



MERCER CAPITAL

# Valuation Issues Post-SVB

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# Key Themes

## **This Cycle Is Different**

1. Current & Historical Rising Rate Environments
  - a) Yield curves
  - b) Bank stock performance
  - c) Unrealized losses on securities

## **Explaining Bank Stock Performance**

1. Why are P/E multiples lower?
2. Do unrealized losses on securities explain share price performance?
3. What other factors are correlated with bank stock performance?

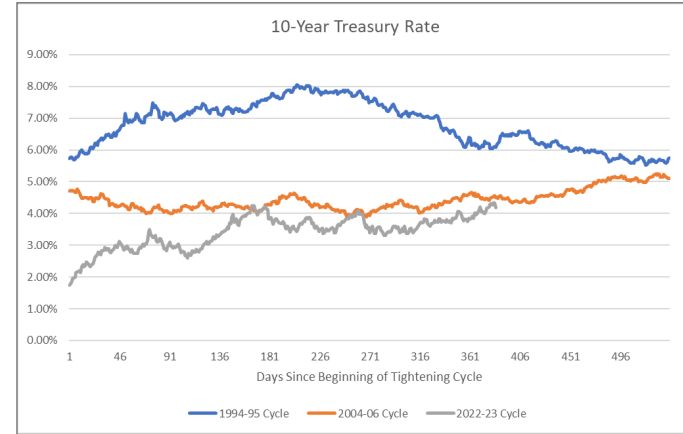
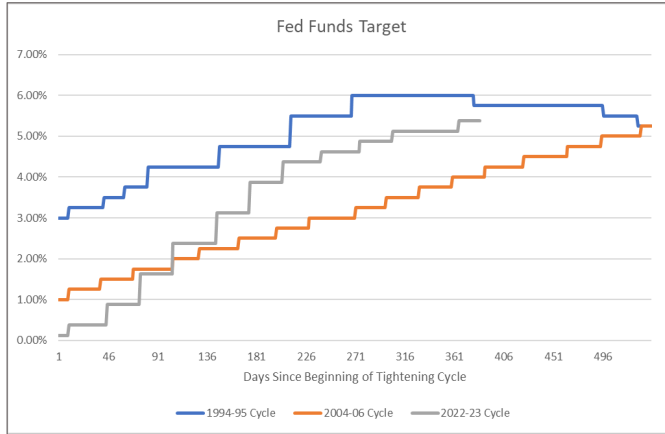
## **Valuation Issues in a Higher-for-Longer Rate Environment**

1. What to do with securities portfolio losses?
2. Net interest margin outlook and risks
3. Credit risk
4. Capital management

# This Cycle Is Different

# Interest Rates

We Compare This Tightening Cycle to 1994-95 and 2004-06



Fed Funds tightening in this cycle (525 bps) exceeds the 1994-95 cycle (300 bps) and the 2004-06 cycle (425 bps)

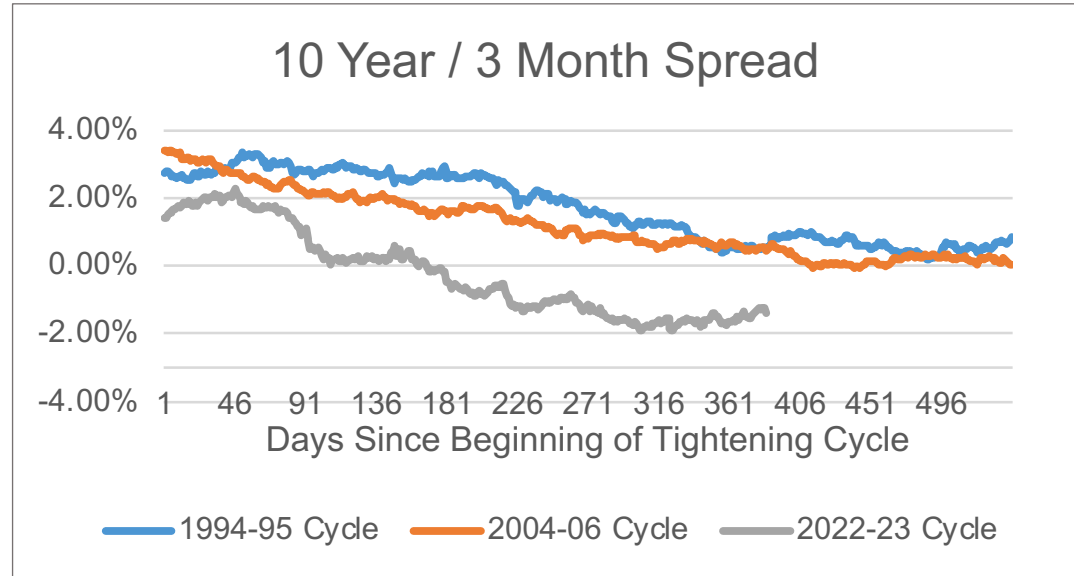
The 10-year Treasury yield has increased about 250 bps since the start of the rate tightening cycle, relative to a 230 bps increase over the 1994-95 cycle. From 2004-06, the 10-year Treasury varied by about 100 bps during the period of rising Fed Funds target rates

