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BUSINESS VALUATION & FINANCIAL ADVISORY SERVICES

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Bank Watch

ARTICLE

Bond Pain and Perspective on Bank Valuations

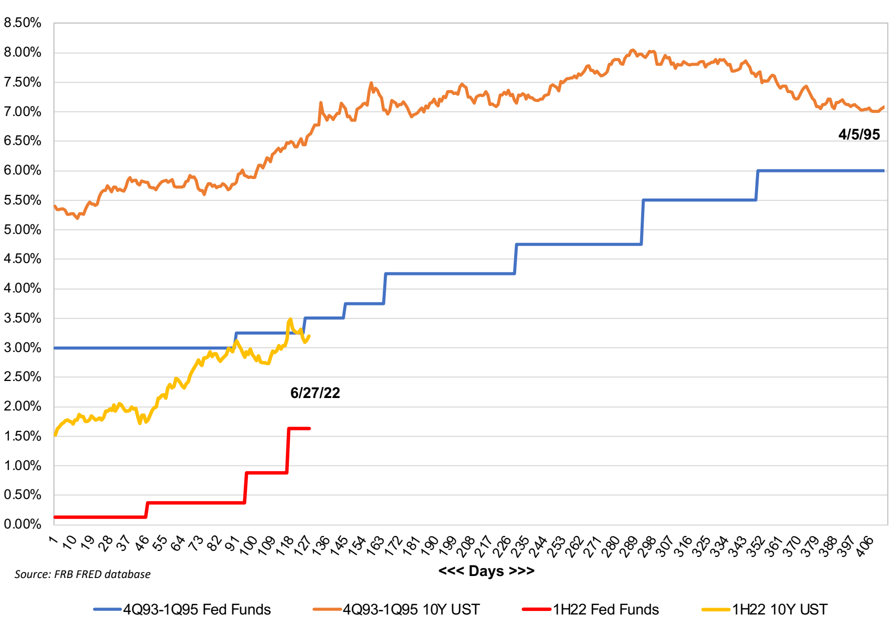
In This Issue

Bond Pain and Perspective on Bank Valuations

Equity investors define a bear market as a 20% or greater reduction in price from the most recent high price. There is no consensus for fixed income. A bond's maturity and coupon are key variables in determining the sensitivity of price except when overlaying credit and prepayment variables when applicable.

A simple definition might be when the price falls more than three times the annual income for any bond with a maturity greater than five years. If so, it is a low bar when coupons are as low as they are. Definitions aside, the bond market is in a bear market.

Figure 1 :: 1994 Bear Market vs 2022 Bear Market



The yield on the 10-year U.S. Treasury note ("UST") was 3.21% on June 27, up from 1.51% as of year-end. Ignoring the impact of the intervening six months for what would be a bond with 9.5 years to maturity, the increase in yield has produced a ~14% loss in value.

The last bond bear market that was brutal occurred in 1994 when the Fed raised the Fed Funds target rate from today's aspirational rate of 3.0% beginning in February to 6.0% by February 1995. The yield on the 10-year UST rose from 5.19% on October 15, 1993 to a peak of 8.05% on November 7, 1994 once the market could see the last few Fed hikes to come. The 286bps increase in yield pushed the price of the 10-year UST down by 17%, which modestly exceeds the 14% loss this year.

Coupons matter. Fixed income investors entered the current rising rate environment with little coupon to cushion rising yields unlike in the years immediately after the Great Financial Crisis when the Fed first implemented a zero-interest rate policy ("ZIRP").

Worse, banks entered the current bear market with much bigger securities portfolios given the system was inundated with excess deposits because of actions taken by the Fed and government to offset the COVID-19 recession.

To get a sense of the damage in bank bond portfolios consider Figures 2 and 3 (on the next page) where we have compared the unrealized losses in bank bond portfolios as of March 31 with the unrealized losses as of year-end 1994, which roughly corresponded to the bottom of the 1994 bear market. The data reflects averages.

