



Massachusetts
Bankers
Association

**THE
KAFAFIAN
GROUP**

STATE OF THE INDUSTRY: MASSACHUSETTS Q3 2022

Performance
Measurement



Strategic
Management



Profit & Process
Improvement



Management
Advisory



Financial
Advisory



DISCLOSURE STATEMENT

FORWARD LOOKING STATEMENTS

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Source: The Kafafian Group, Inc.



MASSACHUSETTS BANKERS ASSOCIATION QUARTERLY UPDATE

SUMMARY OF KEY THEMES

1

Market expectations are for more rate hikes in 2022 into mid 2023 though the severity of the rate hikes is perceived to be lesser even though inflation, while retreating a bit, is still well above the Fed's 2% benchmark.

2

The quarterly median change in net interest margin ("NIM") for Q3 2022 Massachusetts banks was 23bp. Increasing consensus is that deposit costs will accelerate more quickly than loan yields (given low prepayments and slowing loan demand), with NIM most vulnerable to compression through the latter part of 2023.

3

As of September 30, 2022 there are 98 banks across the U.S. with tangible equity / tangible asset ratios below the "critically undercapitalized" level of 2.00% and 31 banks with negative tangible equity / tangible asset ratios. Given decreasing liquidity ratios over the last year, banks need to carefully monitor their securities portfolios to accurately gauge cash flows.

4

The financial condition and financial performance metrics for Massachusetts banks improved again in Q3 2022. The Massachusetts banking landscape remains in a good position.

Source: The Kafafian Group, Inc.



ECONOMIC SNAPSHOT

EMPLOYMENT & HOUSING

EMPLOYMENT		Measure	Oct-22	Sep-22	Aug-22	Change from Prior Month (%) or actual change	Change from Prior Year (%) or actual change
1	Unemployment Rate (National Seasonally Adj)	%	3.7	3.5	3.7	0.2	-1.7
2	Unemployment Rate in Massachusetts (Not Seasonally Adj)	%	3.5	3.4	3.6	0.1	-2.5
3	All Employees, Total Nonfarm	000's	153,285	153,001	152,732	0.19%	3.57%
4	Labor Force Participation Rate	%	62.2	62.3	62.4	-0.1	0.5
			10/29/2022	9/24/2022	8/27/2022		
5	Initial Claims (Weekly)		218,000	190,000	228,000	14.74%	-47.34%

HOUSING		Measure	Oct-22	Sep-22	Aug-22	Change from Prior Month (%) or actual change	Change from Prior Year (%) or actual change
6	S&P/Case-Shiller U.S. National Home Price Index		NA	300.4	303.5	-1.01%	10.65%
7	S&P/Case-Shiller MA-Boston Home Price Index		NA	305.0	309.5	-1.48%	8.81%
8	Housing Affordability Index		NA	96.6	103.8	-6.94%	-32.68%
9	New Privately-Owned Housing Units Started: Single-Family Units	000's	855.0	911.0	923.0	-6.15%	-20.76%
10	New Privately-Owned Housing Units Started: Single-Family Units in the Northeast Census Region	000's	52.0	59.0	60.0	-11.86%	13.21%
11	30-Year Fixed Rate Mortgage Average in the United States	%	6.90	5.97	5.22	0.93	3.83
			3Q2022	2Q2022	1Q2021		
12	Delinquency Rate on Single-Family Residential Mortgages	%	1.86	1.97	2.09	-0.11	(0.45)

Source: The Kafafian Group, Inc. analysis of data provided by the Federal Reserve Bank of St. Louis, data where available as of 11/21/2022



ECONOMIC SNAPSHOT

MARKET/RATES, CONSUMER, & PRODUCTION/PRICES

MARKET/RATES		Measure	Oct-22	Sep-22	Aug-22	Change from Prior Month (%) or actual change	Change from Prior Year (%) or actual change
(End of Period)							
1	S&P 500		3,872.0	3,585.6	3,955.0	7.99%	-15.92%
2	Market Yield on U.S. Treasury Securities at 10-Year Constant Maturity, Quoted on an Investment Basis	%	4.10	3.83	3.15	0.27	2.55
3	Bank Prime Loan Rate	%	6.25	6.25	5.50	0.00	3.00
4	Federal Funds Effective Rate	%	3.08	3.08	2.33	-	2.38

CONSUMER		Measure	Oct-22	Sep-22	Aug-22	Change from Prior Month (%) or actual change	Change from Prior Year (%) or actual change
5	Personal Consumption Expenditures: Chain-type Price Index		124.6	124.1	123.7	0.34%	6.02%
6	Retail Sales: Excluding Motor Vehicle and Parts	\$mil	NA	551,251	551,906	-0.12%	19.75%
7	University of Michigan: Consumer Sentiment		59.9	58.60	58.20	2.22%	-16.46%
8	Personal Saving Rate	%	2.3	2.40	2.80	(0.10)	(5.00)

PRODUCTION/PRICES		Measure	Oct-22	Sep-22	Aug-22	Change from Prior Month (%) or actual change	Change from Prior Year (%) or actual change
9	Consumer Price Index		298.1	296.76	295.62	0.44%	7.76%
10	ISM Manufacturing: PMI		50.20	50.90	52.80	(0.70)	(10.60)
11	ISM Services: PMI		54.40	56.70	56.90	(2.30)	(12.30)
			3Q2022	2Q2022	1Q2022		
12	Gross Domestic Product (Change from Prior, annualized rate)	%	2.90	(0.60)	(1.60)	NA	NA

Source: The Kafafian Group, Inc. analysis of data provided by the Federal Reserve Bank of St. Louis, data where available as of 11/21/2022



STATE ECONOMIC TRENDS

NEW ENGLAND REGIONAL ECONOMIC TRENDS

The below highlights unemployment rate and salary trends in New England for past six months of 2022. Massachusetts had the highest 12 month percentage change in Nonfarm Wage and Salary in the New England region.