# Yield Curve Shape

## Spread between 10-Year and 3-Month Treasuries

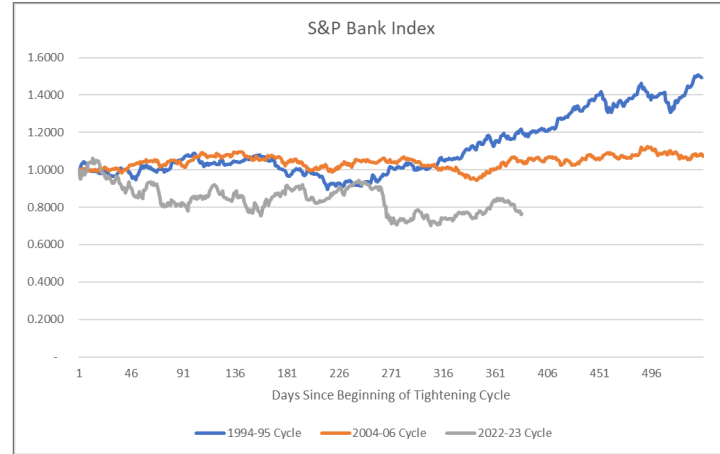
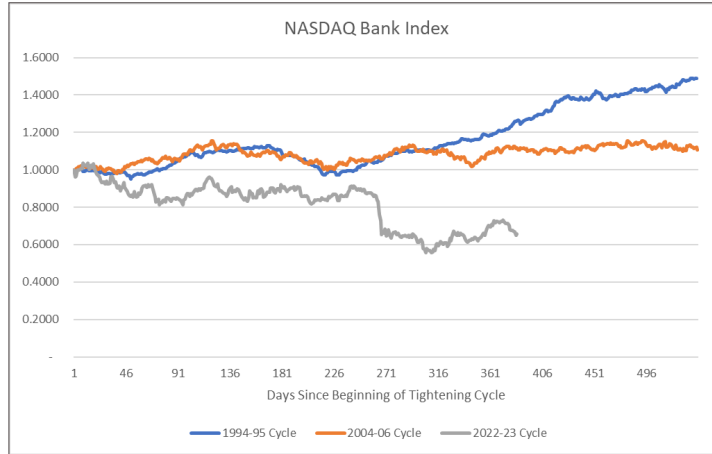
During the 2004-06 cycle, the yield curve was only briefly inverted

In the current cycle, the yield curve has remained inverted since late October 2022



# Bank Stock Index Performance

## NASDAQ Bank and S&P Bank Indices



During the rate tightening period in 1994-95, bank stock indices increased about 5%. When rates stabilized and began to decrease towards the end of the period shown in the chart above, the bank stock indices increased more significantly

From 2004-06, the bank stock indices increased about 10%, albeit over a relatively long period

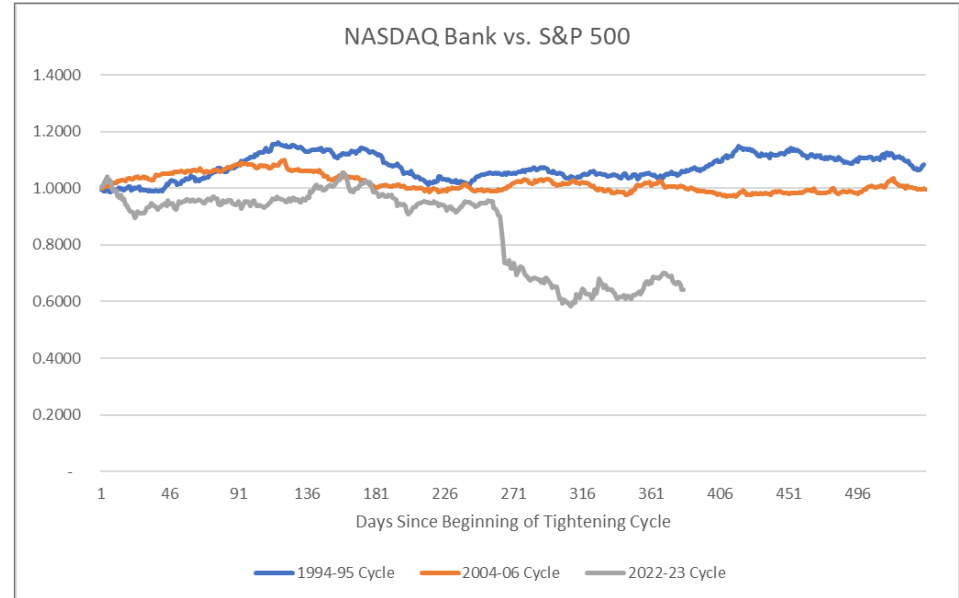
In the current rate cycle, bank stocks have underperformed prior rising rate periods

# Relative Performance

## NASDAQ Bank vs. S&P 500 Indices

In the 1994-95 cycle, bank stocks outperformed the S&P 500, while performance was similar during the 2004-06 cycle

