

2024 FHLBank Topeka Regional Meetings

Oklahoma Meeting

.....

October 16th, 2024

Matt Harris, CFA

Senior Vice President

Financial Strategies Team

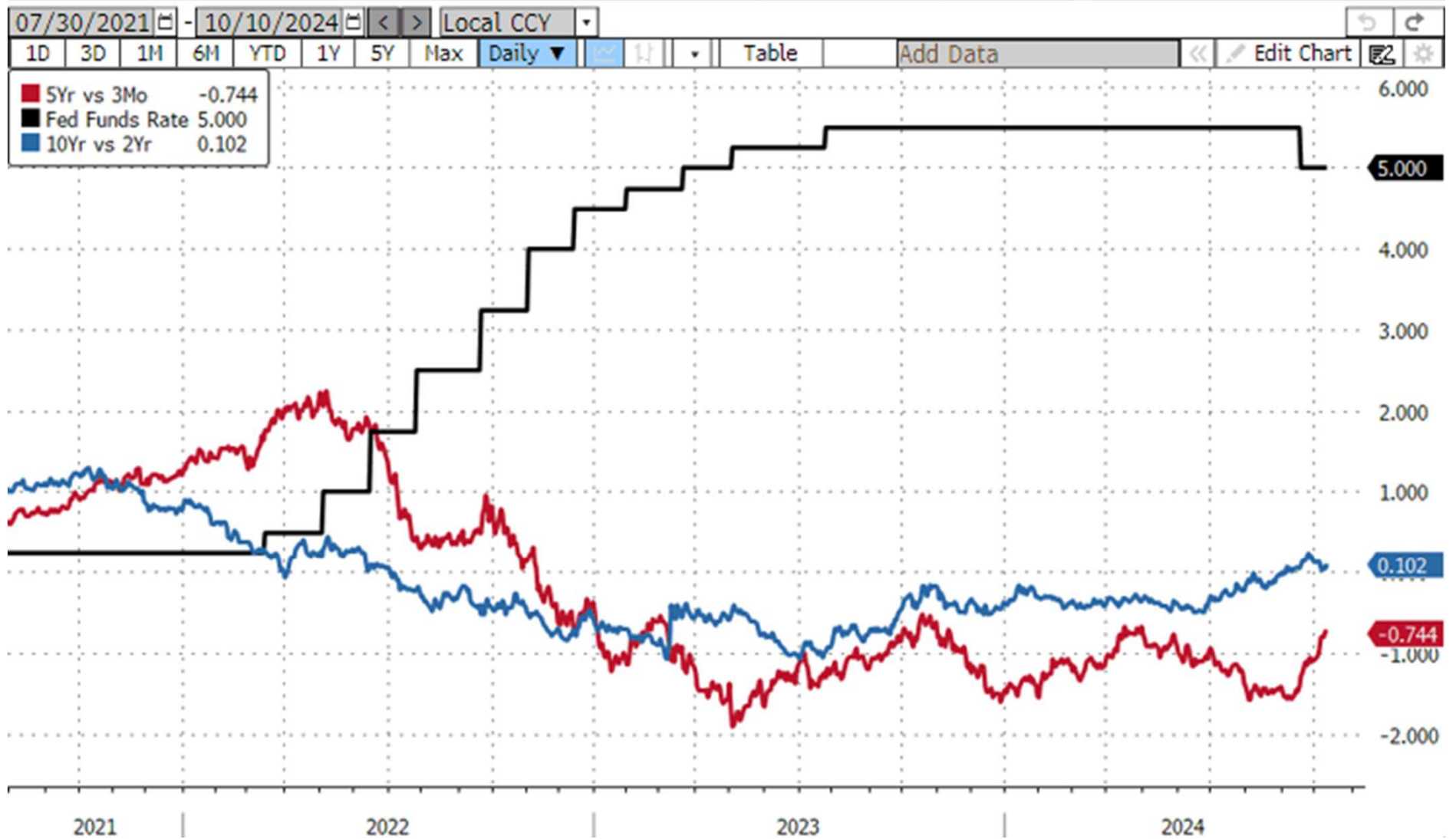
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Yield Curve Inversion



Source: Bloomberg

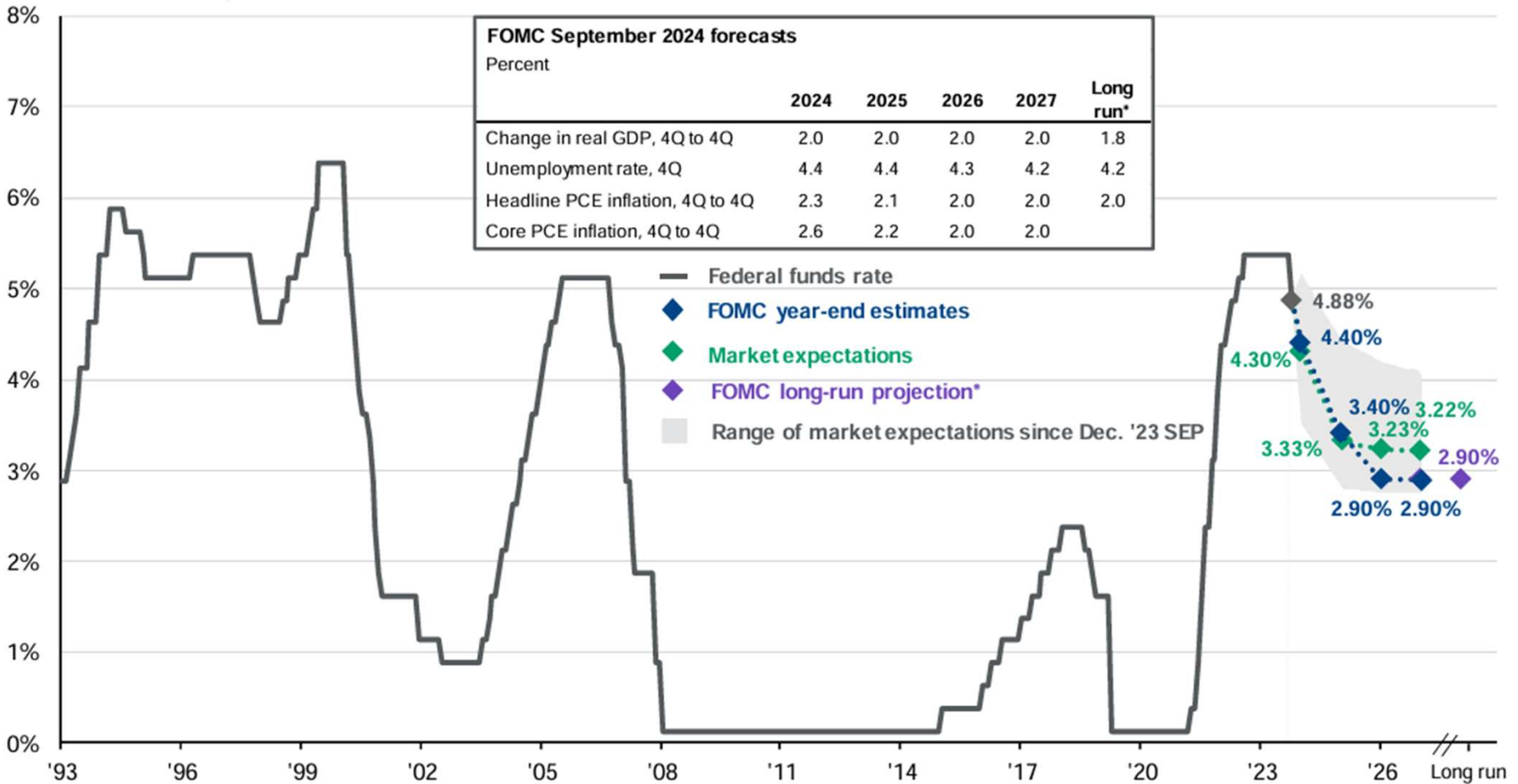
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Dot Plot & SEP

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



Source: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management.

