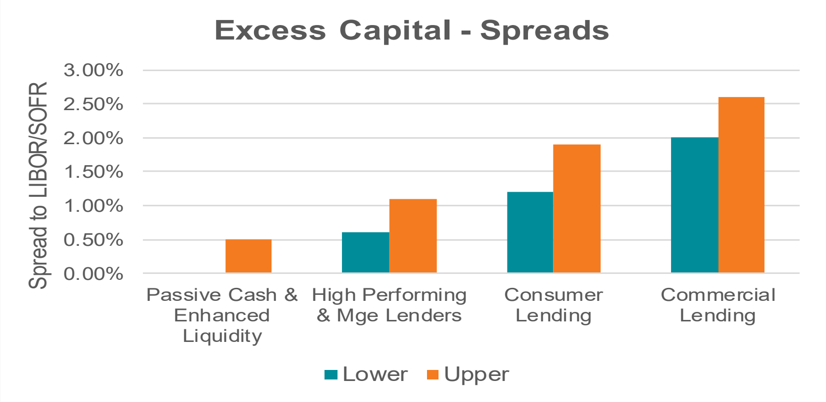
Source: S&P Global; ALM First

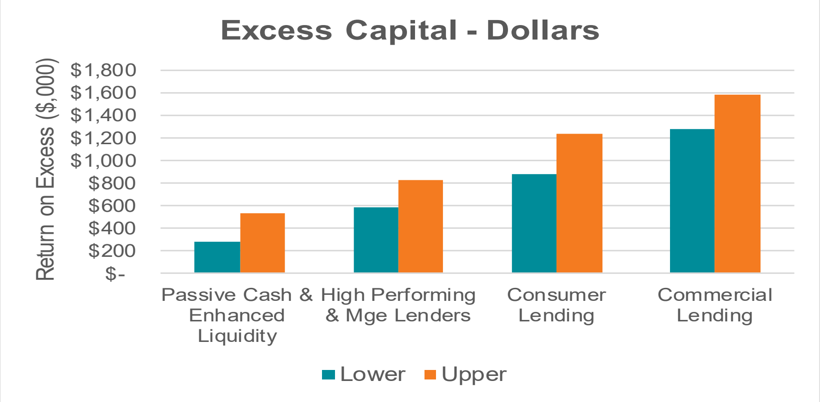
Current Capital and Wholesale Funding Position

Current Capital and Excess Capital Analysis

Inputs as of 6/30/2024	
Asset Size ($,000)	1,825,083
Current Capital/Net Worth	217,985
Current Capital Ratio	11.94%
Target Capital Ratio	11.63%
Leverage Multiplier	8.60
SOFR	4.83%
Tax Rate	0.00%
Additional Assets	50,000

Excess Capital Model for Sample Depository Institution at 11.63% Target Capital Ratio (Actuals)





	Passive Cash and Enhanced Liquidity Portfolios						High Performing Bond Portfolios & Mortgage Lenders					
Spread to SOFR	0.00%	0.10%	0.20%	0.30%	0.40%	0.50%	0.60%	0.70%	0.80%	0.90%	1.00%	1.10%
Return on Excess Capital (%)	4.83%	5.69%	6.55%	7.41%	8.27%	9.13%	9.99%	10.85%	11.71%	12.57%	13.43%	14.29%
Return on Excess Capital ($,000)	281	331	381	431	481	531	581	631	681	731	781	831

	Consumer Lending Focused						Commercial Lending Focused					
Spread to SOFR	1.20%	1.30%	1.50%	1.70%	1.80%	1.90%	2.00%	2.10%	2.20%	2.40%	2.50%	2.60%
Return on Excess Capital (%)	15.15%	16.01%	17.73%	19.45%	20.31%	21.17%	22.03%	22.89%	23.75%	25.47%	26.33%	27.19%
Return on Excess Capital ($,000)	881	931	1,031	1,131	1,181	1,231	1,281	1,331	1,381	1,481	1,531	1,581

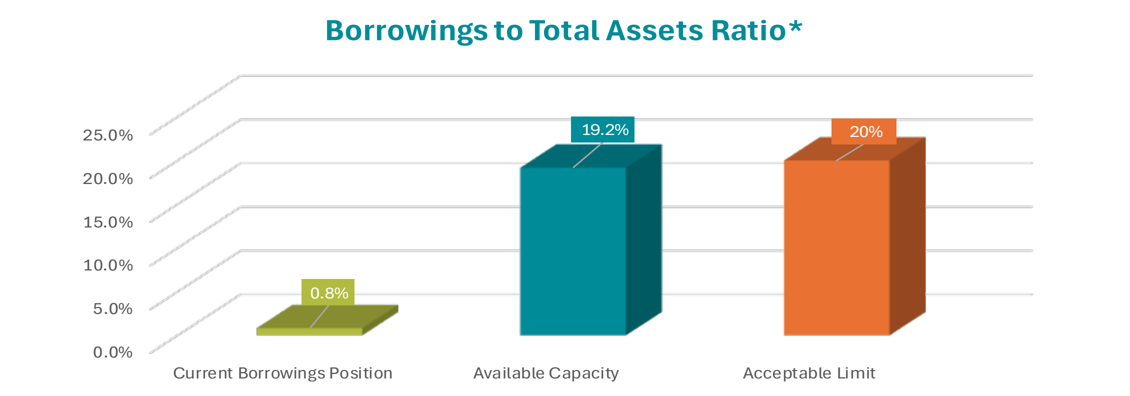
1) Excess capital earns a return and that return is a function of leverage, the risk adjusted spread to SOFR, and the tax rate.
2) The capital utilization question is rooted in the ROE calculator framework and becomes an asset pricing and allocation discussion.
3) The simple model above illustrates this idea at varying spreads to SOFR.
4) Unleveraged capital simply earns the "funding benefit of equity" or the short term SOFR rate.
5) Leveraged capital earns the funding benefit of equity plus the leveraged spread tax adjusted.