Unemployment Rate %						
State	May2022	Jun2022	Jul2022	Aug2022	Sep2022	Oct2022
1 Massachusetts	3.90	3.70	3.50	3.60	3.40	3.50
2 Connecticut	4.20	4.00	3.70	4.10	4.00	4.30
3 Rhode Island	2.90	2.70	2.70	2.80	3.10	3.40
4 New Hampshire	2.10	2.00	2.00	2.00	2.20	2.40
5 Vermont	2.30	2.20	2.10	2.10	2.10	2.30
Nonfarm Wage and Salary Employment 12 Month % Change						
State	May2022	Jun2022	Jul2022	Aug2022	Sep2022	Oct2022
6 Massachusetts	4.90	4.80	3.70	3.40	4.50	4.00
7 Connecticut	2.70	2.50	2.10	2.40	2.80	2.20
8 Rhode Island	3.70	3.30	2.60	3.30	2.60	2.60
9 New Hampshire	3.00	3.00	1.90	1.50	2.70	2.40
10 Vermont	1.80	2.20	1.30	2.00	2.20	1.90
Finance Activities Wage and Salary Employment 12 Month % Change						
State	May2022	Jun2022	Jul2022	Aug2022	Sep2022	Oct2022
11 Massachusetts	(1.80)	(1.50)	(0.80)	(0.30)	(0.50)	2.40
12 Connecticut	1.20	1.20	1.00	1.10	1.50	(0.20)
13 Rhode Island	(2.30)	(1.40)	(1.70)	(1.40)	(0.60)	2.30
14 New Hampshire	1.20	0.60	0.30	(0.90)	(1.20)	(1.70)
15 Vermont	1.70	1.70	2.60	2.50	3.40	2.50

Source: Bureau of Labor Statistics

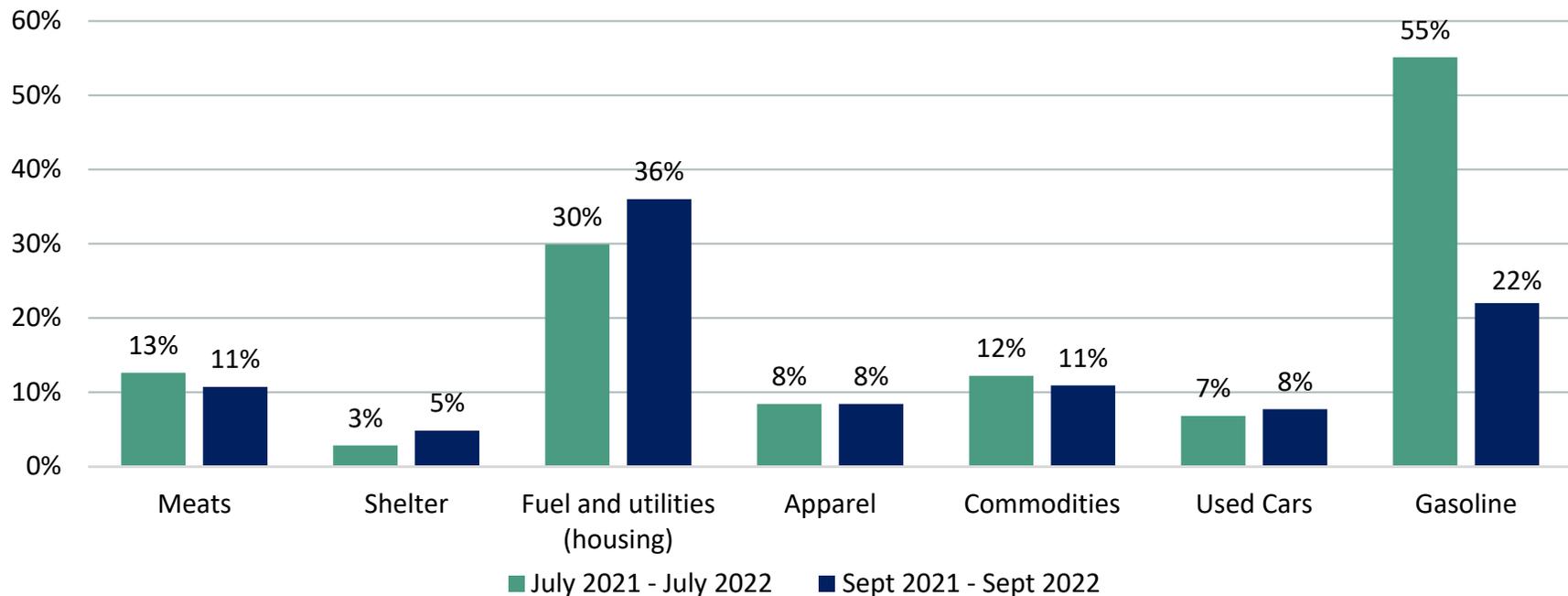


INFLATION

TRENDS IN INFLATION IN THE BOSTON-CAMBRIDGE-NEWTON METROPOLITAN STATISTICAL AREA

The graphic below shows year over year increases between July 2021 and July 2022 as well as September 2021 and September 2022 on everyday necessities. While inflation has subsided in some categories, prices still remain elevated in other categories. The September 2022 average price/ gallon of gasoline in the state of Massachusetts was \$3.826, up from \$3.162 a year ago. The national average for September 2022 was \$3.817.