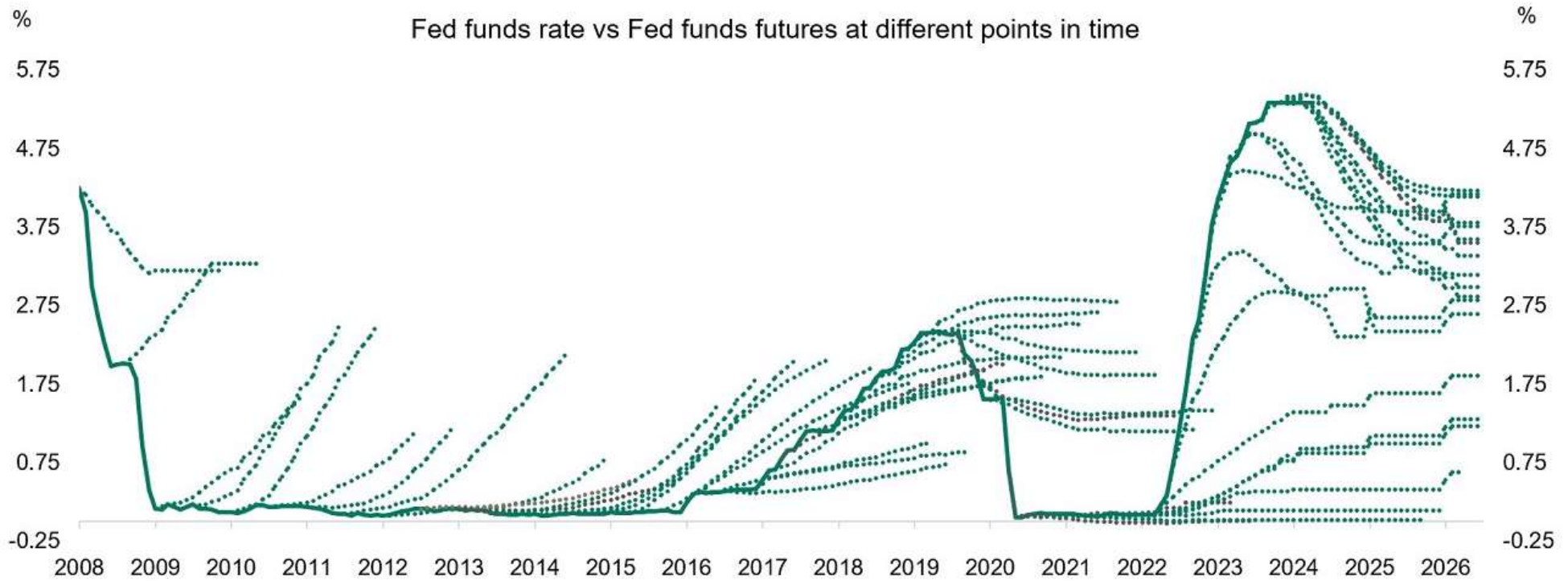
Market expectations are based off of USD Overnight Index Swaps. *Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated. Guide to the Markets – U.S. Data are as of October 9, 2024.

J.P.Morgan
ASSET MANAGEMENT

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The market is always wrong about what the Fed will do



Source: Apollo Global Management

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Q2 2024 Bank Data

Balance Sheet & Securities Portfolio Information

General Data	# Institutions	Sub S #	Leverage	ROAA	NIM	ASSETS YLD	COF	L/D %	Liq Assets %
Micro Community Bank	722	270	19.62	2.15	3.80	5.24	1.79	68%	33%
Small Community Bank	1,120	482	13.00	1.51	3.57	5.30	2.00	74%	24%
Medium Community Bank	1,718	612	11.35	1.08	3.42	5.41	2.18	80%	19%
Large Community Banks	868	124	11.00	1.12	3.34	5.59	2.43	87%	15%
Regional Banks	121	1	10.29	0.96	3.32	5.76	2.57	84%	15%
Tier 1 Banks	33	0	9.31	1.21	3.32	6.29	3.13	68%	29%
Totals	4,582	1,489	12.95	1.36	3.50	5.41	2.14	78%	22%

Portfolio Data	SEC/TA %	SEC YLD	SEC G/(L) %	USTs	Agcy	Muni	Mortgage	Other	# Sec QoQ +	% QoQ Sec +
Micro Community Bank	25%	2.98	-6.68%	22%	23%	27%	24%	3%	171	24%
Small Community Bank	24%	2.81	-8.34%	16%	21%	30%	29%	4%	264	24%
Medium Community Bank	21%	2.86	-8.84%	12%	17%	29%	35%	7%	441	26%
Large Community Banks	18%	3.01	-9.62%	11%	12%	20%	46%	11%	284	33%
Regional Banks	20%	3.25	-9.15%	13%	6%	10%	60%	11%	48	40%
Tier 1 Banks	23%	3.22	-8.33%	25%	1%	2%	57%	14%	20	61%
Totals	22%	2.91	-8.53%	15%	18%	27%	35%	6%	1,228	27%