The illustration represents a hypothetical situation and it is not intended to be representative of any particular client or situation.

Current Wholesale Funding Ratio

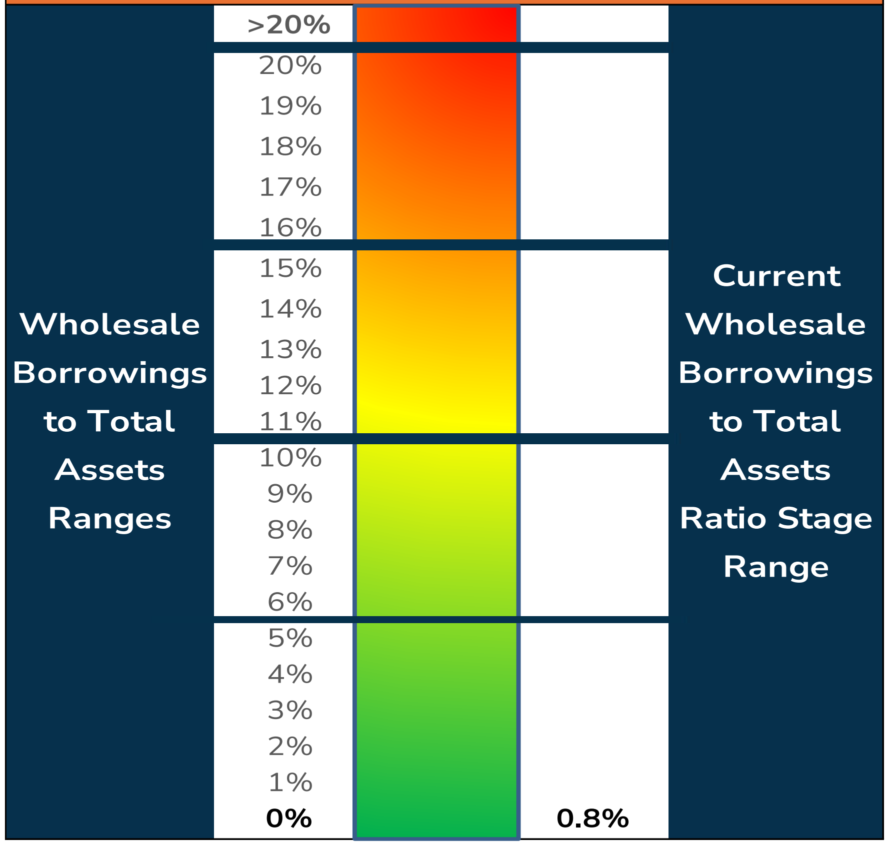
Sample Depository Institution	
Current Wholesale Borrowings to Total Assets Position*	Outstanding Balance
Maximum Borrowings/Total Assets Target Limit	<= 20%
Total Wholesale Borrowings (incl. FHLB & Brokered Deposits)	$ 15,042
Total Assets	$1,825,083
Current Wholesale Borrowings/Total Assets Ratio	0.8%
Available Capacity (Maximum 20% of Total Assets)	$349,975
Available Capacity as a Percent of Total Assets	19.2%

Current Borrowings Liquidity Risk Assessment:	*Current Position is Considered Stage 1 Low - Borrowings Position (Low 0% to 10%)*



* Information obtained from most recently published Call Report.

Wholesale Borrowings/Liquidity Risk Heat Index



Borrowings Capacity Levels:

Stage 1 =	Low Borrowings to Total Assets Position (<=10%)
Stage 2 =	Low to Moderate Position (>10% and <=15%)
Stage 3 =	Reaching Acceptable Capacity Limit (>15% and <=20%)
Stage 4 =	At or Exceeds Acceptable Capacity Limit (>20%)

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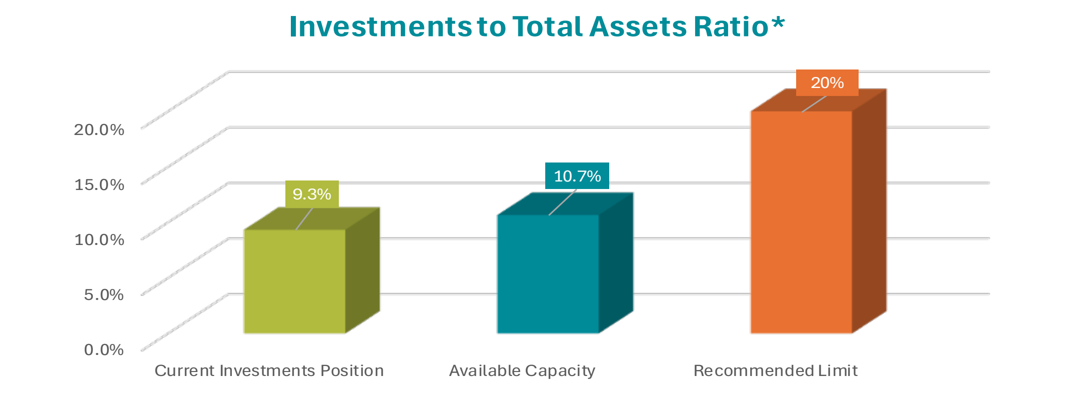
Current Investment Portfolio Ratio

Sample Depository Institution	
Current Investments to Total Assets Position*	**Outstanding Balance**
Recommended Investments/Total Assets Target	15% to 20%
Total Investments (Excl. Fed Funds Sold)	$ 170,383
Total Assets	$1,825,083
Current Investments/Total Assets Ratio	**9.3%**
Available Capacity (Assumes 20% of Total Assets)	$194,634
Available Capacity as a Percent of Total Assets	**10.7%**

Current Investment Portfolio Sector Allocation Assessment:	***Current Ratio Position is Considered Stage 3 - Low to Moderate Position (>5% and <10%)***



* Information obtained from most recently published Call Report.