**Select Consumer Price Index Metrics:
Boston-Cambridge-Newton**

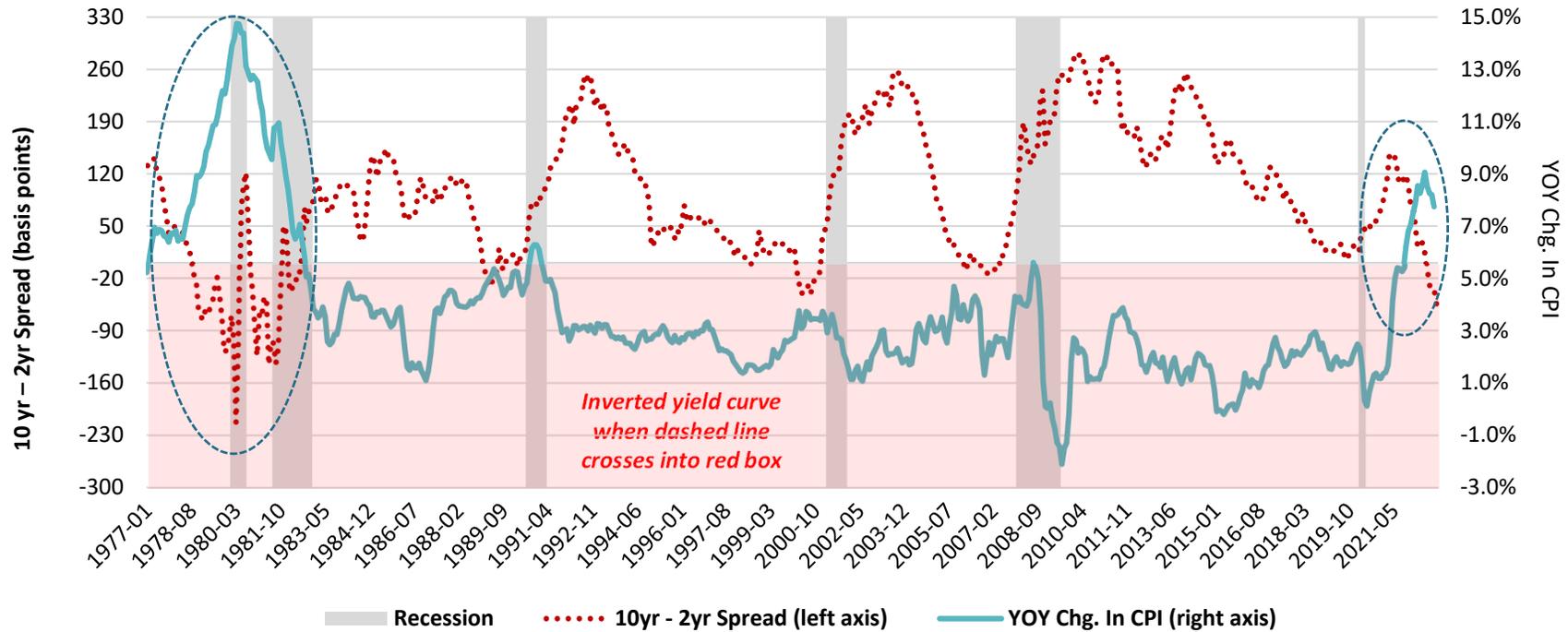


Source: Bureau of Labor Statistics, eia.gov

BACK TO THE FUTURE?

LONG TERM LOOK AT THE RELATIONSHIP BETWEEN THE YIELD CURVE, INFLATION AND RECESSION

The yield curve has been inverted on and off for over five consecutive months as inflation rises. The last time there were both quickly increasing inflation and an inverted yield curve was the early 1980s, a period when the U.S. economy went into a recession for the better part of three years. Much has changed in the U.S. economy over the last four decades but the resemblance to today's economic environment is eye catching.



Source: The Kafafian Group, Inc. analysis of Federal Reserve and Bureau of Labor Statistics data

INTEREST RATE ENVIRONMENT

CME GROUP'S FEDWATCH TOOL

In November 2021 there was only a 26% probability of a rate hike at the March 16, 2022 meeting, by mid-January 2022 that probability increased to 100%. As of August 16, 2022, the probability of the target rate being 275-300bps was 59.5%. As of November 30, 2022, the probability of a target fed funds rate of 475-500bps is now nearly 50%. The pace of interest rate increases has been staggering.

MEETING PROBABILITIES								
MEETING DATE	250-275	275-300	300-325	325-350	350-375	375-400	400-425	425-450
9/21/2022	0.0%	59.5%	40.5%	0.0%	0.0%			
11/2/2022	0.0%	0.0%	30.8%	49.6%	19.5%	0.0%	0.0%	0.0%
12/14/2022	0.0%	0.0%	4.4%	33.5%	45.4%	16.7%	0.0%	0.0%
2/1/2023	0.0%	0.0%	3.1%	24.9%	41.9%	25.2%	5.0%	0.0%
3/15/2023	0.0%	0.0%	2.3%	19.6%	37.7%	29.3%	9.9%	1.2%
5/3/2023	0.0%	0.2%	3.7%	21.0%	37.1%	27.7%	9.2%	1.1%
6/14/2023	0.0%	1.1%	8.0%	25.0%	34.7%	23.2%	7.2%	0.8%
7/26/2023	0.3%	2.9%	12.6%	27.6%	31.6%	18.8%	5.5%	0.6%

MEETING PROBABILITIES									
MEETING DATE	350-375	375-400	400-425	425-450	450-475	475-500	500-525	525-550	550-575
12/14/2022	0.0%	0.0%	0.0%	79.4%	20.6%	0.0%	0.0%		
2/1/2023	0.0%	0.0%	0.0%	0.0%	43.6%	47.1%	9.3%	0.0%	0.0%
3/22/2023	0.0%	0.0%	0.0%	0.0%	15.3%	44.9%	33.8%	6.0%	0.0%
5/3/2023	0.0%	0.0%	0.0%	0.0%	11.5%	37.4%	36.6%	13.0%	1.5%
6/14/2023	0.0%	0.0%	0.0%	0.4%	12.4%	37.4%	35.7%	12.6%	1.5%
7/26/2023	0.0%	0.0%	0.1%	2.5%	16.8%	37.1%	31.7%	10.6%	1.2%
9/20/2023	0.0%	0.0%	0.9%	7.1%	23.3%	35.4%	25.0%	7.6%	0.8%
11/1/2023	0.0%	0.5%	4.3%	16.0%	30.0%	29.6%	15.4%	3.9%	0.4%
12/13/2023	0.3%	3.1%	12.5%	25.7%	29.7%	19.7%	7.3%	1.4%	0.1%