More recently, bank stocks have significantly underperformed the S&P 500



# Mark-to-Market Losses

## Securities Portfolio Unrealized Losses Are Larger Than in 1994

Asset Size	AFS Securities Loss / Cost Basis		AFS Securities Loss / Tier 1 Capital		HTM Securities Loss / Cost Basis		HTM Securities Loss / Tier 1 Capital		Leverage Ratio	
	Dec 1994	Jun 2023	Dec 1994	Jun 2023	Dec 1994	Jun 2023	Dec 1994	Jun 2023	Dec 1994	Jun 2023
> \$250B	n/m	-6.4%	n/m	-8.0%	n/m	-10.5%	n/m	-20.9%	n/m	8.7%
\$100B - \$250B	-0.9%	-8.0%	-0.5%	-11.9%	-10.2%	-8.9%	-3.7%	-6.9%	5.9%	9.1%
\$10B - \$100B	-2.8%	-10.5%	-3.1%	-16.0%	-3.7%	-11.2%	-5.5%	-6.9%	7.0%	9.7%
\$3B - \$10B	-2.8%	-10.8%	-2.7%	-13.9%	-2.9%	-10.0%	-3.7%	-4.8%	7.4%	9.9%
\$1B - \$3B	-2.6%	-10.4%	-2.5%	-16.3%	-3.1%	-7.1%	-4.2%	-1.8%	7.6%	9.9%
\$500M - \$1B	-2.5%	-9.5%	-2.7%	-16.4%	-2.8%	-5.2%	-4.2%	-1.2%	8.1%	10.0%
\$100M - \$500M	-2.6%	-9.2%	-3.5%	-19.4%	-2.9%	-3.9%	-4.5%	-1.2%	8.6%	10.5%
< \$100M	-2.5%	-7.0%	-3.2%	-12.9%	-2.9%	-3.8%	-4.4%	-2.3%	9.5%	11.9%

Source: Call Report data, S&P Global Market Intelligence, Mercer Capital research

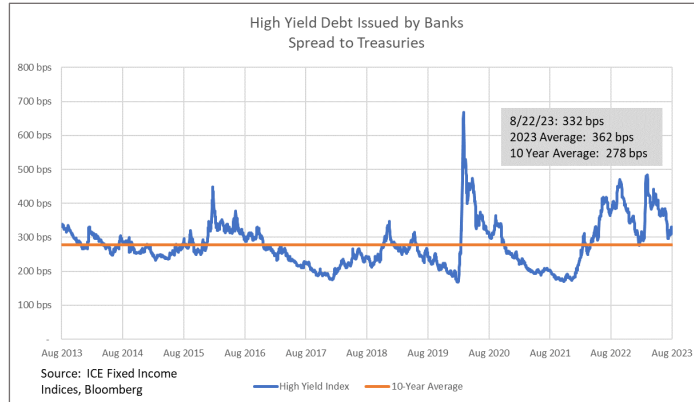
The average coupon on bonds is much lower now than in 1994, which means the price of bonds is more sensitive to a rising rate environment. This explains why securities losses now are a larger percentage of the portfolio's cost basis or Tier 1 capital



# Explaining Struggling Bank Stock Performance

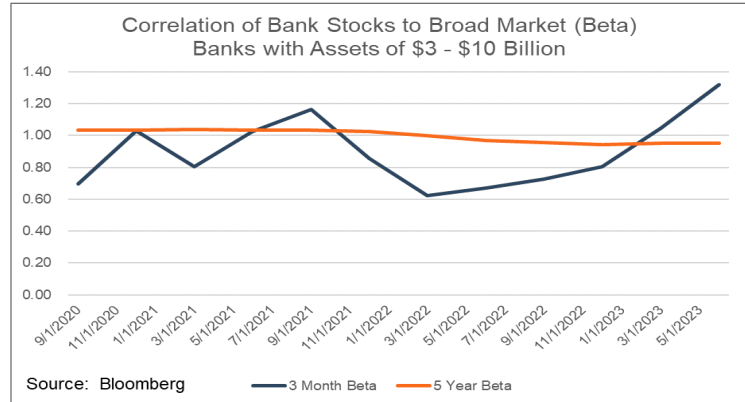
# Industry Risk

## Various Metrics Indicate Investors View the Banking Industry as Possessing Greater Risk



Spreads on high yield debt issued by banks, relative to Treasuries, have exceeded their long-term average for most of 2023

- Average spread in 2023 is 84 bps above 10-year average



The volatility of a stock is positively correlated with its risk

Over a five year period, bank stocks have exhibited similar volatility to the market (i.e., the “beta” is about 1.00)

However, the short-term (3-month) beta in 2023 has been in the 1.20 range, indicating greater volatility for bank stocks relative to the market

# P/E Multiples

## Multiple Compression Is Not Entirely Irrational

Several factors influence the P/E multiple

- Treasury rates, which represents the floor return against which returns of other assets are assessed
- The risk associated with the investment
- The investment's growth potential