Q1 #'s: Portfolio Yield: 2.80%, NIM 3.43, Asset Yield 5.25%, COF 2.04%

Source: Call Report Data Q2 2024

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Q2 2024 Credit Union Data

Credit Union Break Down by Asset Size & Securities

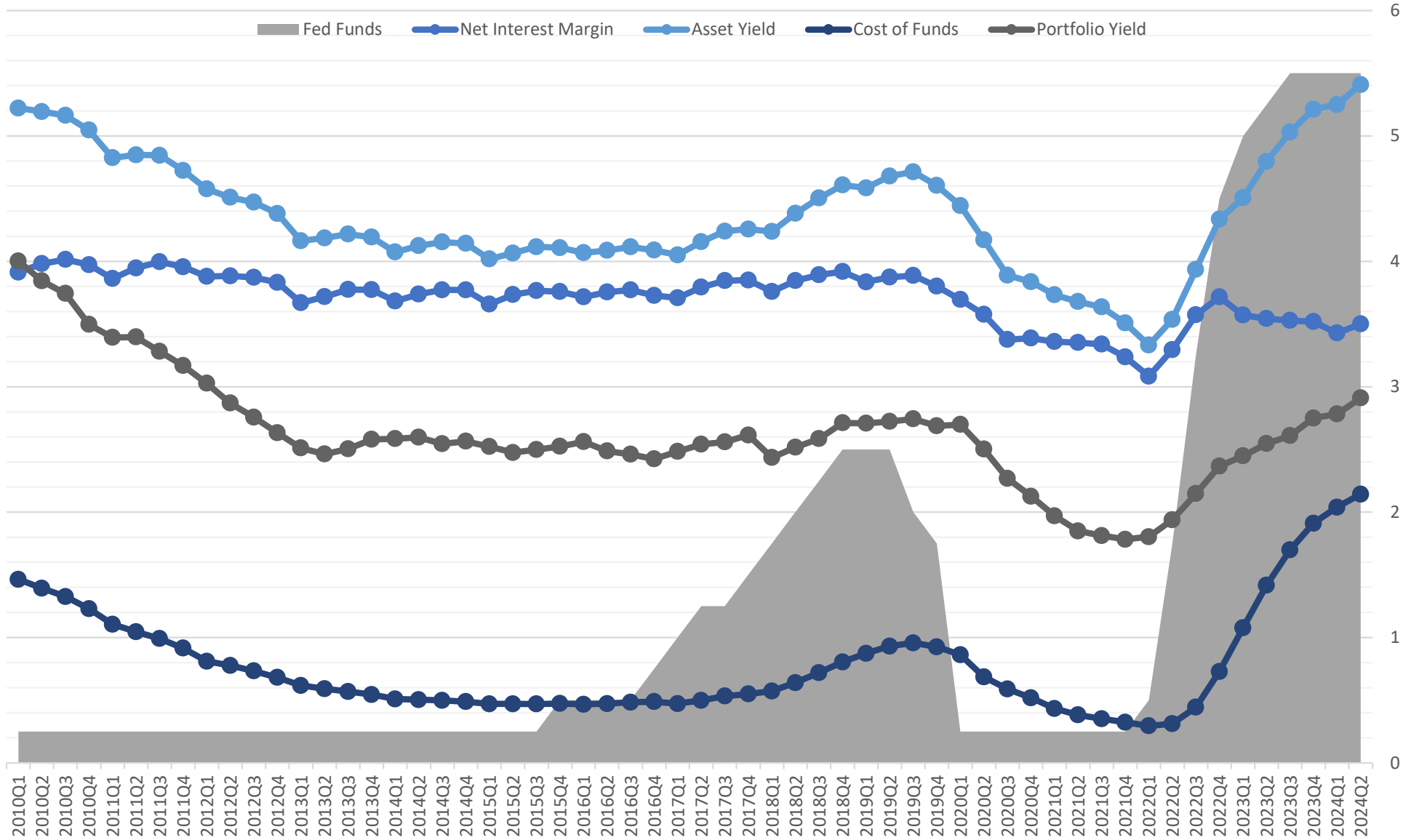
Credit Union Group	Asset Range	#	Asset %	Total Assets	NIM	Asset Yield	Cost of Funds
Micro Credit Union	0 to \$50mm	2,140	2%	36,555,237	4.79	5.78	0.98
Small Credit Union	\$50mm to \$250mm	1,336	7%	157,171,145	4.07	5.37	1.28
Medium Credit Union	\$250mm to \$1bb	674	15%	343,735,623	3.76	5.51	1.67
Large Credit Union	\$1bb to \$10bb	433	53%	1,241,980,467	3.39	5.77	2.20
Regional Credit Union	\$10bb to \$100bb	21	24%	572,997,384	3.19	5.48	2.46
		# Own Secs	% Total	Total Securities	% TA	Sec Yield	AFS (Loss)
Micro Credit Union	0 to \$50mm	665	31%	3,643,429	10%	3.11	-4.20
Small Credit Union	\$50mm to \$250mm	1,088	81%	23,496,874	15%	3.27	-8.25
Medium Credit Union	\$250mm to \$1bb	653	97%	52,660,539	15%	3.52	-8.94
Large Credit Union	\$1bb to \$10bb	417	96%	173,429,788	14%	4.00	-9.13
Regional Credit Union	\$10bb to \$100bb	20	95%	94,372,705	16%	4.05	-6.73

Source: Call Report Data Q2 2024

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Community Bank Trends ≈ 4,500 Banks



Source: Call Report Data



Liquidity Risk

- **Current Issues**
 - Yield Curve, Uncertainty
 - Deposits Post SVB, Deposit Competition
 - Underwater investments, deposit challenges, increased borrowings
- **Understand Your Basic Liquidity Ratios & ALM Implications**
 - Liquid Assets
 - Primary Liquidity vs Secondary Liquidity
 - Sources & Uses of Funds
- **Liquidity: What to Monitor**
 - Deposit Concentrations, Short Term Funding
 - Brokered Deposits & Borrowings
 - Wholesale Funding / Non-Core Funding, Declines in Core Deposits
 - OCC Canary Ratios (let us know if you'd like a copy)
 - Loans Deposits $\leq 75\%$, Noncore Funding Dependency $\leq 20\%$, Short-Term Liabilities / Total Assets $\leq 15\%$, On Hand Liquidity / Total Liabilities $\leq 15\%$, Wholesale Funding / Total Funding $> 15\%$

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Modeling Liquidity

Upload Files

Manage Mappings

View

Shock Assumptions

Reporting

Help

2024
March

- Hilltop Securities ▾
- Any Single Bank Demo 2024 (Any City, Any State) ▾
- Shock Scenario (Default) ▾



+ New Scenario

Edit Scenarios

Discard Changes

Save Changes

Shock Assumptions

- Payment Rates
- Decay Rates
- Growth Assumptions
- Other Options
- Loan Servicing
- Liquidity Assumptions
- Reinvestment Mapping
- Mkt Spreads - Fixed

Search: Export To Excel



Liquidity Metric	Normal	Moderate	Severe	Extreme	
Rate Delta	No Change		+100	+200	+300
Net Loan Growth	3.000		3.000	0.000	0.000
DDA Growth	3.000		0.000	-12.500	-15.000
IB Trans Growth	3.000		-10.000	-12.500	-15.000
Time Deposits Growth	3.000		-10.000	-15.000	-25.000
Public Deposits Growth	3.000		-10.000	-15.000	-25.000
Brokered Deposits Growth	0.000		0.000	0.000	0.000
Borrowed Funds Growth	0.000		-25.000	-100.000	-100.000
Fed Funds Available Lines	5,000,000.00		5,000,000.00	5,000,000.00	5,000,000.00
Borrowing Available	25,000,000.00		25,000,000.00	12,500,000.00	1.00
Asset Sales	0.000		0.000	0.000	0.000
Discount Window	0.00		0.00	0.00	0.00
Blanket Pledged	0.00		0.00	0.00	0.00
Percent Unfunded Commitments To Be Funded	0.000		0.000	0.000	0.000
CDARS Reclamation	0.00		0.00	0.00	0.00
Other Deposit Sources	0.00		0.00	0.00	0.00