We make the following observations for banks with $1 billion to $3 billion of assets:

- Banks are better capitalized with average leverage and tier one capital ratios of 10.6% and 17.0% as of March 31, 2022 compared to 8.3% and 12.9% as of year-end 1994.
- Securities classified as available-for-sale ("AFS") and held-to-maturity ("HTM") averaged 19.0% and 2.5% of assets as of March 31, 2022 compared to 11.2% and 14.6% as of year-end 1994.
- The unrealized loss in the AFS portfolio equated to 4.7% of the cost basis and 11.3% of tier one capital (excludes the deferred tax asset adjustment) as of March 31, 2022 compared to 2.8% and 5.7% as of year-end 1994. [1]
- Unrealized losses in HTM portfolios in Figure 2 may appear too small even though many banks classify long-dated municipals as HTM because these illiquid bonds had not been adequately marked yet to reflect a rapidly declining market.
- Unrealized losses will increase once June 30 data is available because UST rates have risen ~75bps since March 31.

Banks are sitting on large unrealized losses today. Investors know that. The bear market in bank stocks (the NASDAQ Bank Index is down ~19% YTD) primarily reflects investor expectations about the potential impact a recession would have on credit costs next year even though NIMs will increase this year (excluding the impact of PPP loan fees) and next *provided the Fed does not pivot and reduce rates.* The current equity bear market is not about unrealized losses in bond portfolios; it is about the economic outlook.

Figure 2 :: Unrealized Losses in Bank Portfolios as of March 31, 2022

March 31, 2022 FDIC Data Asset Size	# of Banks	Average Assets ($M)	Lev Ratio (%)	Tier 1 Capital (%)	AFS Sec / Assets (%)	AFS Gain / (Loss) Cost (%)	AFS Gain / (Loss) T1 Cap (%)	HTM Sec / Assets (%)	HTM Gain / (Loss) Cost (%)	HTM Gain / (Loss) T1 Cap (%)
> $250B	12	$1,092,468	7.7%	14.0%	18.9%	-3.5%	-10.1%	11.8%	-4.4%	-10.3%
$100 - $250B	17	$165,681	9.2%	13.8%	13.2%	-3.8%	-6.9%	7.9%	-4.2%	-7.2%
$10B - $100B	101	$26,793	9.4%	13.7%	17.8%	-4.5%	-10.3%	5.4%	-4.0%	-4.3%
$3B - $10B	189	$5,289	10.3%	15.2%	18.4%	-4.5%	-10.0%	3.6%	-3.8%	-4.9%
$1B - $3B	498	$1,669	10.6%	17.0%	19.0%	-4.7%	-11.3%	2.5%	-2.5%	-2.5%
$500M - $1B	644	$704	10.2%	17.2%	21.3%	-4.3%	-11.6%	2.0%	-2.1%	-2.2%
$100M - $500M	2,023	$255	10.8%	18.7%	23.5%	-4.4%	-12.7%	2.2%	-2.0%	-3.1%
< $100M	697	$60	15.4%	39.5%	23.1%	-3.4%	-10.6%	4.0%	-1.9%	-4.9%

Figure 3 :: Unrealized Losses in Bank Portfolios as of December 31, 1994

Dec 31, 1994 FDIC Data Asset Size	# of Banks	Average Assets ($M)	Lev Ratio (%)	Tier 1 Capital (%)	AFS Sec / Assets (%)	AFS Gain / (Loss) Cost (%)	AFS Gain / (Loss) T1 Cap (%)	HTM Sec / Assets (%)	HTM Gain / (Loss) Cost (%)	HTM Gain / (Loss) T1 Cap (%)
> $250B	0	$0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
$100B - $250B	4	$154,571	6.0%	8.2%	9.5%	-1.4%	-1.2%	2.3%	-10.2%	-3.5%
$10B - $100B	55	$21,213	7.2%	9.0%	7.8%	-2.1%	-2.5%	10.7%	-3.3%	-6.3%
$3B - $10B	130	$5,599	7.7%	10.7%	9.6%	-2.5%	-5.0%	12.2%	-3.7%	-8.6%
$1B - $3B	191	$1,666	8.3%	12.9%	11.2%	-2.8%	-5.7%	14.6%	-2.8%	-6.9%
$500M - $1B	245	$707	8.5%	14.0%	11.9%	-2.4%	-4.7%	15.0%	-2.8%	-6.0%
$100M - $500M	2,492	$197	9.2%	15.8%	14.1%	-2.4%	-5.7%	16.4%	-3.0%	-6.6%
< $100M	7,138	$43	10.7%	20.3%	14.2%	-0.8%	-5.3%	18.7%	-3.1%	-6.4%