Bank stocks traded around 13x earnings at year-end 2019. In August 2023, though, banks traded at about 9x estimated 2024 earnings.<sup>[1]</sup>

We can decompose this change in the P/E multiple into:

- Higher Treasury rates (up 236 bps)
- A rising risk premium for banks, as measured by the "beta" statistic

<sup>[1]</sup> Banks with assets between \$3 and \$10 billion

	12/31/2019	8/22/2023
20-Year Treasury Rate	2.25%	4.61%
Base Equity Risk Premium	5.50%	5.50%
x Beta	1.00	1.20
+ Beta-Adjusted Equity Risk Premium	5.50%	6.60%
+ Small-Cap Stock Premium	3.00%	3.00%
+ Industry Risk Premium	0.75%	0.75%
= Equity Rate of Return	11.50%	14.96%
- Long-Term Growth Rate	4.00%	4.00%
= Capitalization Rate	7.50%	10.96%
<b>Price / Earnings Multiple (1 ÷ Capitalization Rate)</b>	<b>13.3x</b>	<b>9.1x</b>

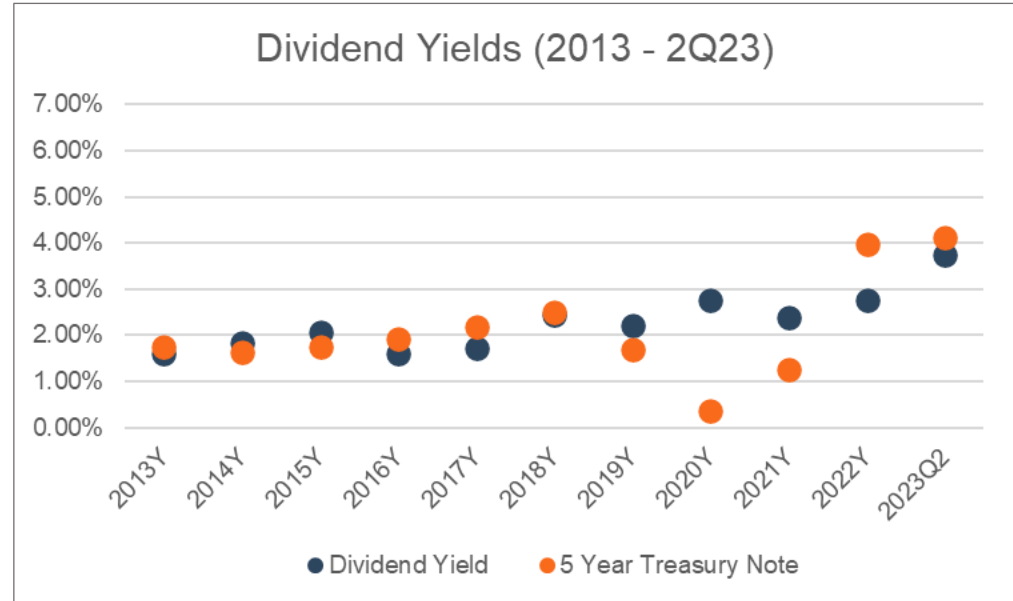
# Dividend Yields

## Dividend Yields Are at an Historical High

Banks' share prices benefited in 2020 and 2021, as their dividend yields appeared attractive in a low rate environment. Rising rates create other alternatives for yield conscious investors, which may be another source of pressure on bank stock prices in 2023

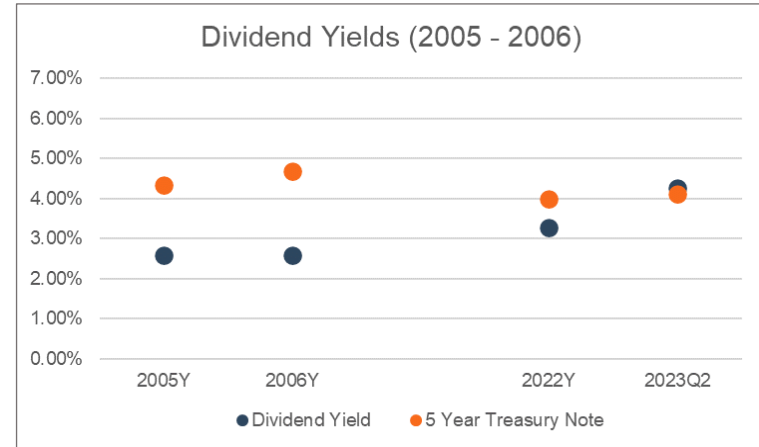
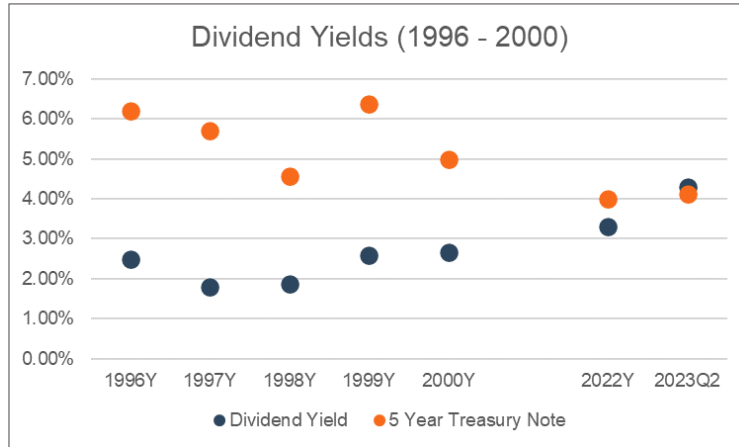
Median dividend yield was about 3.75% at 6/30/23, relative to 1.50% to 2.75% over the 2013 to 2020 period <sup>[1]</sup>