Source: The Kafafian Group, Inc, CME Group data as of 8/16/2022 vs,11/30/2022

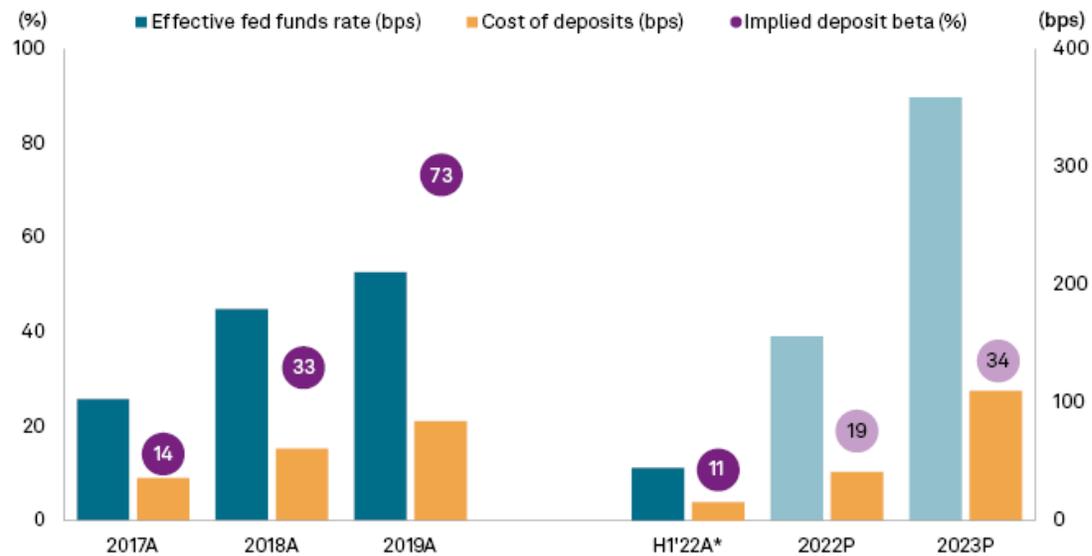


INTEREST RATE ENVIRONMENT

DEPOSIT BETAS

With rising rates there is potential for banks to improve net interest margin. However, a key component heading into 2023 is that consumers who have not rate shopped, may look to move deposit relationships as the Fed continues to aggressively increase rates. Deposit betas represent the change in deposit costs relative to the change in fed funds.

After lagging rate hikes, deposit costs poised to rise in H2'22, 2023



Data compiled Sept. 15, 2022.
 Figures for the federal funds rate through 2026 are based on a four-quarter average of estimates provided by IHS Markit. Actual reported figures used when available.
 * Deposit beta for first half 2022 reflects the change in the first six months of the year against the levels witnessed during the fourth quarter of 2021.
 Sources: S&P Global Market Intelligence, IHS Markit, proprietary estimates
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Source: S&P Capital IQ Pro



EXAMPLE OF THE IMPACT OF RISING INTEREST RATES ON ACQUISITION ACCOUNTING ADJUSTMENTS AND MERGER METRICS

Under ASC Topic 805 “Business Combinations”, an acquired institution’s assets and liabilities are marked to fair value at closing. After a period of many years of a low interest rate environment, the rapid rise in interest rates has added considerably more complexity to evaluating business combinations. The following highlights the difference between key metrics with and without loan interest rate discounts.

Provident Financial Services, Inc. (NJ) acquiring Lakeland Bancorp, Inc.

Dollars in thousands

	With Interest Rate Marks	Without Interest Rate Marks
Aggregate Pre-Tax Income Statement Impact		
Securities Interest Rate Mark	\$33,570	\$0
Loan Interest Rate Mark	47,839	0
Cost Savings	65,000	65,000
Total Pre-tax Adjustment	\$146,409	\$65,000
TBV Impact		
TBV Dilution	(17.3%)	(3.6%)
TBV Earnback	3.60 years	1.65 years

*Even though this transaction did involve a Massachusetts based institution, its instructive on how quickly and severely interest rate increases are impacting acquisition accounting adjustments.

The immediate results:

- ✓ Increased initial book value dilution
- ✓ Increased accretion of the loan discounts and increased net interest margins
- ✓ Increased core deposit intangibles (rising towards 2.50% of core deposits, up from 50bp from a year ago)

The irony of fair value accounting:

- ✓ While core deposit intangibles have risen quickly, the economic value of many bank balance sheets has increased even more so

The long-term results:

- ✓ The rise in interest rates may materially change fair value adjustments between deal announce and close

Source: S&P Capital IQ Pro and Provident Financial Services, Inc. Form 8-K dated September 27, 2022.

THE IMPACT OF RISING INTEREST RATES AND WHAT REGULATORS MAY BE WATCHING

While most bankers focus on regulatory capital ratios, many have taken for granted the tangible equity / tangible asset ratio. In bank failures where an FDIC insured institution was put into receivership, the tangible equity / tangible asset ratio was below 2.00%, which the FDIC considers to be “critically undercapitalized”.

Per the Kansas City Fed 9/8/2022 Community Banking Bulletin

“Tangible equity capital, a non-regulatory capital measure, defined as total equity capital, including other comprehensive income less goodwill and other intangible assets, can be useful in measuring financial strength since unrealized loss positions make these assets a much less attractive source of liquidity. Moreover, parent company equity is impacted by unrealized losses at the bank-level, potentially hindering its ability to serve as a source of strength.”