Source: S&P Global Market Intelligence, FDIC and Mercer Capital

[1] Bonds classified as AFS are marked-to-market with an offsetting entry directly to equity rather than through the income statement. The unrealized gain or loss is excluded from regulatory capital, however. Bonds classified as HTM are recorded at cost unless impaired. The loss shown as a percent of tier one capital in Figures 2 and 3 is for comparative purposes only given losses or gains are not reflected in a bank's equity.

From a valuation perspective, we primarily look to the impact of rising (or falling) rates on a bank's earnings rather than how changes in rates have impacted the value of the bond portfolio and tangible book value. Assuming an efficient market, the unrealized losses represent the opportunity cost of holding bonds with coupons below the current market rate. If the underwater bonds are sold and immediately repurchased, then the bonds repurchased will produce enough extra income over the life of the bonds to recoup the loss (assuming an efficient market).

Further, the AFS securities portfolio is the only asset for most banks that is marked-to-market other than mortgage loans pending sale. Fixed rate residential and CRE loans would have sizable losses, too, if subjected to mark-to-market. Rates have risen, prepayment speeds have slowed and in the case of CRE credit spreads have widened.

Also not marked-to-market are deposits. Though a liability, core deposits are the key "asset" for commercial banks. Value for deposits—especially non-interest-bearing deposits—is soaring given a low beta to changes in market interest rates when loan-to-deposit ratios are low.

The monthly report that really matters is not the bond report but the asset-liability model ("ALM"). Banks manage net interest margin (price) and assets (volume) to drive earnings; and earnings (or cash flow) drive stocks over time. Earnings also build book value to the extent earnings are retained.

Rising rates—gradually rather than rapid—are a positive development given the commercial bank business model, assuming that credit quality does not deteriorate.

Having said that, we cannot completely dismiss the unrealized losses in the bond portfolios. Some investors focus on tangible book value, though we view it as a proxy for earning power because tangible book value is levered to produce net interest income.

Also, M&A is more challenging because day one dilution to tangible BVPS is greater to the extent unrealized bond losses are recognized via fair value marks applied to all assets. Of course, earnings then increase from accreting the discounts as additional yield.

Aside from the soaring value of core deposits, the glass half full view is bonds and fixed rate loans eventually mature. In the interim, cash flows should be reinvested to produce better yields.

About Mercer Capital

Mercer Capital is a national valuation and transaction advisory firm that has advised banks for 40 years through bear and bull markets. Please give one of our professionals a call if we can be of assistance.

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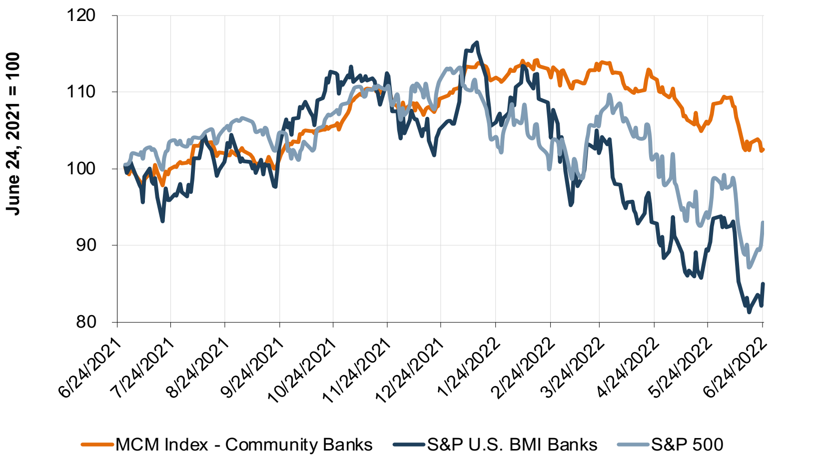
WHAT WE'RE READING

Small businesses are **reexamining** their strategies and operations with a sense of urgency in response to rising costs and staffing difficulties, according to a recent survey from Umpqua Bank.