<sup>[1]</sup> Banks with assets between \$3 and \$10 billion



# Dividend Yields

The Correlation Between Rates & Dividend Yields Was Weak in 1996-00 and 2005-06



We researched historical periods with 5-year Treasury rates in the same range as at 6/30/23 <sup>[1]</sup>

In these periods, dividends yields were in the 2.00% to 3.00% range, indicating the anomalous nature of the current environment

<sup>[1]</sup> Historical period includes banks in the following size ranges:  
 1996-20: Greater than \$1 billion at 12/31/96  
 2005-06: Greater than \$2 billion at 12/31/05

# Factors Explaining Banks' Market Performance

## The Magnitude of Unrealized Losses on Securities (AOCl) Is Not Correlated with Market Performance

The magnitude of the unrealized loss on securities, measured as a percentage of total equity (excluding AOCl), is not closely correlated with market performance

- That is, banks with larger unrealized losses did not perform significantly worse than banks with smaller unrealized losses

The analysis includes losses on held-to-maturity securities to avoid any bias caused by accounting classifications

	Unrealized Loss / Tangible Equity			2022 Stock Price Change
	Smallest	Largest	Median	Median
1st Quartile	6%	-8%	-5%	-6%
2nd Quartile	-8%	-19%	-14%	-10%
3rd Quartile	-19%	-29%	-24%	-7%
4th Quartile	-29%	-111%	-38%	-5%

*Source: S&P Capital IQ Pro, Mercer Capital research*

# Factors Explaining Banks' Market Performance

Changes in Net Interest Margin Are Highly Correlated with Stock Price Changes

We grouped publicly-traded banks with assets between \$1 and \$10 billion into quartiles

The quartile with the least NIM compression (the 4<sup>th</sup> quartile) reported the best share price performance

Share price performance becomes progressively worse when moving from the fourth to the first quartiles

	Change in Net Interest Margin			
	Rising Rate Environment (1Q22 - 2Q23)		Year-to-Date 2023 (4Q22 - 2Q23)	
	Median Change in		Median Change in	
	Net Interest Margin	Stock Price	Net Interest Margin	Stock Price
1st Quartile	-72 bps	-35%	-73 bps	-22%
2nd Quartile	-19 bps	-25%	-49 bps	-20%
3rd Quartile	22 bps	-16%	-34 bps	-15%
4th Quartile	100 bps	-12%	-3 bps	-8%

Source: S&P Capital IQ Pro, Mercer Capital research

# Factors Explaining Banks' Market Performance

Both Greater Asset Sensitivity & Lower Deposit “Betas” Contribute to Share Price Performance

	Change in Yield on Earning Assets				Change in Cost of Earning Assets			
	Rising Rate Environment (1Q22 - 2Q23)		Year-to-Date 2023 (4Q22 - 2Q23)		Rising Rate Environment (1Q22 - 2Q23)		Year-to-Date 2023 (4Q22 - 2Q23)	
	Median Change in		Median Change in		Median Change in		Median Change in	
	Yield on Earning Assets		Yield on Earning Assets		Cost of Earning Assets		Cost of Earning Assets	
	Stock Price		Stock Price		Stock Price		Stock Price	
1st Quartile	88 bps	-30%	26 bps	-18%	80 bps	-16%	55 bps	-11%
2nd Quartile	121 bps	-20%	38 bps	-20%	119 bps	-16%	78 bps	-17%
3rd Quartile	160 bps	-19%	48 bps	-18%	154 bps	-26%	95 bps	-20%
4th Quartile	221 bps	-15%	65 bps	-12%	212 bps	-30%	119 bps	-19%

Source: S&P Capital IQ Pro, Mercer Capital research

Both sides of the NIM calculation influence market performance:

- Banks with more expansion in earning asset yields reported better market performance (-15% for the banks with the most yield expansion and -30% for banks with the least)
- Banks with the lowest expansion in the cost of funding earning assets report better market performance (-16% for the banks with the smallest increases in funding costs versus -30% for the banks with the most funding cost pressure)



# Factors Explaining Banks' Market Performance

Interplay of Balance Sheet Components, Rather than a Single Metric, Influences Share Price Performance