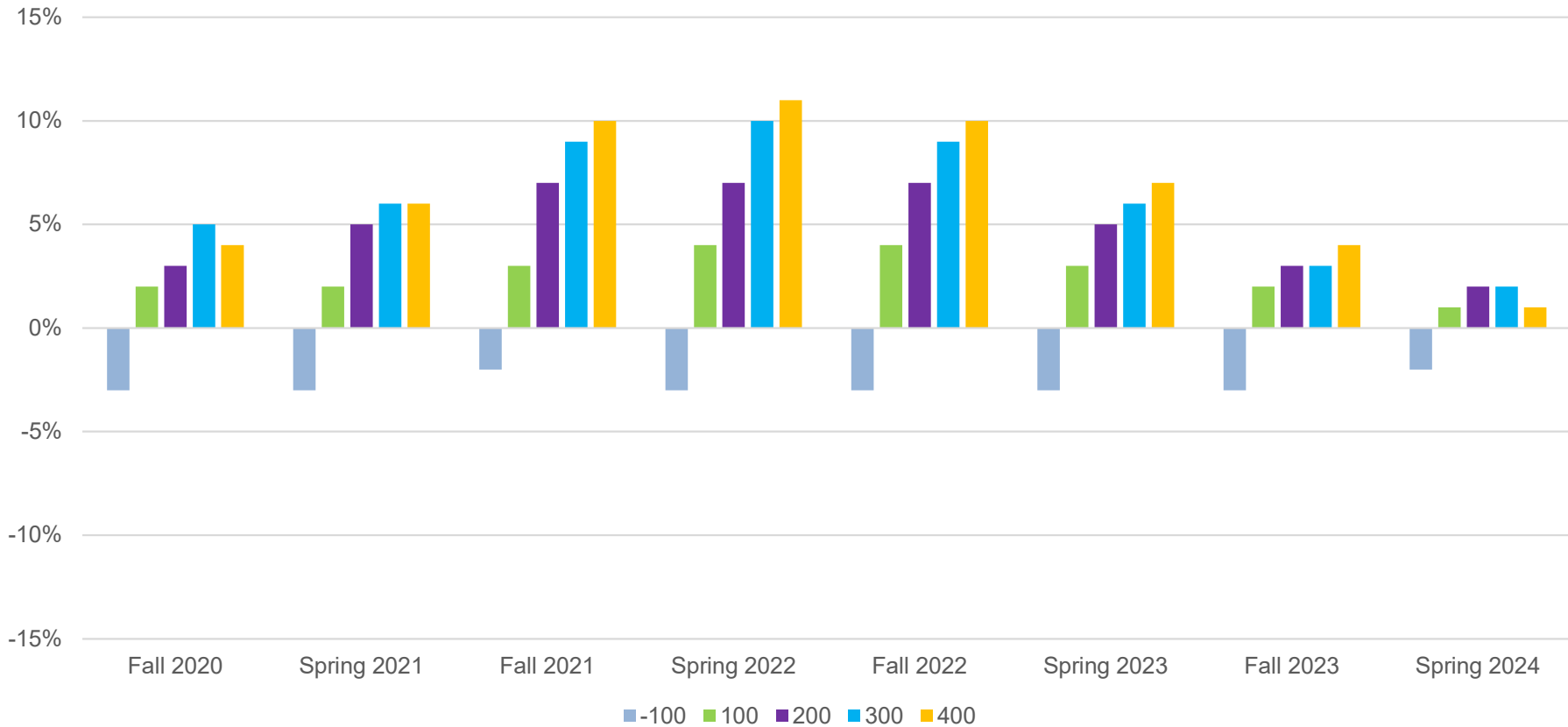
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OCC Range of Practice Memo on Interest Rate Risk

Statistics on Earnings at Risk and Economic Value of Equity – All Banks from Study

All Banks: Historical EAR



Source: OCC Range of Practice Memo / <https://www.occ.gov/publications-and-resources/publications/interest-rate-risk-statistics-reports/files/interest-rate-risk-statistics-report-spring-2024.html>

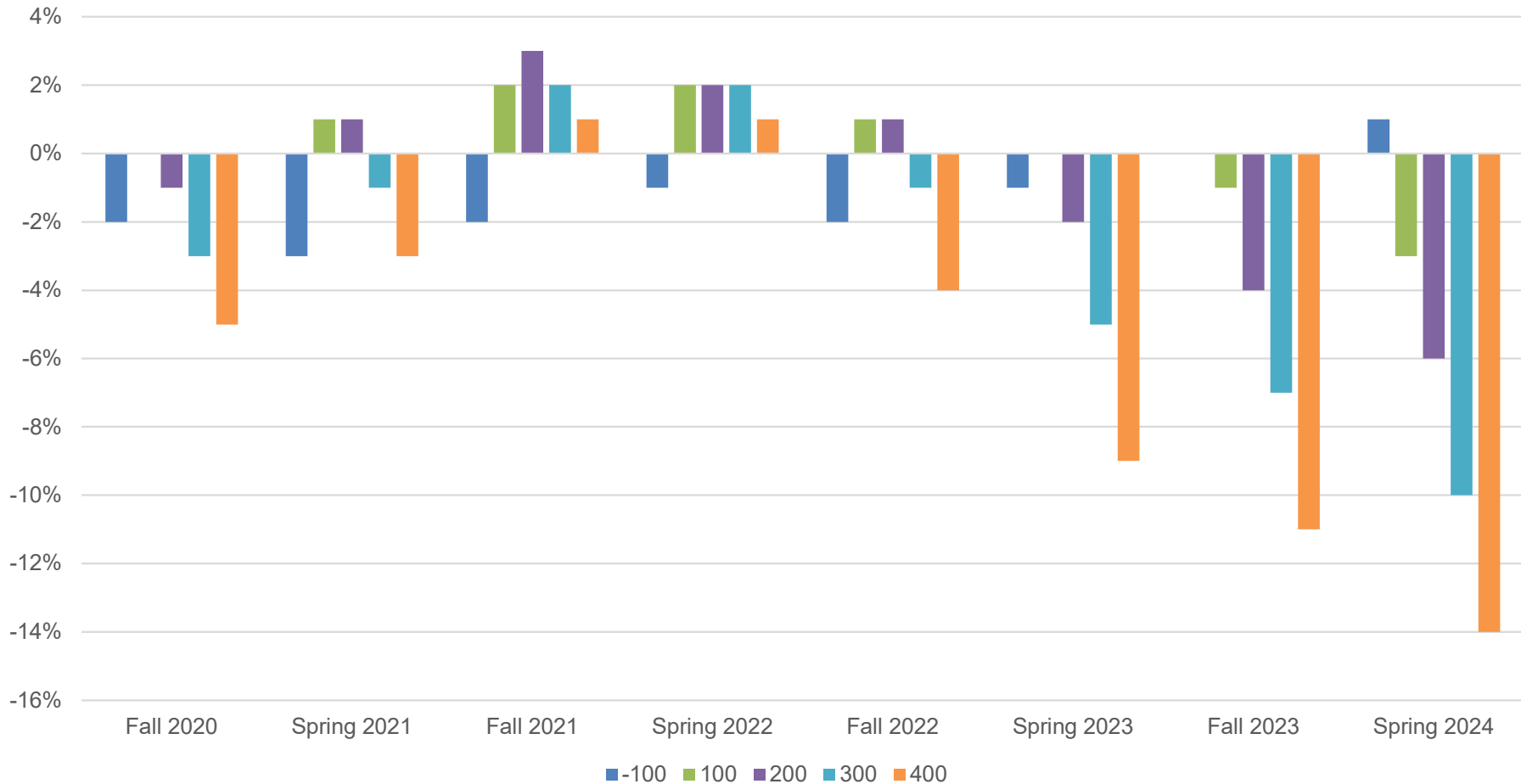
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OCC Range of Practice Memo on Interest Rate Risk

Statistics on Earnings at Risk and Economic Value of Equity – All Banks from Study

All Banks: Historical EVE



Source: OCC Range of Practice Memo / <https://www.occ.gov/publications-and-resources/publications/interest-rate-risk-statistics-reports/files/interest-rate-risk-statistics-report-spring-2024.html>



Understand Your Interest Rate Risk Exposure & Balance Sheet Mix

Review Your Model Output for EAR and EVE/NEV

- **Earnings at Risk**
- **Economic Value of Equity and Net Economic Value**
- Too much exposure one way or the other can lead to underperformance for earnings and higher risk levels.