Fed Chair Powell **acknowledged** the possibility of a recession in congressional hearings as he discussed the central bank's focus on bringing down inflation.

The University of Michigan's **Consumer Sentiment Index** fell to a **record low** in June as inflation concerns impacted respondents' views of the economy.

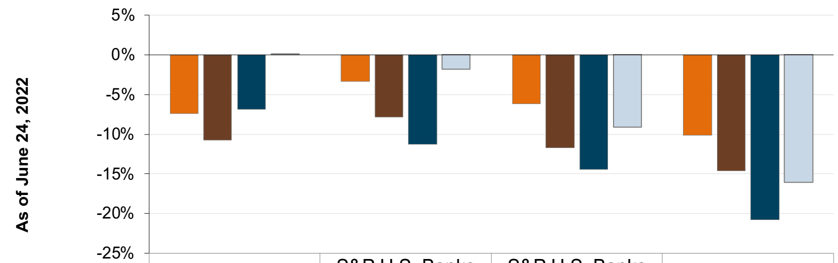
Mercer Capital's Bank Group Index Overview



Source: S&P Capital IQ Pro.

Return Stratification of U.S. Banks

by Market Cap



	S&P U.S. Banks Market Cap Under $250 Million	S&P U.S. Banks Market Cap Between $250 Million - $1 Billion	S&P U.S. Banks Market Cap Between $1 Billion - $5 Billion	S&P U.S. Banks Market Cap Over $5 Billion
Month-to-Date	-7.38%	-3.37%	-6.13%	-10.09%
Quarter-to-Date	-10.75%	-7.81%	-11.75%	-14.63%
Year-to-Date	-6.90%	-11.24%	-14.44%	-20.79%
Last 12 Months	0.10%	-1.79%	-9.14%	-16.07%

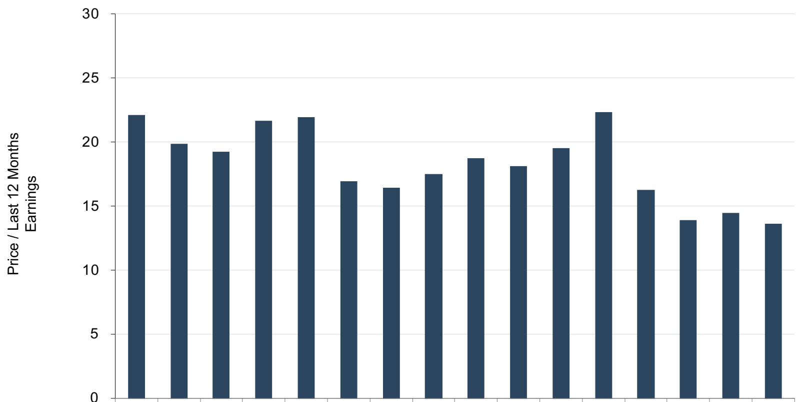
Source: S&P Capital IQ Pro.

	Total Return				Regional Index Data as of June 24, 2022					
	Month-to-Date	Quarter-to-Date	Year-to-Date	Last 12 Months	Price/LTM EPS	Price / 2022 (E) EPS	Price / 2023 (E) EPS	Price / Book Value	Price / Tangible Book Value	Dividend Yield
Atlantic Coast Index	-6.7%	-11.1%	-11.6%	-5.6%	9.0x	9.9x	9.3x	112%	122%	2.7%
Midwest Index	-5.1%	-6.6%	-3.9%	6.3%	8.9x	10.0x	9.1x	101%	117%	3.0%
Northeast Index	-5.0%	-6.1%	-5.5%	4.4%	8.9x	9.0x	8.2x	107%	117%	3.0%
Southeast Index	-8.1%	-6.3%	1.9%	4.4%	11.6x	9.3x	8.3x	110%	119%	2.7%
West Index	-5.0%	-13.7%	-11.2%	3.7%	10.0x	9.0x	7.5x	107%	113%	3.1%
Community Bank Index	-5.6%	-8.8%	-7.1%	2.5%	9.2x	9.3x	8.3x	107%	118%	2.9%
S&P U.S. BMI Banks	-9.4%	-14.0%	-19.7%	-15.0%	na	na	na	na	na	na

Source: S&P Capital IQ Pro.