	Noninterest-Bearing Deposits / Total Deposits				Securities / Total Assets			
	Rising Rate Environment (1Q22 - 2Q23)		Year-to-Date 2023 (4Q22 - 2Q23)		Rising Rate Environment (1Q22 - 2Q23)		Year-to-Date 2023 (4Q22 - 2Q23)	
	NIB / Total Deposits	Stock Price	NIB / Total Deposits	Stock Price	Securities / Assets	Stock Price	Securities / Assets	Stock Price
1st Quartile	15%	-25%	15%	-17%	6%	-18%	6%	-13%
2nd Quartile	21%	-26%	21%	-20%	13%	-24%	13%	-17%
3rd Quartile	28%	-21%	28%	-15%	18%	-25%	18%	-17%
4th Quartile	34%	-20%	34%	-13%	28%	-22%	28%	-18%

Relatively weak correlation exists between share price performance and (a) the level of noninterest-bearing deposits and (b) securities as a percentage of total assets

The interplay of several factors—like the level of noninterest-bearing deposits and asset duration—contributes to relative performance, rather than a single balance sheet metric

# Valuation Issues in a Higher-for-Longer Rate Environment

# Exposure to Low Rate Environment

For Many Banks, A Zero Rate Environment Presents Greater Risk

We assume that NIMs in 1Q22 are a proxy for expected NIMs in a zero rate environment, absent unusual income like PPP fees

For 68% of the banks studied, 2Q23 NIMs exceeded 1Q22 NIMs

While NIMs may have contracted in 2023, they remain above the zero rate environment NIMs for many banks, indicating that a low rate environment presents a greater risk to some banks

Change in NIM	NIM Change 2Q23 vs 1Q22	
	No. of Banks	% of Total
Down > 50 bps	221	8.0%
Down 25 - 50 bps	260	9.5%
Down < 25 bps	389	14.2%
No Change	20	0.7%
Up < 25 bps	402	14.6%
Up 25 - 50 bps	418	15.2%
Up > 50 bps	1,036	37.7%
% with Lower NIMs		31.7%
% with Higher NIMs		67.6%
Data set consists of 2,764 banks with assets between \$100 million and \$3 billion at 12/31/22		
Source: S&P Capital IQ Pro, Mercer Capital Research		

# Spreads on Securities

Tight (or Negative) Spreads on Securities May Prompt a Reassessment of Securities Portfolio Strategies

Percentage of banks reporting a spread on securities (securities yield minus cost of earning assets) of less than 1.00% has risen from 8% in 4Q19 to 23% in 4Q22 to 43% in 2Q23

For banks with larger securities portfolio (> 25% of total assets), 36% report a spread of less than 1.00%

Spread between Securities Yield & Cost of Funds								
	2Q23 (Complete Dataset)		4Q22		4Q19		2Q23 (Securities > 25% of Assets)	
Securities Spread	No. of Banks	% of Total	No. of Banks	% of Total	No. of Banks	% of Total	No. of Banks	% of Total
< 0.00%	203	7%	70	3%	49	2%	36	3%
0.00% - 0.50%	355	13%	144	5%	35	1%	143	10%
0.50% - 1.00%	616	22%	417	15%	143	5%	315	23%
1.00% - 1.50%	668	24%	886	32%	501	18%	372	27%
1.50% - 2.00%	445	16%	769	28%	1,002	36%	253	19%
2.00% - 3.00%	374	14%	389	14%	913	33%	206	15%
3.00% - 4.00%	75	3%	59	2%	93	3%	29	2%
4.00% - 5.00%	13	0%	16	1%	11	0%	6	0%
> 5.00%	13	0%	8	0%	14	1%	5	0%
% with Spread < 1.00%		43%	23%		8%		36%	
Data set consists of 2,764 banks with assets between \$100 million and \$3 billion at 12/31/22								
Securities yields are tax-equivalent								
Cost of funds represents the cost of earning assets (interest expense ÷ average earning assets)								
Source: S&P Capital IQ Pro and Mercer Capital research								

# Spreads on Securities

## Tight (or Negative) Spreads on Securities May Prompt a Reassessment of Securities Portfolio Strategies

Unless rates decrease significantly, losses on securities will be realized in either of two ways:

- Immediately, through losses on sale
- Over time, through lower earnings

Attractiveness of swap transactions?