Total Investment to Assets Ratio Heat Index

Total Investment to Total Asset Stage Ranges		Current Ratio of Total Investment/ Total Assets Stage Range
	>20%	
	20%	
	19%	
	18%	
	17%	
	16%	
	15%	
	14%	
	13%	
	12%	
	11%	
	10%	
	9%	9.3%
	8%	
	7%	
	6%	
	5%	
	4%	
	3%	
	2%	
	1%	
	0%	

Investment to Asset Ratio Levels:

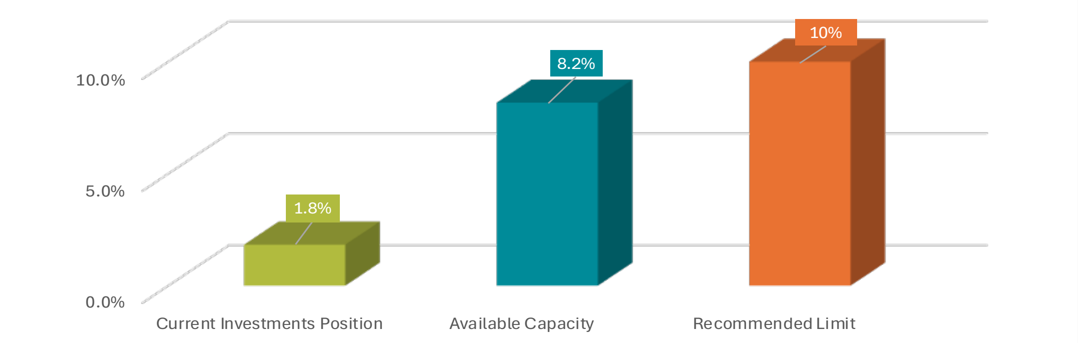
Stage 1 =	At or Exceeds Sector Allocation Recommendation (>=20%)
Stage 2 =	Reaching Recommended Acceptable Limit (>15% and <=20%)
Stage 3 =	Low to Moderate Position of Recommended Limit (>5% and <=10%)
Stage 4 =	Very Low Position of Recommended Limit (<5%)

Current Fed Funds Sold & Cash Equiv. Ratio

Sample Depository Institution	
Current Cash & Cash Equiv to Total Assets Position*	Outstanding Balance
Recommended Cash & Cash Equiv/Total Assets Target	5% to 10%
Total Cash & Cash Equivalents	$ 33,410
Total Assets	$1,825,083
Current Cash & Cash Equiv/Total Assets Ratio	1.8%
Available Capacity (Assume 10% of Total Assets)	$149,098
Available Capacity as a Percent of Total Assets	8.2%

Current Investment Portfolio Sector Allocation Assessment:	*Current Ratio Position is Considered Stage 1 (Low 0% to 5%)*

Investments to Total Assets Ratio*



Cash & Cash Equivalents to Total Assets Ratio Heat Index

Cash & Cash Equivalents to Total Asset Ranges	Current Ratio of Cash & Cash Equivalents to Total Asset Stage Ranges
>20%	
20%	
19%	
18%	
17%	
16%	
15%	
14%	
13%	
12%	
11%	
10%	
9%	
8%	
7%	
6%	
5%	
4%	
3%	
2%	
1%	**1.8%**
0%	

Investment to Asset Ratio Levels:

Stage 1 =	At or Below Sector Allocation Recommendation (<=5%)
Stage 2 =	Operating in Recommended Acceptable Range (>5% and <=10%)
Stage 3 =	Maintaining Beyond Recommended Limit (>10% and <=15%)
Stage 4 =	Exceeding Recommended Position (i.e. Holding Too Much Liquidity) (>20%)

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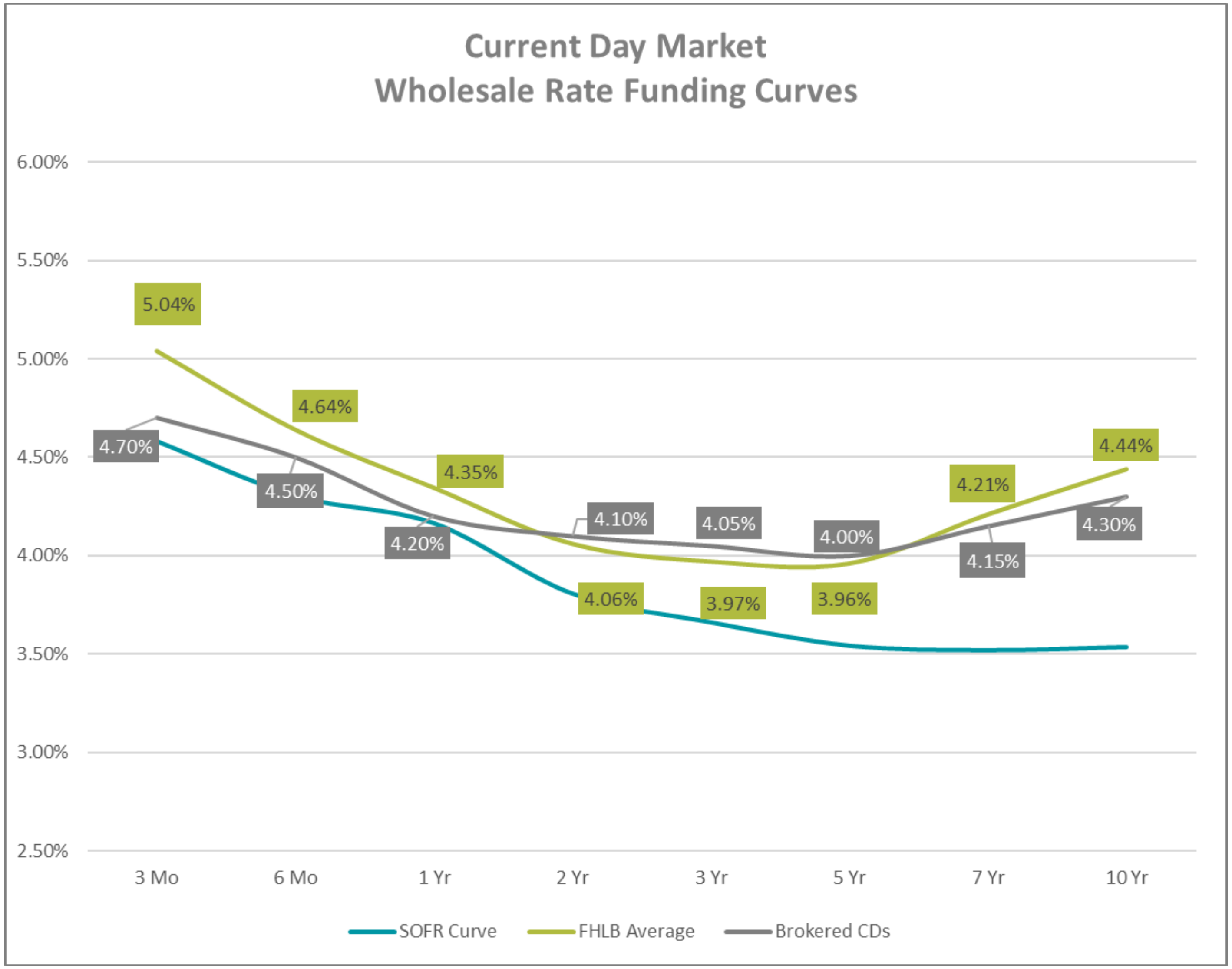
Using Interest Rate Swaps to Hedge Wholesale Borrowings