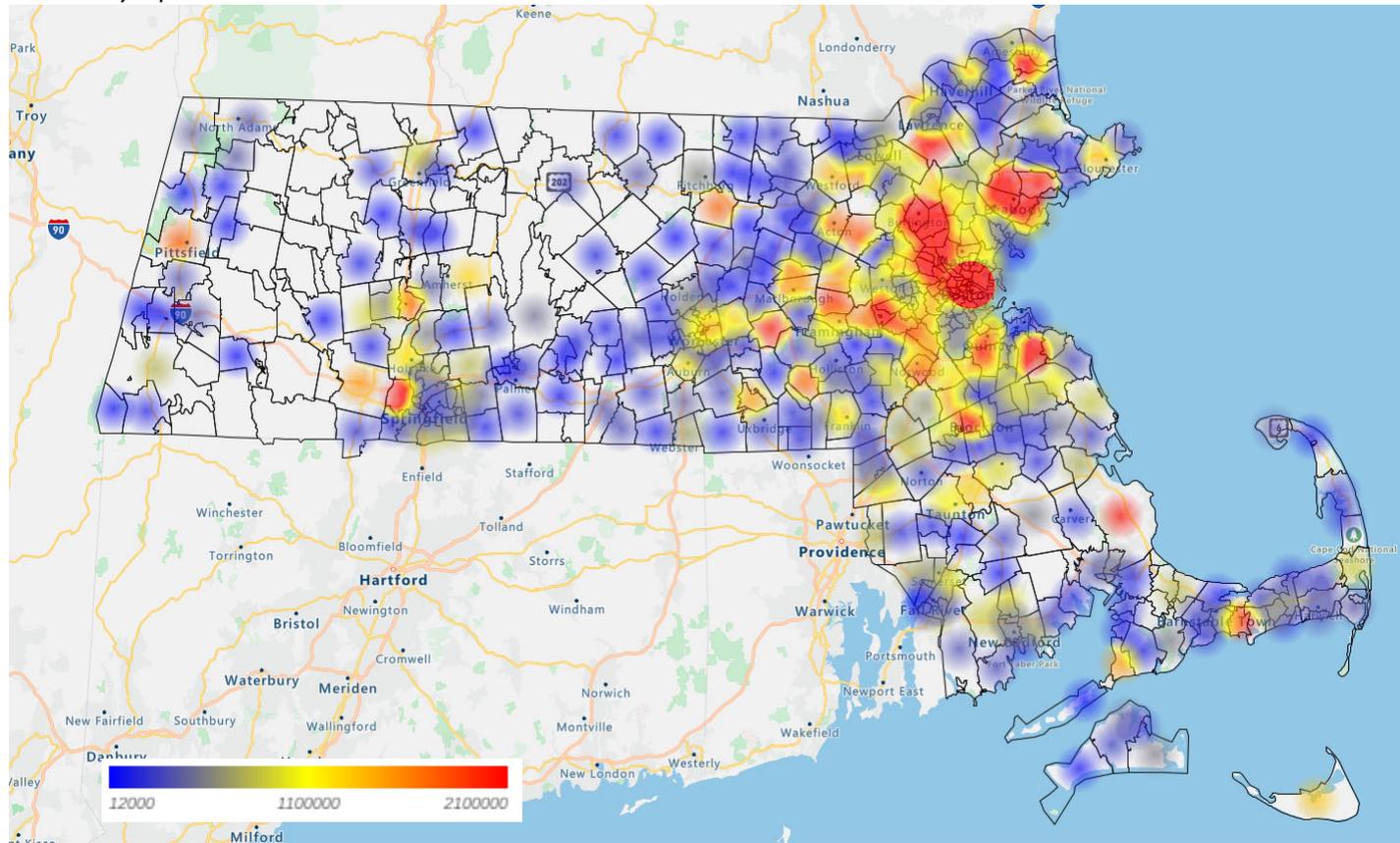
- Between the third quarter 2021 and third quarter 2022, the U.S. banking industry’s tangible equity / tangible asset ratio fell from 10.13% to 8.36%. For the same period, cash and interest bearing balances as a percentage of total assets fell from 11.49% to 6.03%.
- Across the U.S., there are 175 banks with a tangible equity / tangible asset ratio with less than 3%, there are 98 banks with a tangible equity / tangible asset ratio less than 2% and there are 31 banks that have a negative tangible equity / tangible asset ratio.
- While there is no certainty as to timing, many banks expect that their unrealized losses on available for sale securities will level off by Q2 2023; in the interim, many banks have evaluated capital formation alternatives (though raising common equity in this environment is generally dilutive and the cost of subdebt offerings for even larger institutions is approaching 7.50% pre-tax coupons).

Source: The Kafafian Group. Inc.

DEPOSITS BY ZIP CODE

2022 DEPOSIT DATA

Deposit data from June 30, 2022 was released during 3rd quarter 2022. The map below shows a heat map of where the highest deposit concentrations are by Zip Code.