### Pros of Selling Securities

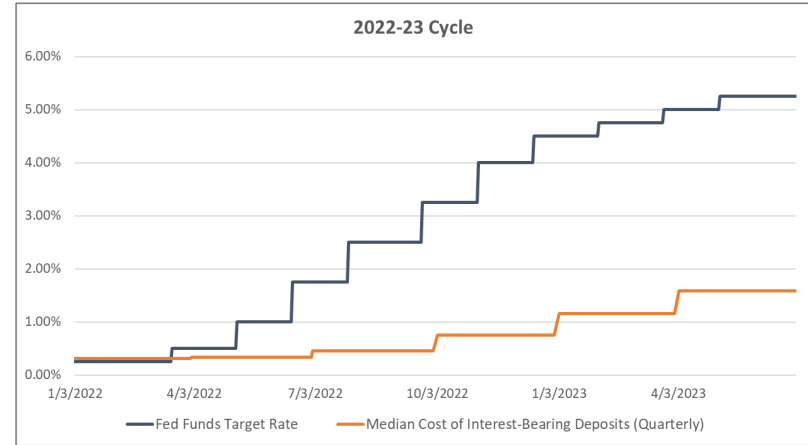
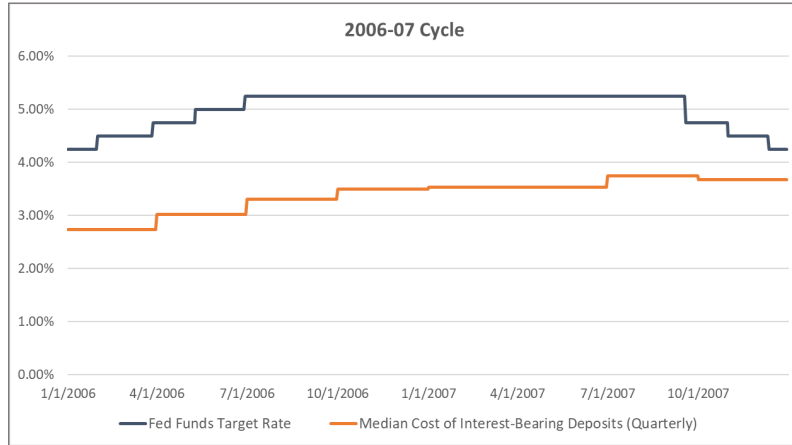
- Net interest margin enhancement. As discussed previously, the market has rewarded banks with less NIM pressure
- Reduced interest rate risk
- Provides some closure
- Can repay high rate borrowings with proceeds

### Cons of Selling Securities

- Impact to capital may not be tolerable for some banks
- Lower capital affects the potential size of the balance sheet (via minimum capital ratios) and therefore net interest income
- Rates could decrease before the securities loss is earned back through higher net interest income
- Investor/customer reaction

# Funding Cost Pressure: It Could be Worse

For the Median Bank, Funding Costs Likely Will Stabilize Below Past Rising Rate Cycles



The most recent period for which the Fed Funds target rate was in the 5% range lasted from May 2006 to September 2007. For the banks in our analysis, the median cost of interest-bearing deposits peaked at 3.75%

Deposit funding costs differ significantly from the prior cycle, with the cost of interest-bearing deposits for the median bank rising to only 1.59% in 2Q23.

Data set consists of 2,764 banks with assets between \$100 million and \$3 billion at 12/31/22

# Cost of Earning Assets

Funding Costs Rose Rapidly in the 1<sup>st</sup> Half of 2023 but Perhaps Less than Expected Given Aggressive Fed Moves

In 4Q07, 93% of banks had a cost of earning assets exceeding 2.00%, versus only 11% in 2Q23

Extrapolating the recent upward trend, it appears that the cost of earning assets will settle in the 1.50% to 2.00% range for most banks

	Cost of Earning Assets					
	2Q23		4Q22		4Q07	
<b>Cost of Earning Assets</b>	<b>No. of Banks</b>	<b>% of Total</b>	<b>No. of Banks</b>	<b>% of Total</b>	<b>No. of Banks</b>	<b>% of Total</b>
< 0.50%	255	9%	1,188	43%	5	0%
0.50% - 1.00%	712	26%	1,113	40%	14	1%
1.00% - 1.50%	956	35%	365	13%	33	1%
1.50% - 2.00%	529	19%	75	3%	148	5%
2.00% - 3.00%	283	10%	22	1%	1,104	40%
3.00% - 4.00%	28	1%	0	0%	1,330	48%
4.00% - 5.00%	1	0%	0	0%	125	5%
> 5.00%	0	0%	0	0%	5	0%
<b>Median Cost of Earning Assets</b>	<b>1.20%</b>		<b>0.57%</b>		<b>3.04%</b>	

Data set consists of 2,764 banks with assets between \$100 million and \$3 billion at 12/31/22  
Source: S&P Capital IQ Pro and Mercer Capital research

# Cost of Earning Assets

## Grow or Hold the Balance Sheet Steady?

One way to restrain growth in funding costs is to limit earning asset/deposit (or wholesale borrowing) growth. But is this the best way to enhance shareholder value?

A higher rate environment—with an inverted yield curve—raises questions about balancing current profitability with growth

- Should the bank attract incremental funding at 4.5% to 5.5% today to invest in loans yielding 7% to 8%? The 2.00% spread may squeeze the NIM, but it may be more accretive to the NIM if rates fall (assuming the bank obtains prepayment penalties)



# Earning Asset Yields

Deposit Runs Weren't the Only Issue for Banks that Failed in 2023

Why did PacWest and Western Alliance survive, whereas SVB, Signature, and First Republic did not?