Asset Sensitive Institutions

- At risk when rates decrease
- Shorter Duration, Floating Rate Assets
- Lower Deposit Betas

Balanced / Neutral Interest Rate Risk Institutions

- Understand the dynamics between borrowing and lending and how their customers maximize their own utility
- **Fixed Rate Assets, Low Deposit Betas**
- Floating rate Assets, High Deposit Betas

Liability Sensitive Institutions

- At risk when rates increase
- Longer Duration, Fixed Rate Assets
- High Deposit Betas

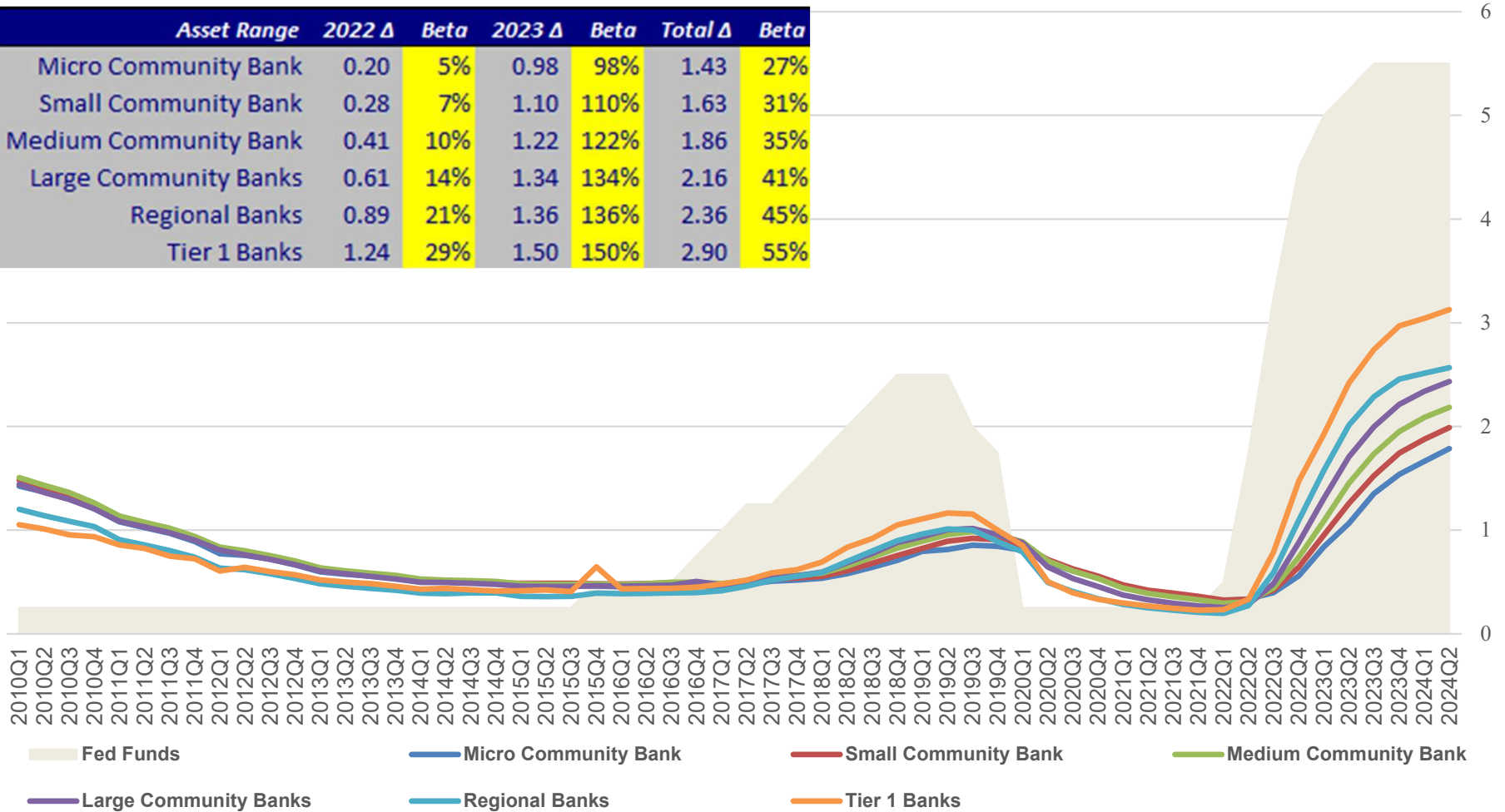
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Deposit Betas Remain Critical to Managing Net Interest Margin

Betas & Cost of Funds: Broken out By Asset Size

Asset Range	2022 Δ	Beta	2023 Δ	Beta	Total Δ	Beta
Micro Community Bank	0.20	5%	0.98	98%	1.43	27%
Small Community Bank	0.28	7%	1.10	110%	1.63	31%
Medium Community Bank	0.41	10%	1.22	122%	1.86	35%
Large Community Banks	0.61	14%	1.34	134%	2.16	41%
Regional Banks	0.89	21%	1.36	136%	2.36	45%
Tier 1 Banks	1.24	29%	1.50	150%	2.90	55%



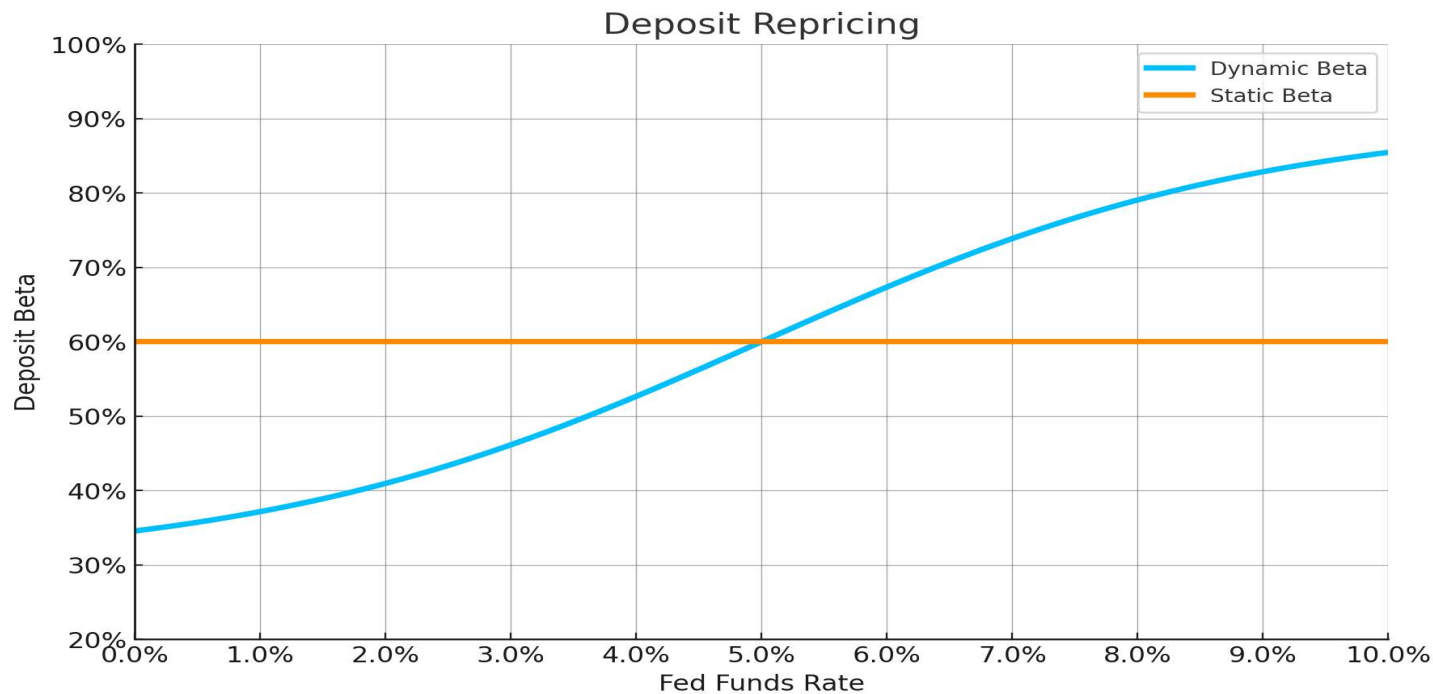
Source: OCC Range of Practice Memo / <https://www.occ.gov/publications-and-resources/publications/interest-rate-risk-statistics-reports/files/interest-rate-risk-statistics-report-spring-2024.html>