Median Price/Earnings Multiples

Target Banks' Assets <$5B and LTM ROE >5%

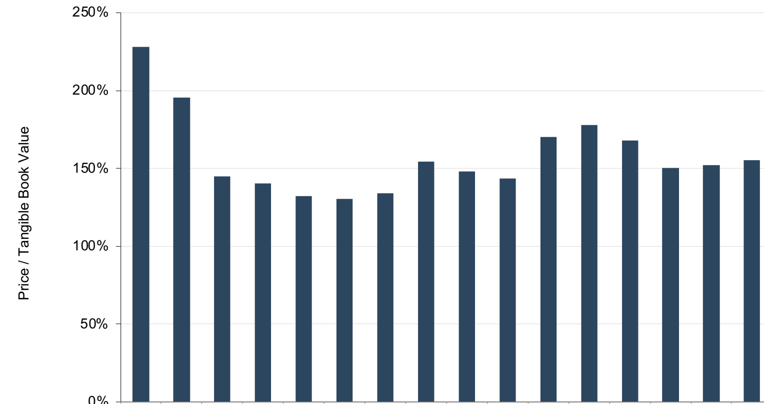


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	LTM 2022
U.S.	22.1	19.9	19.3	21.7	21.9	17.0	16.5	17.5	18.8	18.1	19.5	22.4	16.3	13.9	14.5	13.7

Source: S&P Capital IQ Pro.

Median Price/Tangible Book Value Multiples

Target Banks' Assets <$5B and LTM ROE >5%

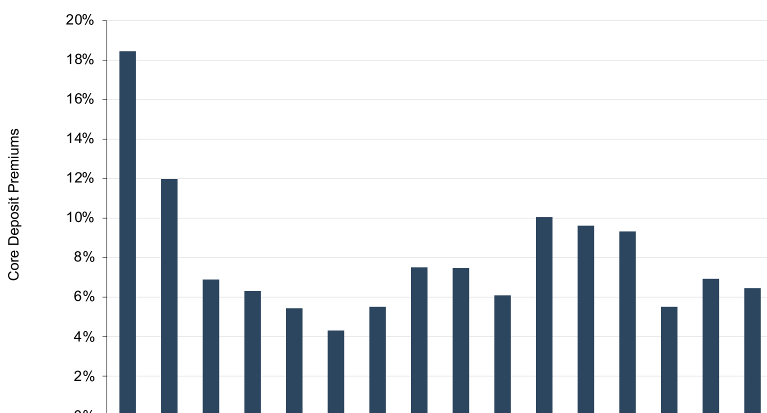


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	LTM 2022
U.S.	228%	196%	145%	141%	132%	130%	134%	155%	148%	143%	170%	178%	168%	150%	152%	155%

Source: S&P Capital IQ Pro.

Median Core Deposit Premiums

Target Banks' Assets <$5B and LTM ROE >5%



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	LTM 2022
U.S.	18.4%	12.0%	6.9%	6.3%	5.4%	4.3%	5.5%	7.5%	7.5%	6.1%	10.0%	9.6%	9.3%	5.5%	6.9%	6.5%

Source: S&P Capital IQ Pro.

Median Valuation Multiples for M&A Deals

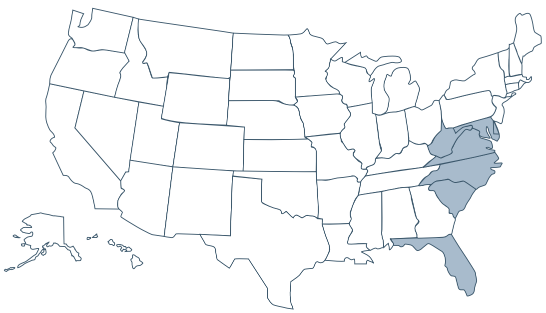
Target Banks' Assets <$5B and LTM ROE >5%, 12 months ended June 24, 2022