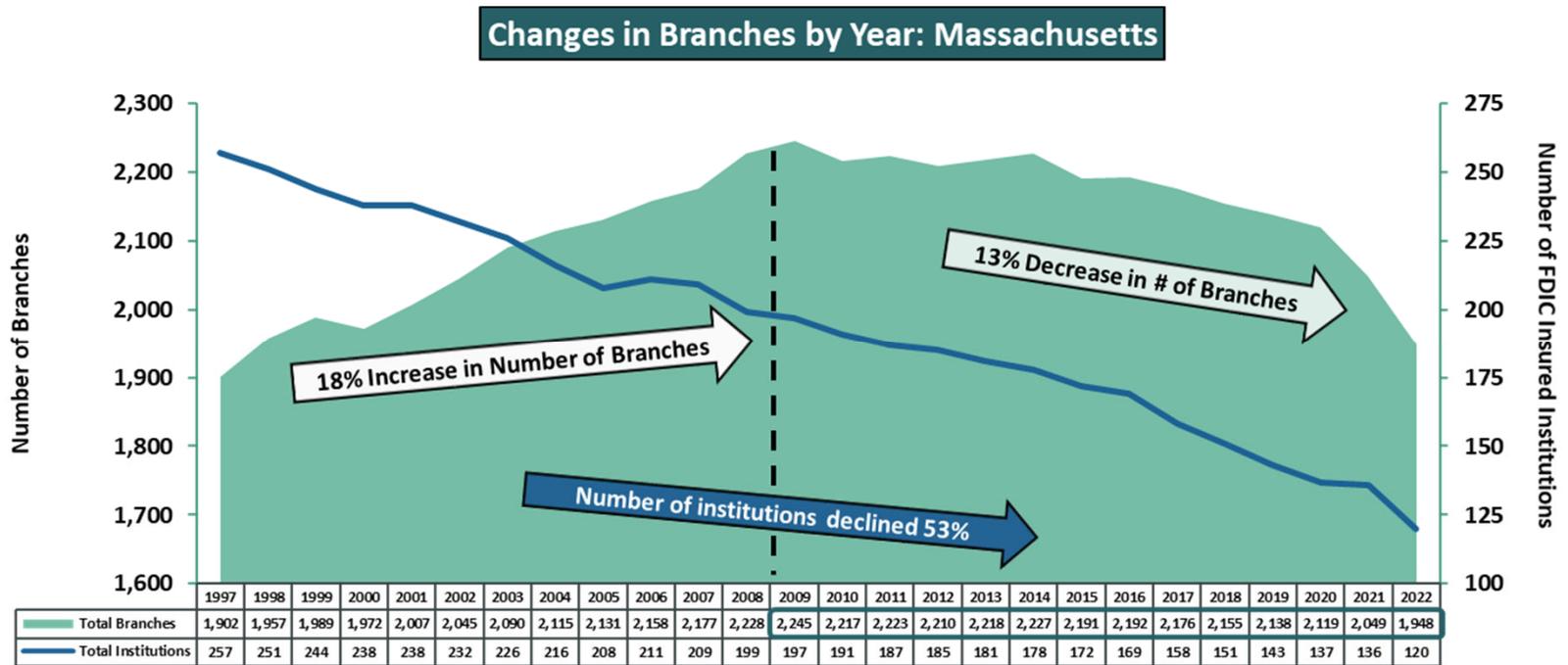


Source: The Kafafian Group, Inc. and S&P Capital IQ Pro data as of 6/30/2022 (Summary of Deposit data is only released annually for June 30)

INDUSTRY CONSOLIDATION

CHANGES IN U.S. BRANCHES BY YEAR: MASSACHUSETTS

The chart below shows the trend of branches in Massachusetts. Since 2009 there has been a 13% decrease in number of branches in the State. Since 1997 the number of financial institutions have declined by 53%.



Source: The Kafafian Group, Inc. and S&P Capital IQ Pro data as of 6/30/2022 (Summary of Deposit data is only released annually for June 30)

THE U.S. BANKING INDUSTRY VS MASSACHUSETTS BANKS

THIRD QUARTER OF 2022 RESULTS (AGGREGATE)

108 MA Institutions*

4,963 Total U.S. Institutions**

1.12% of the U.S. Banking Industry's Total Assets

1.69% of the U.S. Banking Industry's Total Loans

Net Interest Margin

MA: 3.15% up from 2.88% in Q2
U.S.: 3.06% up from 2.75% in Q2

Returns

MA: ROAA of 0.70% up from 0.62% in Q2, ROAE of 6.28% up from 5.42% in Q2
U.S.: ROAA of 1.20% up from 1.08% in Q2, ROAE of 13.04% up from 11.49% in Q2

Capital Levels

MA: Leverage Ratio of 11.17% up from 11.13% in Q2
U.S.: Leverage Ratio of 8.90% up from 8.79% in Q2

Credit Quality

MA: Net charge-offs to average loans of 0.13% up from 0.05% in Q2.
U.S.: Net charge-offs to average loans of 0.26% up from 0.23% in Q2

Number of Unprofitable Institutions

MA: 7.41%
U.S.: 3.47%

*Headquartered in Massachusetts; removed State Street Bank and Trust Company

**All FDIC call report filers

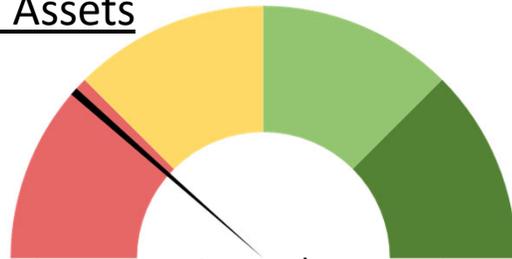
Source: The Kafafian Group, Inc. and S&P Capital IQ Pro. Data for the quarter ended 9/30/2022 and includes both commercial and mutual bank data.

THE U.S. BANKING INDUSTRY VS MASSACHUSETTS BANKS

RECENT PERFORMANCE: SELECT PROFITABILITY RATIOS

*Return On Avg. Assets

MA Median: 0.75%
U.S. Median: 1.09%

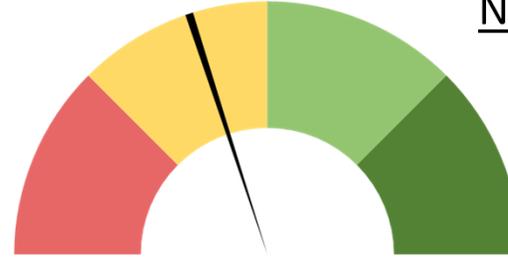


MA's **Median** ROAA ranks among the **22nd** percentile Nationwide

**ROAA utilizes S&P Capital IQ Pro's adjustment for institutions that operate as Sub Chapter S Corporations.*

Net Interest Margin

MA Median: 3.28%
U.S. Median: 3.44%



MA's **Median** Net Interest Margin ranks among the **39th** percentile Nationwide

Efficiency Ratio

MA Median: 67.39%
U.S. Median: 61.84%



MA's **Median** Efficiency Ratio ranks among the **35th** percentile Nationwide

Cost of Funds

MA Median: 0.36%
U.S. Median: 0.36%



MA's **Median** Cost of Funds ranks among the **51st** percentile Nationwide

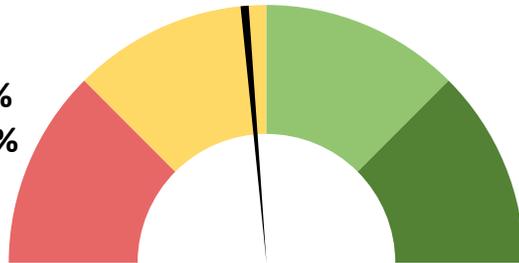
Source: The Kafafian Group, Inc. and S&P Capital IQ Pro. Data for the quarter ended 9/30/2022 and includes both commercial and mutual bank data.