Deposit Repricing – Dynamic vs Static

Table 1d: All Banks – Non-Maturity Deposit Assumptions

Deposit type	-100 BPs repricing rates 25th percentile	-100 BPs repricing rates median	-100 BPs repricing rates 75th percentile	+100 BPs repricing rates 25th percentile	+100 BPs repricing rates median	+100 BPs repricing rates 75th percentile	Average lives 25th percentile	Average lives median	Average lives 75th percentile
Money market deposit account	20%	35%	50%	25%	35%	50%	2.59	3.83	5.00
NOW/ interest checking	10%	16%	31%	13%	19%	27%	3.70	5.00	7.89
Savings	10%	15%	28%	11%	16%	25%	4.00	5.00	6.90
Non-interest bearing	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	4.00	5.00	6.54





Portfolio Strategies for The Potential Peak in Rates



Source: Bloomberg



Balance Sheet Management for Banks and Credit Unions

Asset Sensitive

- Increase Overall Asset Duration
- Deploy Cash
- Increase Fixed Rate Loans
- Bonds: Extend Duration, Positive Convexity
- Decrease Overall Liability Duration
- Shorten Funding – FHLB Borrowings
- Receive Fix, Pay Float Swaps
- LOAN FLOORS
- Floors, Sell Caps

Liability Sensitive

- Decrease Overall Asset Duration
- Increase Cash Holdings
- Increase Floating Rate Loans
- Bonds: Decrease Duration, Negative Convexity
- Increase Liability Overall Duration
- Term Funding – FHLB Borrowings
- Receive Float, Pay Fix Swaps
- Caps, Sell Floors



Balance Sheet Management for Banks and Credit Unions

Asset Sensitive

- Buy Longer Bullets
- Buy MBS (Prepayment Protection)
- Buy CMBS – DUS or K-Deals
- Buy CMOs with Lock Outs
- Limit Floaters, Ladder Reset Dates
- SBA Pools Fixed Rate
- Swaps Pay Floating Rate
- DISCOUNT PAPER

Liability Sensitive

- Sell Longer Bullets
- Ladder Short Bullets & Callables (Cushion)
- Buy MBS (Prepayment Protection)
- Buy CMOs with Current Pay
- Add Floaters, Focus Resets < 1 Year
- SBA Pools Floaters
- Swap Pay Fixed Rate
- PREMIUM PAPER



Balance Sheet Management for Credit Unions

Low-Rate Strategies

- Minimize Duration
- Focus on Premium Priced Bonds
- Focus on Higher Coupon Bonds
- Negative Convexity OK
- High Cash Flow Bonds
- Buy ARMS & Other Floaters
- Current Pay CMBS
- Deemphasize Prepayment Protection
- 1x Callable Agencies
- Cushion Callables

High-Rate Strategies

- Maximize Duration
- **Focus on Discount Priced Bonds**
- Focus on Lower Coupon Bonds
- **Reduce Negative Convexity**
- Lockout Cash Flows
- Sell ARMS & Other Floaters
- Lockout CMBS
- **Emphasize Prepayment Protection**
- Bullet Agencies / Extend Calls

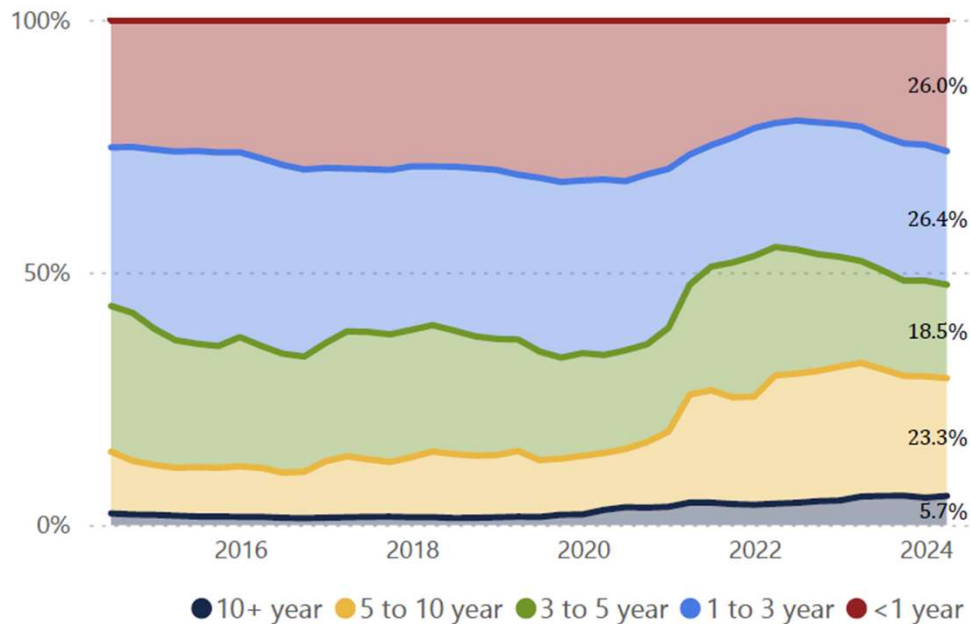
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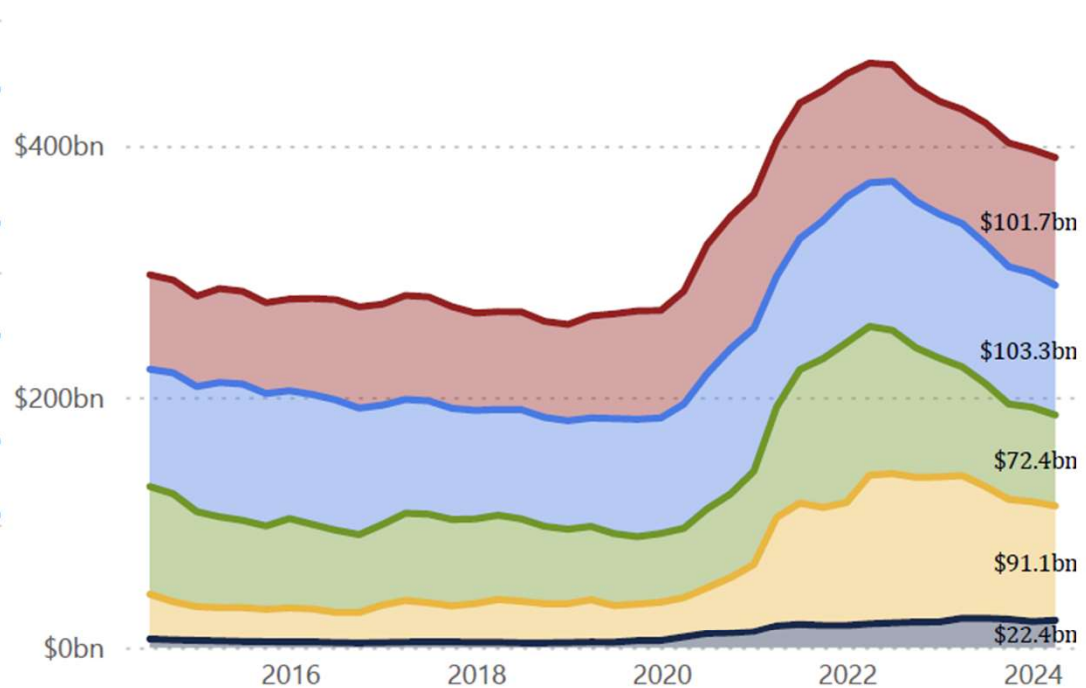
Credit Union Investment Trends

NCUA Q2 Chart Pack – Investment #'s

Maturity (% of Total Investments)