Wholesale Funding Curve

- Can be cheaper than raising retail deposit rates and/or running a "Odd-Lot" CD Term Specials
- **WYSIWYG (What You See Is What You Get) –** becomes the absolute marginal funding rate with no impact on disintermediation of lower cost funding on the balance sheet.
- Very efficient way to secure funding but creates no franchise value
- More expensive than derivatives and dilutes Capital/Net Worth Ratio
- **Wholesale Borrowings** (if used wisely within your Liquidity Policy metrics) will provide you a tool to mitigate interest rate risk and even act as a supplement for short-term/long-term liquidity needs **(i.e., not a bad thing!)**
- **Borrowings/Assets ratio that operates in a range 10% to 20% is considered "safe" funding best practices strategies for depositories to consider**



Source: Bloomberg October 9, 2024

What is a Term Liquidity Premium?

- A ***liquidity premium*** in this context is the institution-specific funding premium over a market reference rate.

- The ***term liquidity premium (TLP)*** is the additional cost over a swap rate the borrower pays to access **term** liquidity for a given period of time.
  - The premium gets larger the farther out the term.

Term Liquidity Premium*					
Tenor	SOFR Curve	FHLB Average	TLP	Brokered CD Rates	TLP
3 Mo	4.64%	5.02%	38 BP	4.70%	6 BP
6 Mo	4.29%	4.64%	35 BP	4.50%	21 BP
1 Yr	4.12%	4.41%	29 BP	4.20%	9 BP
2 Yr	3.77%	4.17%	40 BP	4.10%	33 BP
3 Yr	3.64%	4.08%	44 BP	4.05%	41 BP
5 Yr	3.54%	4.07%	53 BP	4.00%	46 BP
7 Yr	3.53%	4.32%	79 BP	4.15%	62 BP
10 Yr	3.56%	4.53%	97 BP	4.30%	74 BP

** Pricing Indications as of October 9, 2024*

Source: Bloomberg, Regional FHLBs

Why Is Now the Time to Consider Hedging Strategies?

- Mitigate variability, improve predictability
- Be market agnostic
- Enhance budget results
- Promote risk management
- **Optimize the Balance Sheet**

Payer vs. Receiver Swap

Payer Swap

- “Pays” the fixed rate
- Receives float
- Protects against rising rates
- Negative duration

Receiver Swap

- “Receives” the fixed rate
- Pays float
- Protects against falling rates
- Positive duration