Regions	Price / LTM Earnings	Price/ Tang. BV	Price / Core Dep Premium	No. of Deals	Median Deal Value ($M)	Target's Median Assets ($000)	Target's Median LTM ROAE
Atlantic Coast	13.8x	184%	8.0%	12	168.3	857,181	11.3%
Midwest	14.5x	153%	7.8%	52	97.2	192,388	10.0%
Northeast	12.2x	124%	3.2%	8	106.8	750,988	10.4%
Southeast	13.1x	162%	6.4%	27	105.5	377,714	13.4%
West	13.5x	157%	6.4%	19	75.0	539,484	12.5%
National Community Banks	13.7x	155%	6.5%	118	105.0	377,265	11.1%

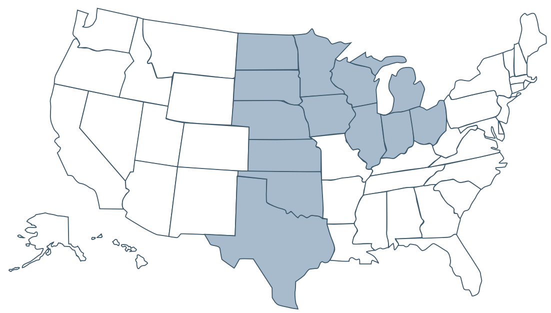
Source: S&P Capital IQ Pro.

Mercer Capital's Regional Public Bank Peer Reports

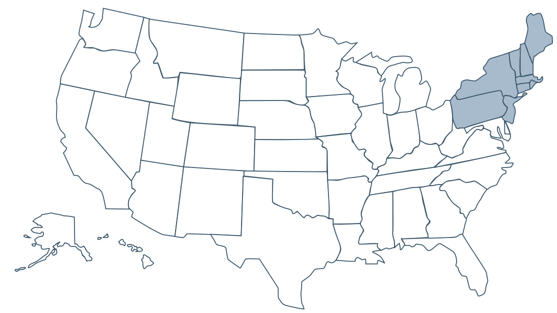
Updated weekly, Mercer Capital's Regional Public Bank Peer Reports offer a closer look at the market pricing and performance of publicly traded banks in the states of five U.S. regions. Click on the map to view the reports from the representative region.



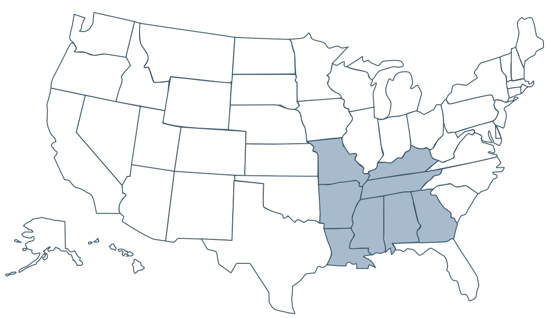
Atlantic Coast



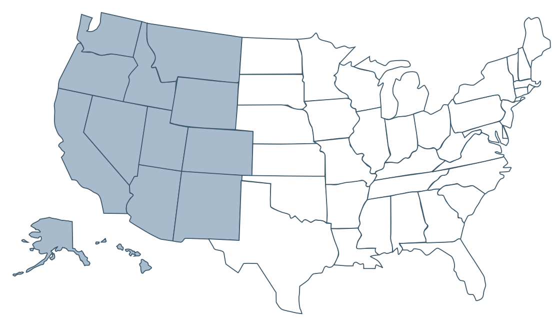
Midwest



Northeast



Southeast



West

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Depository Institutions Services

Mercer Capital assists banks, thrifts, and credit unions with significant corporate valuation requirements, transaction advisory services, and other strategic decisions.

Mercer Capital pairs analytical rigor with industry knowledge to deliver unique insight into issues facing banks. These insights underpin the valuation analyses that are at the heart of Mercer Capital's services to depository institutions.

- Bank valuation
- Financial reporting for banks
- Goodwill impairment
- Litigation support
- Stress Testing
- Loan portfolio valuation
- Tax compliance
- Transaction advisory
- Strategic planning

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