Maturity (Billions)



Investment Growth by Maturity (YoY)

	<1 year	1 to 3 Year	3 to 5 Year	5 to 10 year	10+ year
2021 12	-8.1%	1.9%	71.5%	81.7%	40.8%
2022 12	-8.4%	-1.0%	-25.7%	17.9%	15.3%
2023 12	9.5%	-6.8%	-20.5%	-17.3%	1.5%
2024 03	11.9%	-9.4%	-16.4%	-19.8%	-7.0%

Source: NCUA

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Q2 2024 Bank Data / Portfolio Yield Breakdown

≈2,000 Banks \$100mm to \$500mm Assets

≈900 Banks \$1bb to \$10bb Assets

	Low	Middle	High		Low	Middle	High
Median Yield (TEY)	1.72	2.50	3.72	Median Yield (TEY)	1.91	2.70	4.00
USTs	17%	9%	12%	USTs	14%	10%	11%
Agencies	32%	17%	12%	Agencies	20%	11%	7%
Munis	23%	37%	34%	Munis	13%	22%	17%
MBS	19%	22%	16%	MBS	31%	28%	15%
CMO	4%	8%	11%	CMO	12%	14%	15%
CMBS	2%	3%	5%	CMBS	6%	7%	8%
Other	2%	4%	10%	Other	4%	8%	26%
Sec / TA %	23%	25%	21%	Sec / TA %	19%	18%	18%
Liquid Assets %	22.90	22.51	24.91	Liquid Assets %	15.73	15.18	17.35
Long-Term Assets %	27.53	33.96	29.13	Long-Term Assets %	33.37	35.05	28.17
Sec FV / Sec BV	90.51	90.42	94.54	Sec FV / Sec BV	88.59	89.32	94.23
Unrlzd G/(L) %	(9.49)	(9.58)	(5.46)	Unrlzd G/(L) %	(11.41)	(10.68)	(5.77)
AFS Portfolio %	88%	90%	84%	AFS Portfolio %	85%	83%	83%
ROA	0.77	0.90	1.06	ROA	0.78	0.87	1.07
ROE	8.71	10.28	10.36	ROE	9.24	9.37	10.34

Source: Call Report Data, 2nd Quarter 2024

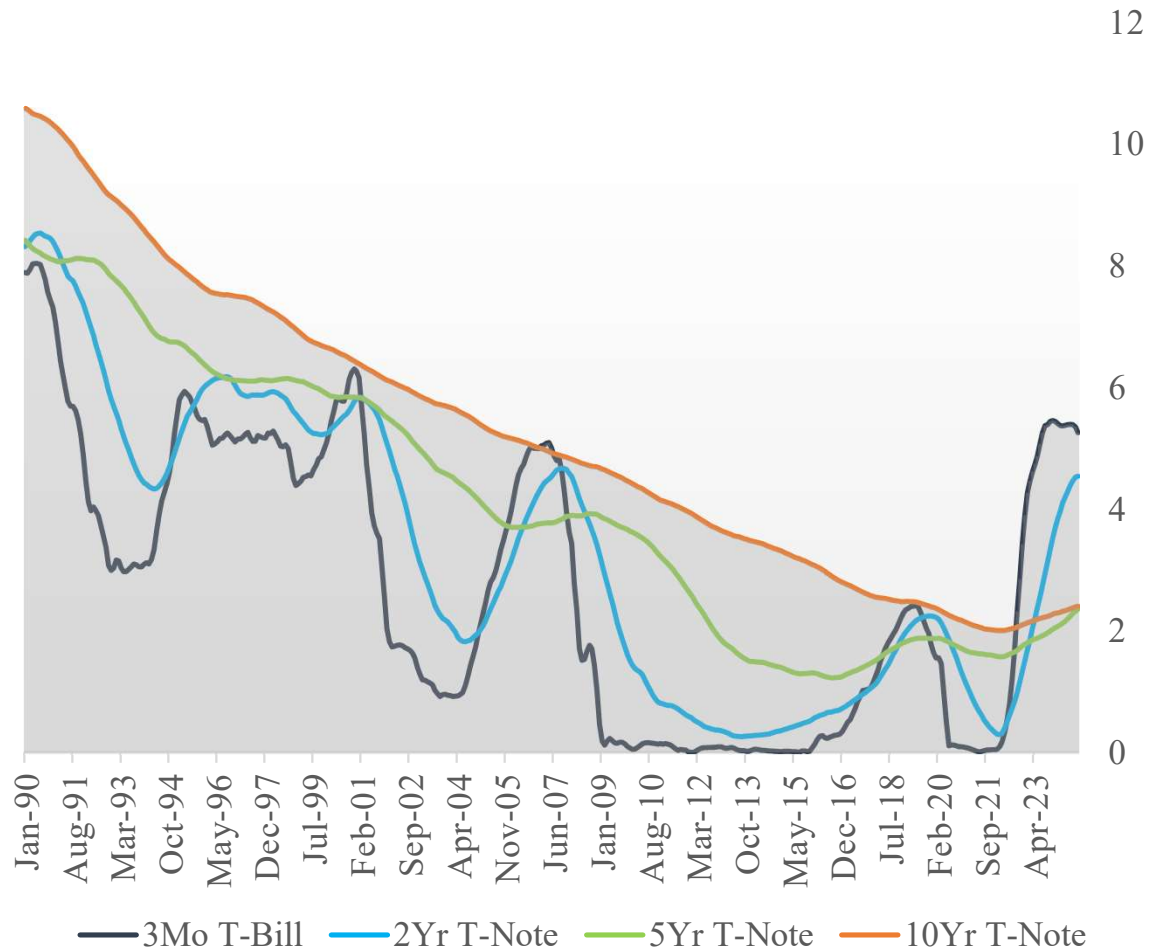
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Portfolio Management – Managing Duration / Price Risk

Portfolio Duration: Key Decision When Investing in Fixed Income Portfolio

- Average Portfolio Yields on Short vs Long Treasury Ladders
- Short: Earns less yields when rates are low/rising, less depreciation
- Long: Earns more yield over time, outperforms when rates fall, more depreciation
- Balanced Approach: Barbell Strategy
- Understand YOUR Cash Flows



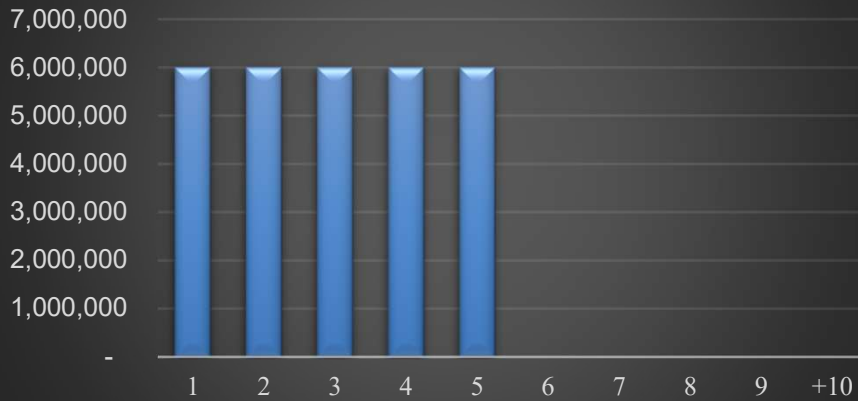
Source: Bloomberg, each line represents the yield earned on given a pro-rata roll for each maturity. (3Mo = 3 months, 2Yr = 24 months, 5Yr = 60 months, 10Yr = 120 months)