THE U.S. BANKING INDUSTRY VS MASSACHUSETTS BANKS

RECENT PERFORMANCE: SELECT BALANCE SHEET RATIOS

NPA/Assets

MA Median: 0.28%
U.S. Median: 0.24%



MA's **Median** NPA/Assets ranks among the **47th** percentile Nationwide

Tier 1 Leverage

MA Median: 10.74%
U.S. Median: 10.19%



MA's **Median** Tier 1 Leverage Ratio ranks among the **60th** percentile Nationwide

CRE/Loans*

MA Median: 29.73%
U.S. Median: 23.43%

**non-owner occupied*



MA's **Median** Total CRE/Loans ratio ranks among the **62nd** percentile Nationwide

Loans/Deposits

MA Median: 86.74%
U.S. Median: 70.93%



MA's **Median** Loan/ Deposit ratio ranks among the **74th** percentile Nationwide

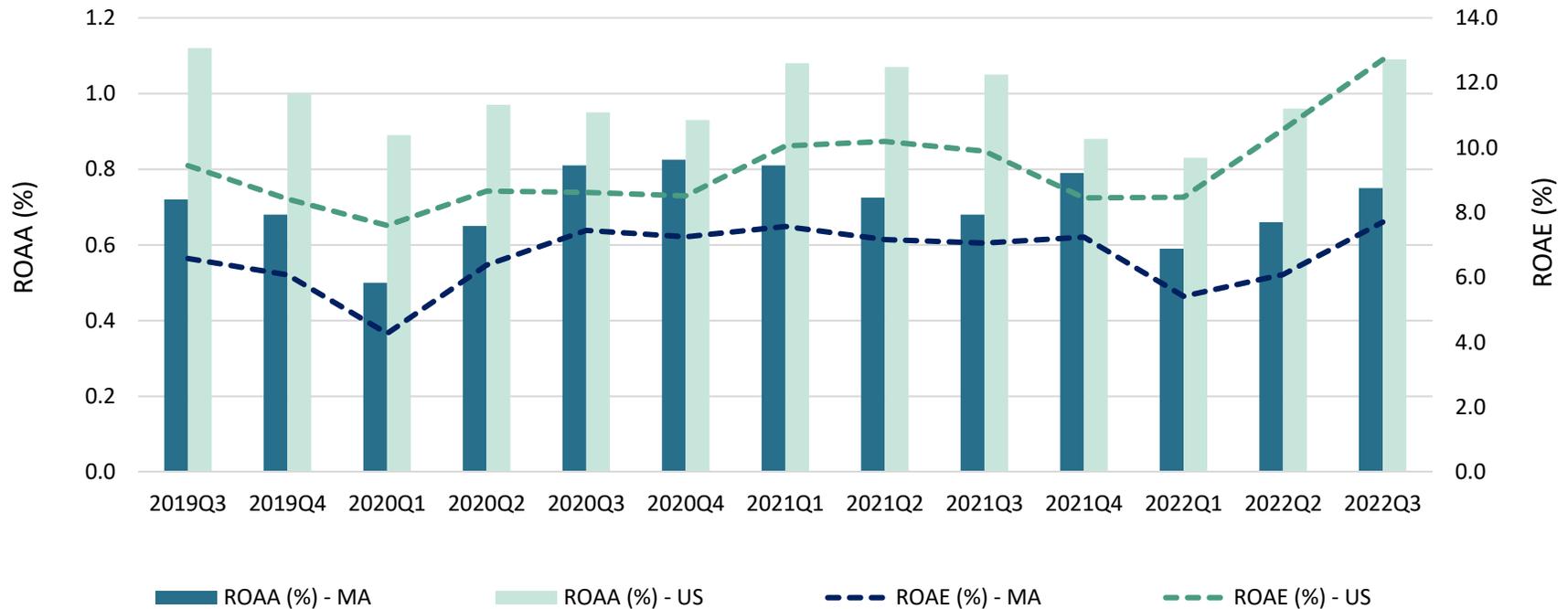
Source: The Kafafian Group, Inc. and S&P Capital IQ Pro. Data for the quarter ended 9/30/2022 and includes both commercial and mutual bank data.

MASSACHUSETTS BANKS PERFORMANCE

RECENT TRENDS

ROAA and ROAE both increased for Massachusetts banks and for U.S. banks quarter over quarter.

Profitability Highlights (Median %)