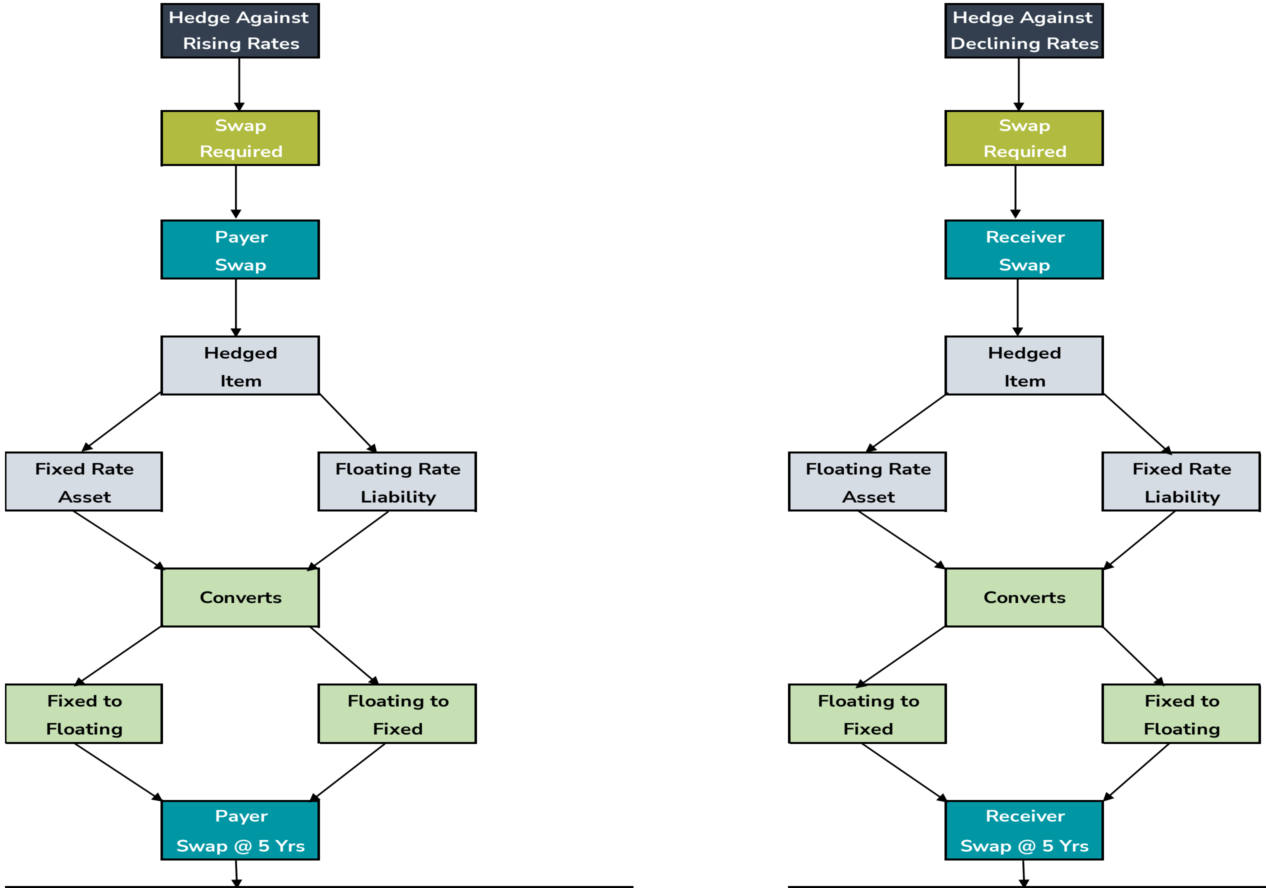
Payer/Receiver Swap Levels

SOFR Curve:			
Tenor	Current Day	1-Mth Ago	1-Year Ago
1 Mo	4.82%	5.11%	5.34%
3 Mo	4.64%	4.94%	5.41%
6 Mo	4.29%	4.41%	5.42%
1 Yr	4.12%	4.15%	5.43%
2 Yr	3.77%	3.79%	4.99%
3 Yr	3.64%	3.65%	4.71%
5 Yr	**3.54%**	**3.55%**	**4.52%**
7 Yr	3.53%	3.53%	4.48%
10 Yr	3.56%	3.56%	4.49%
15 Yr	3.63%	3.62%	4.52%
30 Yr	3.50%	3.48%	4.28%

Other US Rates:			
Tenor	Current Day	1-Mth Ago	1-Year Ago
FF Effective	**4.83%**	**4.83%**	**5.33%**
FDTR	5.00%	5.00%	5.50%
IORB	4.90%	4.90%	5.40%
Prime	8.00%	8.00%	8.50%
Overnight SOFR	4.83%	0.00%	0.00%
30-Day Avg SOFR	5.06%	5.34%	5.32%
90-Day Avg SOFR	5.28%	5.37%	5.29%

Source: Bloomberg as of October 9, 2024

Interest Rate Swap Hedging Use Cases



Pay Fix Rate Swap @ 5 Year	3.54
Receive Float Rate Swap FF Effective	4.83
Net Pay/(Receive) Swap Payment*	**(1.29)**

* If the **Net Pay/(Receive) Swap Payment** is ***(Negative),*** then the institution receives money from the Swap Counterparty on the notional amount being hedged (i.e. income).

Pay Floating Rate Swap FF Effective	4.83
Receive Fix Rate Swap @ 5 Year	3.54
Net Pay/(Receive) Swap Payment*	**1.29**

* If the **Net Pay/(Receive) Swap Payment** is ***(Positive)*** , then the institution pays money to the Swap Counterparty on the notional amount being hedged (i.e. expense).

Swap Spreads Since March 2022

	Payer Swap Levels			Receiver Swap Levels		
Quarter Ending/Current	Pay Fix Rate Swap @ 5 Year	Receive Float Rate Swap Fed Funds	Net Pay/(Receive) Swap Payment*	Pay Floating Rate Swap Fed Funds	Receive Fix Rate Swap @ 5 Year	Net Pay/(Receive) Swap Payment*
Mar-22	1.68%	0.08%	**1.60%**	0.08%	1.68%	**-1.60%**
Jun-22	2.99%	1.58%	**1.41%**	1.58%	2.99%	**-1.41%**
Sep-22	3.92%	3.08%	**0.84%**	3.08%	3.92%	**-0.84%**
Dec-22	3.40%	4.33%	**-0.93%**	4.33%	3.40%	**0.93%**
Mar-23	3.36%	4.83%	**-1.47%**	4.83%	3.36%	**1.47%**
Jun-23	3.78%	5.07%	**-1.29%**	5.07%	3.78%	**1.29%**
Sep-23	4.39%	5.33%	**-0.94%**	5.33%	4.39%	**0.94%**
Dec-23	3.57%	5.33%	**-1.76%**	5.33%	3.57%	**1.76%**
Mar-24	3.98%	5.33%	**-1.35%**	5.33%	3.98%	**1.35%**
Jun-24	3.99%	5.33%	**-1.34%**	5.33%	3.99%	**1.34%**
Sep-24	3.23%	4.83%	**-1.60%**	4.83%	3.23%	**1.60%**
10/09/24	3.54%	4.83%	**-1.29%**	4.83%	3.54%	**1.29%**

* If the **Net Pay/(Receive) Swap Payment** is ***(Negative),*** then the institution receives money from the Swap Counterparty on the notional amount being hedged (i.e. income).