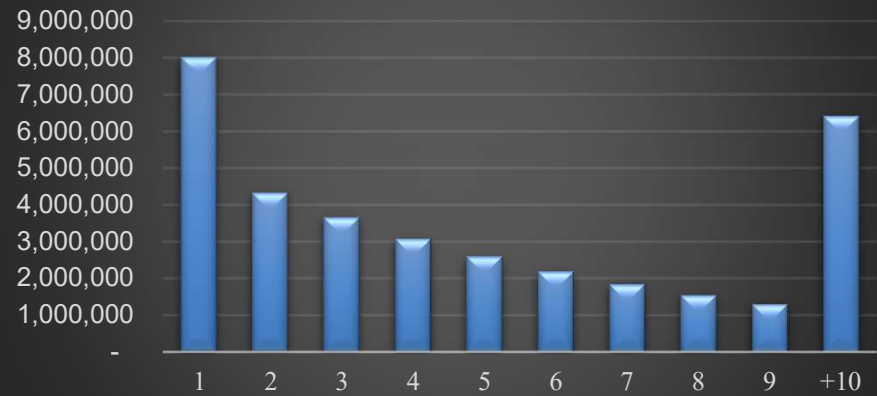
Portfolio Cash Flows

Depository Fixed Income Investment Portfolio

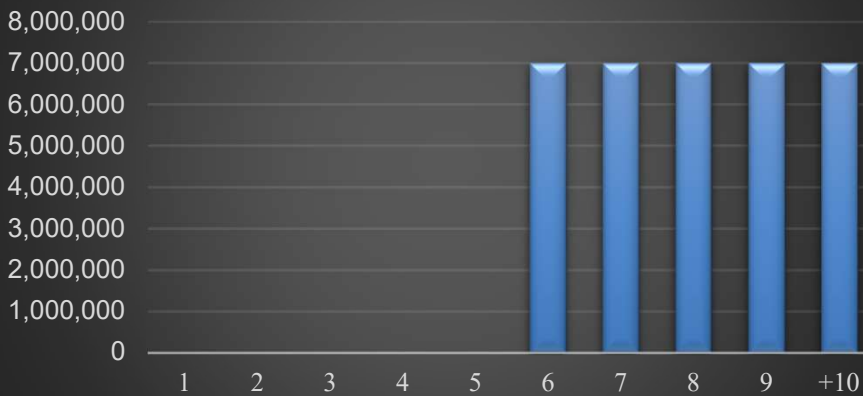
UST/Agency



Mortgages



Municipals



Barbell Portfolio



Source; HBS

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Focus on Call Protection in Today's Environment

Loan Attributes & Prepayment Impact

Loan Attribute	Call Protection	Extension Protection	Prepay Characteristics
Low Loan Balance	✓	✓	<ul style="list-style-type: none"> Smaller loan amounts don't benefit as much from refinancing Fixed refinance costs and lower dollar savings reduce refi incentives for these borrowers, offering some call protection Lower priced homes experience higher turnover as borrowers trade up, offering some extension protection
Seasoned Loans	✓	✓	<ul style="list-style-type: none"> Seasoned loans offer some call protection due to burnout effect Sufficiently seasoned loans also have shorter amortization schedules, offering some extension protection
New Production	✓	✗	<ul style="list-style-type: none"> Infrequent turnover and refi activity in the first few months after origination results in slower speeds (call protection) in the short-term
Shorter Term (10-20 years)	✗	✓	<ul style="list-style-type: none"> Shorter term mortgages offer some extension protection due to shorter amortization schedules
Geography	✓	✗	<ul style="list-style-type: none"> Costs and origination requirements in certain states make it more difficult for residents to refinance, creating some call protection on collateral from specific states
Investor	✓	✗	<ul style="list-style-type: none"> GSEs charge higher costs for loans with undesirable characteristics like non-owner occupancy These borrowers face additional origination costs and underwriting hurdles making it harder for them to refinance, which creates some call protection
High LTV	✓	✗	<ul style="list-style-type: none"> GSEs charge higher costs for loans with undesirable characteristics like high LTVs High LTV borrowers face additional origination costs making it harder for them to refinance, which creates some call protection
Low FICO	✓	✗	<ul style="list-style-type: none"> GSEs charge higher costs for loans with undesirable characteristics like low credit scores Weak credit limits the borrower's ability to secure a mortgage and they face additional origination costs and underwriting hurdles making it harder for them to refinance, which creates some call protection
Bank Servicing	✓	✗	<ul style="list-style-type: none"> Non-bank servicers exhibit substantially faster refinance speeds compared to their bank counterparts They tend to be more efficient in processing and more aggressive in soliciting borrowers, which increases prepayment sensitivity Bank serviced loans offer some call protection
Retail Origination Channel	✓	✗	<ul style="list-style-type: none"> Third-party originators have economic incentives to encourage borrowers to refinance and are more likely to prepay than retail originations
Jumbo	✗	✗	<ul style="list-style-type: none"> Jumbo loans are the antithesis of low loan balance loans Dollar incentives to refinance are large when rates fall, which creates reinvestment risk Disincentives to relocate/refi when rates rise are also large locking these borrowers in, which creates extension risk

Source: BAML



Thoughts on Interest Rate Risk

Don't Get Caught Offsides on your Next Safety and Soundness Exam

- **POLICY – *If it's not written down, it didn't happen***
 - IRR appetite and risk management objectives
 - Responsibility and Authority for IRR Management
 - Standards for Measuring and Monitoring IRR
 - Types of IRR Measurement (EAR, EVE), Frequency (Quarterly)
 - Risk Limits on IRR Exposure for Earnings and Capital
 - Risk Mitigation – Monitor, Escalate, and Address Risk Limits
 - Model Validation and Back Testing
- **STRESS TESTING OF KEY ASSUMPTIONS – *Garbage in, garbage out.***
 - Deposit Betas & Decay Rates
 - Modeling Disintermediation (NMDs to CDs)
 - Asset Prepayment Speeds
- **MODEL ASSUMPTIONS**
 - Deposit Betas and Decay Rates
 - Asset Prepayment Speeds
- **ADDITIONAL REVIEW ITEMS - *We can't predict but we can prepare***
 - Back Testing
 - Validation Letter
 - Independent Review of an IRR Management System
 - ALCO, Board of Director Training and Education

Questions?

THANK YOU!

.....

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Hilltop Holdings By the Numbers

\$16.5B

In Assets⁽¹⁾

3,900

Nationwide Employees⁽¹⁾

No. 33

America's Best Banks⁽²⁾

Holding Company



Subsidiaries

PlainsCapital Bank

- Texas-based bank
- \$11.1 billion in deposits per regulatory filings as of December 31, 2023 (Source: S&P, Call Report)
- Nearly 60 locations providing personal, commercial and private banking to customers in key markets across Texas

PrimeLending

A PlainsCapital Company.

- Focuses on purchase mortgage originations
- #11 Top Retail Mortgage Lender by Scotsman Guide⁽³⁾
- 1,230 loan officers located throughout the U.S.
- Authorized to make loans in all 50 states and the District of Columbia

HilltopSecurities

Investment Banking Solutions

- #5 national municipal investment bank ranking on a combined basis by number of negotiated, competitive and privately placed, underwriting and municipal advisory financings from 2019 through 2023⁽⁴⁾
- Trusted Clearing Services partner to financial professionals nationwide
- Other areas of focus include retail brokerage services, sales, underwriting and trading of taxable and tax-exempt securities, structured finance and securities lending

(1) Hilltop Holdings Earnings Release for 12/31/2023

(2) S&P Global Market Intelligence

(3) Ranked by Scotsman Guide for retail volume in 2023

(4) Per IPREO MuniAnalytics



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