- Earning asset yields played a significant role
- The mix of earning assets matters too. SVB had a relatively high loan yield, but it had too few loans

	Silicon Valley Bank	Signature Bank	First Republic Bank	Pacific Western Bank	Western Alliance Bank
Yield on Loans	6.08%	4.95%	3.59%	5.80%	5.73%
Yield on Securities	1.78%	2.26%	3.33%	2.31%	3.98%
<b>Yield on Earning Assets</b>	<b>3.38%</b>	<b>4.13%</b>	<b>3.55%</b>	<b>4.89%</b>	<b>5.42%</b>
Cost of Interest-Bearing Deposits	2.36%	3.11%	1.58%	2.13%	1.94%
Cost of Earning Assets	1.32%	1.85%	1.06%	1.46%	1.47%
<b>Net Interest Margin</b>	<b>2.06%</b>	<b>2.28%</b>	<b>2.49%</b>	<b>3.43%</b>	<b>3.95%</b>

*Source: 4Q22 Call Reports, Mercer Capital research*

# Earning Asset Yields

We remained concerned, from an investment risk standpoint, about banks with lower earning asset yields

- Duration of the assets matters, of course (although we suspect that many banks with lower asset yields also have longer durations)
- From an investment standpoint, betting that banks with low asset yields can sufficiently restrain funding cost growth to maintain a reasonable NIM seems like a risky proposition

Yield on Earning Assets				
	2Q23		4Q07	
	No. of Banks	% of Total	No. of Banks	% of Total
< 3.00%	51	2%	0	0%
3.00% - 4.00%	503	18%	0	0%
4.00% - 5.00%	1,315	48%	12	0%
> 5.00%	895	32%	2,752	100%
Median Yield on Earning Assets		4.62%	6.99%	

Data set consists of 2,764 banks with assets between \$100 million and \$3 billion at 12/31/22

Source: S&P Capital IQ Pro and Mercer Capital research

## Credit Metrics Remain Stable, But Credit May Replace Rates at the Forefront of Investor Concerns

Asset quality metrics remain stable in 2023

- Classified loans fell for 53% of banks
- Median classified loan ratio up 4 bps in 2023

A longer period of higher rates likely will pressure asset quality metrics

- Stress on borrowers with variable rate loans
- More loans to borrowers that currently have fixed/adjustable rate structures will be subject to rate adjustments in a higher rate environment
- Potential impact on cap rates for CRE properties

Change in Problem Loan Ratio	Change in Problem Loan Ratios (4Q22 - 2Q23)			
	Criticized Loan Ratio		Classified Loan Ratio	
	No. of Banks	% of Total	No. of Banks	% of Total
Down More than 100 bps	20	10%	6	3%
Down 25 bps - 100 bps	49	24%	36	18%
Down 0 bps - 25 bps	54	27%	65	32%
No Change	4	2%	7	3%
Up 0 bps - 25 bps	25	12%	51	25%
Up 25 bps - 100 bps	36	18%	26	13%
Up More than 100 bps	13	6%	10	5%
<b>Total, Lower Problem Loans</b>	<b>123</b>	<b>61%</b>	<b>107</b>	<b>53%</b>
<b>Total, Higher Problem Loans</b>	<b>74</b>	<b>37%</b>	<b>87</b>	<b>43%</b>

	6/30/2023	12/31/2022	6/30/2023	12/31/2022
Median Ratio	1.66%	1.81%	0.84%	0.80%

Data set consists of publicly-traded banks with assets between \$1 and \$10 billion  
Source: S&P Capital IQ Pro, Mercer Capital research

Classified Loan Ratio = (Substandard + Doubtful Loans) / Total Loans  
Criticized Loan Ratio = (Special Mention + Classified Loans) / Total Loans

# Capital

## The Menu of Capital Uses Is Growing

### Capital Allocation:

- Stock redemptions (may be attractive at 8x-9x earnings if confident in earning power)
- Reposition securities portfolio
- Redeem floating rate holding company borrowings, such as trust preferred securities
- Higher capital expectations from regulators?

If rates stay higher for longer, it is more likely that subordinated debt issued by banks will experience a significant increase in interest payments when the rate switches from fixed to floating. At least 200 bank holding companies issued sub debt in 2019 and 2020

# Planning Opportunities for Privately-Held Banks

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Though the near-term outlook for banks appears muted, an attractive opportunity exists for shareholders to make gifts to descendants over the next two years

- The lifetime gift and estate tax exemption is \$13 million in 2023 and, indexed for inflation, is expected to be about \$13.5 to \$14.0 million in 2024 and 2025
- In 2026, the exemption drops to about \$7 million when the Trump tax cuts sunset

The combination of lower-than-average P/E multiples and a higher gift tax exemption makes an opportune time for gift and estate tax planning

# Questions?

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Andy Gibbs leads Mercer Capital's Depository Institutions Group. He provides valuation and corporate advisory services to financial institutions for purposes including mergers and acquisitions, employee stock ownership plans, profit sharing plans, estate and gift tax planning and compliance matters, corporate planning and reorganizations.

He leads projects involving compliance with ASC 805 and ASC 350, which entail, for example, the identification and valuation of intangible assets under ASC 805 and impairment testing under ASC 350.

He also works with financial institutions in merger and acquisition advisory engagements. In addition, Andy participates in projects in a litigated context, including tax disputes, dissenting shareholder actions, and employee stock ownership plan related matters.

Andy is a frequent speaker on topics related to community bank valuation and has co-authored three books on banking topics.



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