* If the **Net Pay/(Receive) Swap Payment** is ***(Positive)*** , then the institution pays money to the Swap Counterparty on the notional amount being hedged (i.e. expense).

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Overview of a Pay Fix/Receive Float Swap Transaction*

Derivatives Trade Detail Section:	
Hedge Tenor:	5 Year
Swap Structure:	Pay Fix/Receive Float
Notional Amount ($000):	$25,000
Origination/Transaction Date:	10/9/24
Maturity Date:	10/31/29
Accrual Year Base:	Actual/365
Estimated Pay Rate - Fixed:	**3.54%**
Receive Rate Index (Float):	**FF Effective**
Estimated Duration:	5 Years
Hedged Item:	FHLB 30-Day
Index Rate:	FF Effective
Current FHLB 30-Day	4.95%
Index Spread on Borrowing:	0.00%
Current Rate on Funding	**4.95%**
Current Balance of Portfolio:	$25,000
Percentage Hedge Target:	100.0%
Notional Hedged Amount	**$25,000**

Total Portfolio Sensitivity Analysis									
FHLB 30-Day Borrowng Rate:	**-300 BP**	**-200 BP**	**-100 BP**	**Base**	**+100 BP**	**+200 BP**	**+300 BP**	**+400 BP**	**+500 BP**
Current FHLB 30-Day	1.95%	2.95%	3.95%	**4.95%**	5.95%	6.95%	7.95%	8.95%	9.95%
Less: Spread	0.00%	0.00%	0.00%	**0.00%**	0.00%	0.00%	0.00%	0.00%	0.00%
FHLB 30-Day Funding Rate(a)	**1.95%**	**2.95%**	**3.95%**	**4.95%**	**5.95%**	**6.95%**	**7.95%**	**8.95%**	**9.95%**
Net Swap Rate:									
Pay Rate - Fixed for 5 Years	3.54%	3.54%	3.54%	**3.54%**	3.54%	3.54%	3.54%	3.54%	3.54%
Rec Rate FF Effective - Floating	1.83%	2.83%	3.83%	**4.83%**	5.83%	6.83%	7.83%	8.83%	9.83%
Net Pay/(Rec) Swap Rate[b]	**1.71%**	**0.71%**	**-0.29%**	**-1.29%**	**-2.29%**	**-3.29%**	**-4.29%**	**-5.29%**	**-6.29%**
Net Term Funding Rate[c]	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**
Unhedged Interest Expense	($488)	($738)	($988)	**($1,238)**	($1,488)	($1,738)	($1,988)	($2,238)	($2,488)
Hedged NII Impact[d]	($427)	($177)	$73	**$323**	$573	$823	$1,073	$1,323	$1,573
Total Interest Expense	**($915)**	**($915)**	**($915)**	**($915)**	**($915)**	**($915)**	**($915)**	**($915)**	**($915)**
Wtd Avg Cost of Portfolio[e]	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**	**3.66%**
Rate (Savings)/Cost[f]	**1.71%**	**0.71%**	**-0.29%**	**-1.29%**	**-2.29%**	**-3.29%**	**-4.29%**	**-5.29%**	**-6.29%**

** Pricing Indications as of October 9, 2024*

Footnotes:

(a) **Unhedged Item (Net Deposit Rate)** = FHLB 30-Day Borrowing Rate - Less Spread

(b) **Net Pay/(Receive) Rate on Swap** = Fixed Rate Pay to Counterparty - Receive Rate (Float)

(c) **Net Term Fund Rate after Swap** = Net Funding Rate + Net Pay/(Receive) Rate on Swap

(d) **Hedged Net Interest Income Impact** = Notional Hedged Amount* Net Pay/(Receive) Rate on Swap

(e) **Wtd Avg Cost of Portfolio** = Total Interest Expense(Hedged & Unhedged)/Total Balance of Portfolio

(f) **Rate (Savings)/Cost** = FHLB 30-Day Borrowing Rate (Unhedged) - Wtd Avg Cost of Portfolio

The illustration represents a hypothetical situation and it is not intended to be representative of any particular client or situation.

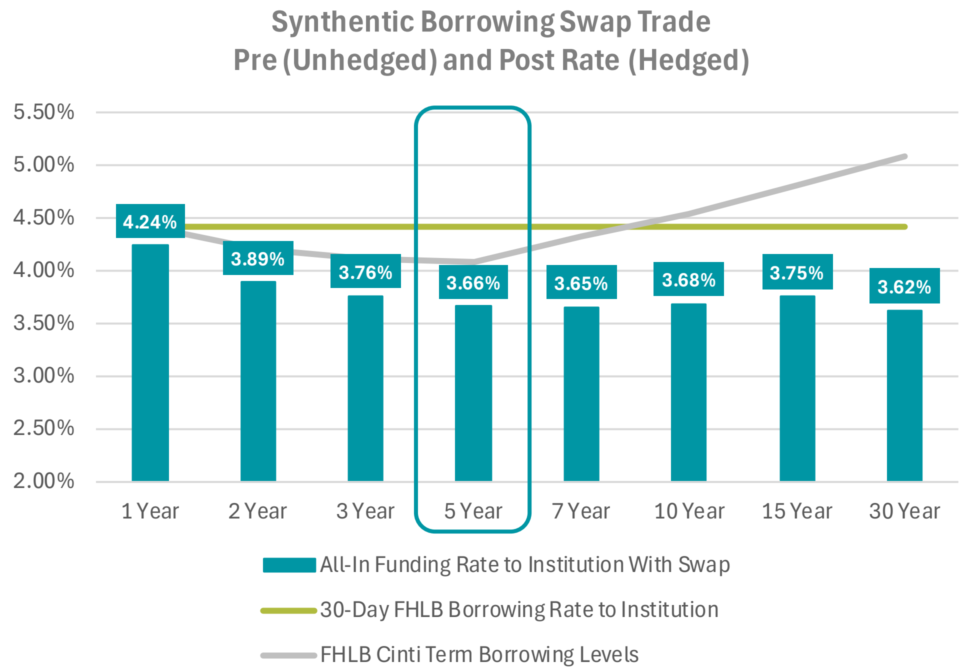
Overview of a Pay Fix/Receive Float Swap Transaction*

Current Day Pay Fix/Receive Float Swap Hedge Costs: *Converting a Floating Rate Liability to Fixed Rate (Payer Swap)*

Synthentic Borrowing Swap Trade

Term	FHLB 30-Day Cinti	Pay Fix Rate	Receive Fltg Rate	Net Pay/ (Rec) Rate*	All-In Rate With Swap
1 Year	**4.95%**	4.12%	4.83%	-0.72%	**4.24%**
2 Year	**4.95%**	3.77%	4.83%	-1.06%	**3.89%**
3 Year	**4.95%**	3.64%	4.83%	-1.19%	**3.76%**
5 Year	**4.95%**	**3.54%**	**4.83%**	**-1.29%**	**3.66%**
7 Year	**4.95%**	3.53%	4.83%	-1.30%	**3.65%**
10 Year	**4.95%**	3.56%	4.83%	-1.27%	**3.68%**
15 Year	**4.95%**	3.63%	4.83%	-1.20%	**3.75%**
30 Year	**4.95%**	3.50%	4.83%	-1.33%	**3.62%**

* Net Pay/(Rec) Swap rate netted against Net Funding Rate paid.



Source: Bloomberg, Regional FHLBs

By utilizing a swap, the institution manages margins regardless of where rates move:

- You can reduce the Term Liquidity Premium factor compared to borrowing term advances, and,
- Depending on which term you choose, the ultimate funding cost (i.e. All-In Rate With Swap) becomes a fixed rate instrument because the interest rate swap makes the funding cost similar to a Borrowing

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Funding Comparisons on Leverage Analysis*

Funding Comparisons on Leverage Analysis (All-In Payer Swap Rate vs FHLB Cinti Term Borrowings)

Current Indications as of October 9, 2024

Converting a Floating Rate Liability (FHLB 30-Day Borrowing)[1] to a Fixed Rate Term with a Payer Swap

Pricing Indications as of October 9, 2024

	(a)	(b)	(c)	(d) = (b - c)	(e)	(f)	(g) = (b -f)	(h) = (g * Notional)
Funding Rates*	Current FHLB Cinti 30-Day Rate	All-In Funding Costs After Swap	Current SOFR Curve	All-In Swap Rate Over/(Under) SOFR	Original TLP[2] FHLB Markup	Current FHLB Cinti Term Funding	All-In Swap Rate Over/(Under) FHLB Cinti	Annualized Interest Expense Savings/(Cost)[3] ($000)
1 Year	4.95%	4.24%	4.12%	12 BP	31 BP	4.42%	(19) BP	$46
2 Year	4.95%	3.89%	3.77%	12 BP	43 BP	4.20%	(31) BP	$79
3 Year	4.95%	3.76%	3.64%	12 BP	47 BP	4.11%	(35) BP	$89
4 Year	4.95%	3.71%	3.59%	12 BP	51 BP	4.10%	(39) BP	$97
5 Year	4.95%	3.66%	3.54%	12 BP	54 BP	4.08%	(42) BP	$105
6 Year	4.95%	3.66%	3.54%	12 BP	66 BP	4.20%	(54) BP	$136
7 Year	4.95%	3.65%	3.53%	12 BP	79 BP	4.32%	(67) BP	$167
10 Year	4.95%	3.68%	3.56%	12 BP	98 BP	4.54%	(86) BP	$214

Source: Bloomberg, Regional FHLBs

(1) Current FHLB 30-Day Borrowing Rate 4.95%

(2) TLP = The Term Liquidity Premium amount equals FHLB markup on each borrowing cost maturities.

(3) On Notional Amount of $25,000

** Pricing Indications as of October 9, 2024*

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Leverage Analysis and Proforma Results

Reinvestment Spreads/Opportunities for Leverage Portfolio ($000)*

Leverage Target Amount	$ 50,000

Current Capital/Net Worth Ratio	11.94%	As of June 30, 2024
Target Capital/Net Worth Ratio	11.63%	

Asset Sector:	Purchase Price	Target Amount ($000)	Book Value	Coupon	Book Yield	P&L Impact	Avg Life
CMBS Fixed [1]	100.00	$ 25,000	$ 25,000	4.20%	4.20%	$ 1,050	5.00
HECM Floater (Variable) [2]	100.00	$ 25,000	$ 25,000		6.00%	$ 1,500	
Total Securities Purchased		**$ 50,000**	**$ 50,000**		**5.10%**	**$ 2,550**	

Liability Sector	Purchase Price	Target Amount ($000)	30-Day FHLB Cinti	Payer Swap Impact** Pay Fix	Payer Swap Impact** Receive Float	Payer Swap Impact** Net Pay Fix	Net Funding Cost	P&L Impact	Term Funding Life
30-Day FHLB Debt [3]	100.00	$ 25,000	4.95%	3.54%	4.83%	-1.29%	3.66%	$ (915)	5.00
30-Day FHLB Debt (Variable)	100.00	$ 25,000	4.95%				4.95%	$ (1,238)	
Total Debt (Match Funded)		**$ 50,000**	**4.95%**				**4.30%**	**$ (2,152)**	

** Payer Swap Tenor:	5 Year

		P&L Impact
Net Spread to Matched Funding	0.80%	
Annualized Income/(Expense)	$ 398	$ 398
Current Quarter Financial Impact	$ 99	

Leverage analysis match funds a floating/fixed rate duration asset against the same liability duration to eliminate any interest rate risk in the transaction, while locking in an accretive spread to funding.

The illustration represents a hypothetical situation and it is not intended to be representative of any particular client or situation.

** Pricing Indications as of October 9, 2024*

Proforma Results on Leverage Analysis*

Proforma Results [4]	Current Qtr (2Q24)	Strategy Impact [5]	Proforma* Qtr (2Q24)
Return on Assets (ROA)	0.76%	0.01%	0.77%
Return on Equity (ROE)	7.07%	0.20%	7.27%
Net Interest Margin	3.43%	-0.07%	3.36%
Efficiency Ratio	76.18%	-0.43%	75.75%
Total Investments/Total Assets	9.3%	2.3%	11.7%
Cash & Equivalent/Total Assets	1.8%	-0.1%	1.8%
Total Borrowings/Total Assets	0.8%	2.6%	3.4%

Transaction

Target Notional Amount of Balance Sheet Item	$	50,000
Current Book Yield of Investments Identified for Purchase		**5.10%**
Cost of Matched Funding (Hedged & Unhedged)		4.30%
Net Interest Spread on Leverage Trade		**0.80%**
Annualized Incremental Income ($000)	**$**	**398**
Current Quarter Incremental Income Impact	**$**	**99**

** Pricing Indications as of October 9, 2024*

Footnotes:

(1) Executed Trade as of October 09, 2024

(2) Coupon = 30-Day Avg SOFR + 80BP.

(3) Synthetic Term Funding through the use of a Payer Swap as of October 09, 2024
Payer Swap maturity is priced to match the expected average life of the fixed investment.

(4) * The proforma analysis provides a framework as to what your position would be assuming this strategy was executed simultaneously based on your most recent reported financial information (2Q24). This strategy may impact future reporting periods, as your actual results may differ from simulated results due to the timing, magnitude and frequency of interest-rate changes, the difference between actual experience and the characteristics assumed, as well as changes in market conditions and management strategies.

(5) = Positive Impact = Negative Impact

Source: Bloomberg, Regional FHLBs

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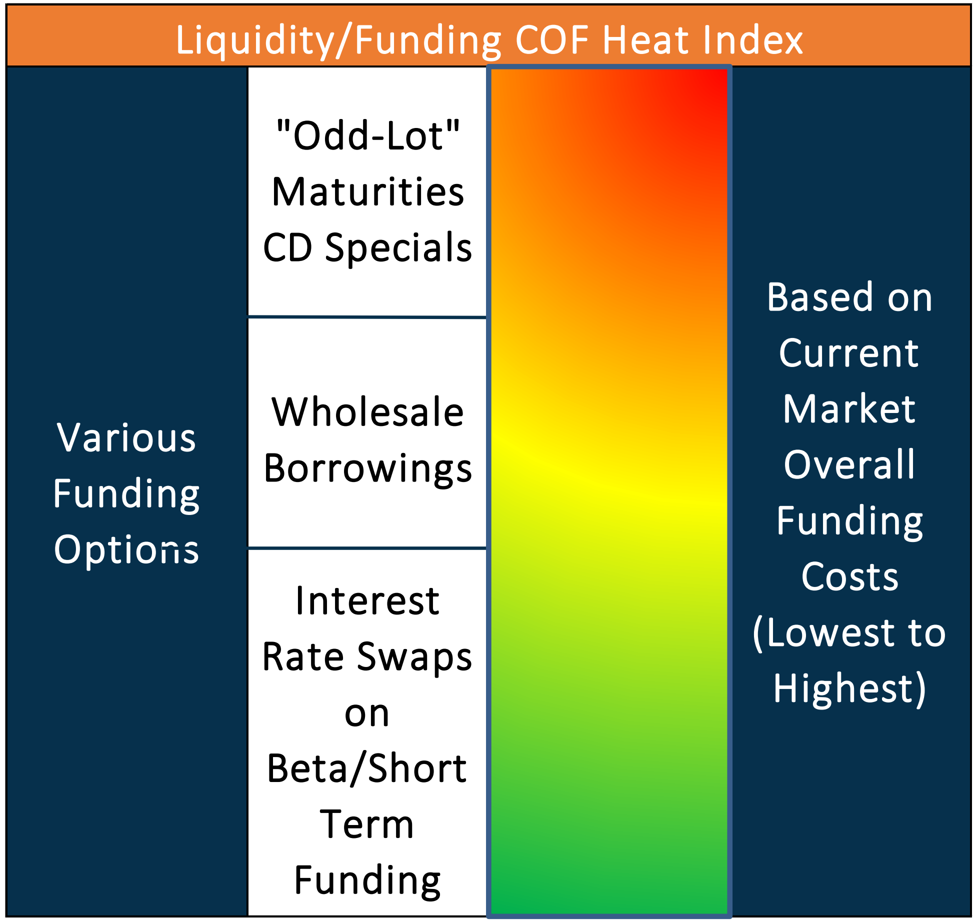
Key Takeaways

Key Takeaways

- Risk management is better than risk avoidance.
- Understand the various funding options available to the institution. **Borrowings are not a bad thing!**
- Consider using Derivatives (Interest Rate Swaps) as it can be used to reduce an institution's funding costs and help reduce IRR sensitivity.
- Derivatives are a common part of finance and of a depository's balance sheet—**use them to your advantage.**
- Using robust models, a derivative portfolio can be built out to hedge a multitude of risks.



Conclusion/Key Takeaways

Given the FOMC has now signaled that they intend to lower the Fed Funds Target rate by 200BP by the end of 2025, it is important to establish the following guidelines:

- Pricing discipline and proper capital allocation/utilization are necessary for success in such an environment to ensure the institution is meeting its desired return
- Keep loan spreads wide to price in for any market volatility
- Liquidity and cost of funds will still be a challenge given the overnight to five-year part of the curve remains inverted, but should be actively managed to factor in the FOMC expectations

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