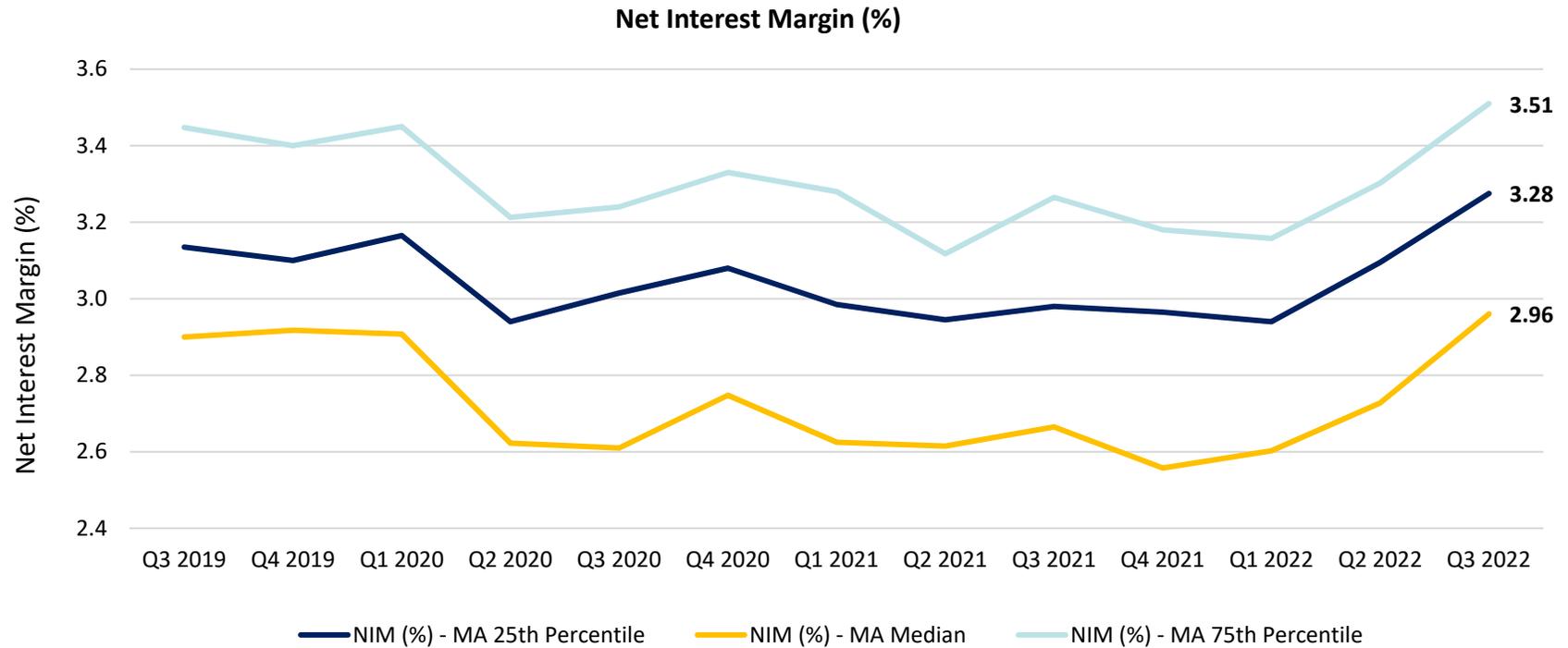


Source: The Kafafian Group, Inc. and S&P Capital IQ Pro. Data for the quarter ended 9/30/2022, adjusted for election of Sub Chapter S and includes both commercial and mutual bank data.

MASSACHUSETTS BANKS PERFORMANCE

RECENT TRENDS (CONTINUED)

The net interest margin for Massachusetts banks and U.S. banks increased on an aggregate level in Q3 2022 compared to Q2 2022. Median, 75th percentile and top 25th percentile levels of NIM for Massachusetts banks increased in Q3 2022 by approximately 18 to 23 basis points.



Source: The Kafafian Group, Inc. and S&P Capital IQ Pro. Data for the quarter ended 9/30/2022 and includes both commercial and mutual bank data. Excludes certain institutions.

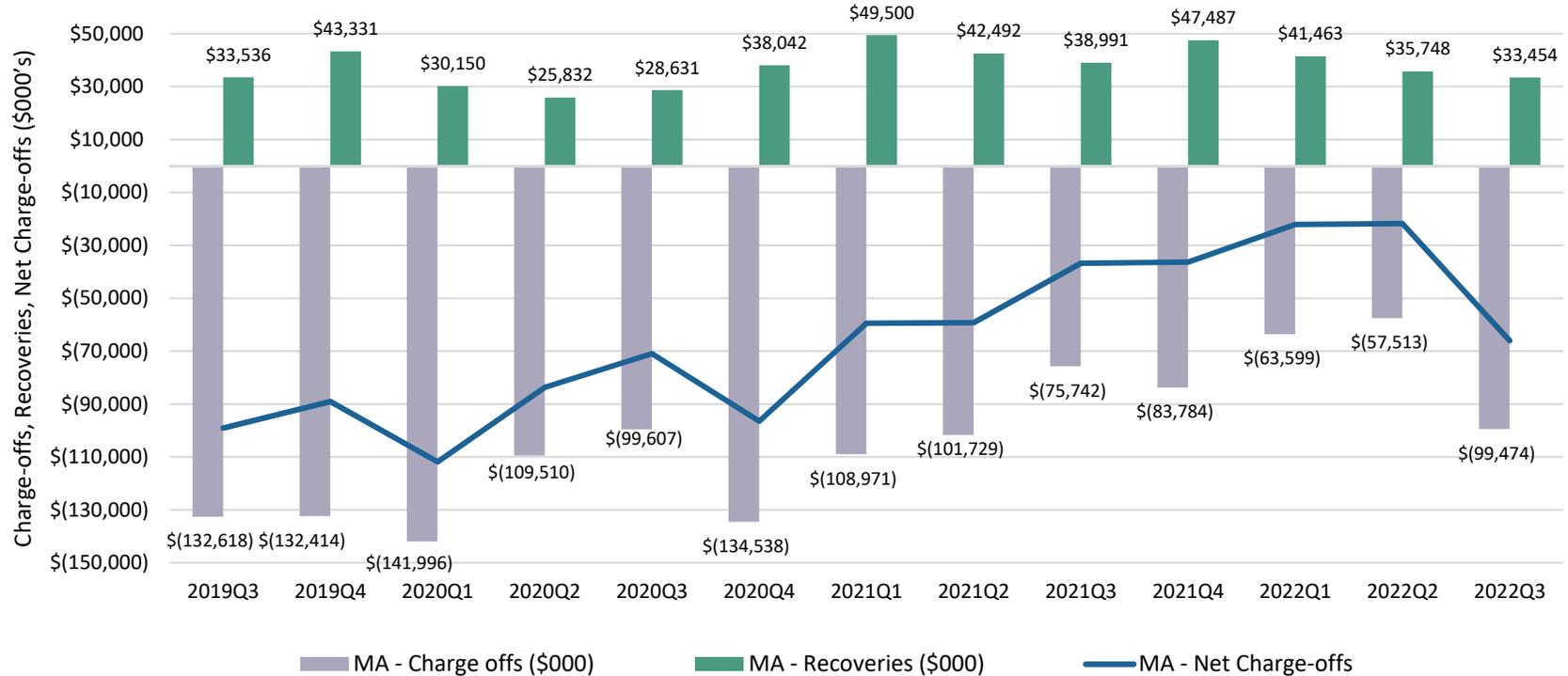


MASSACHUSETTS BANKS PERFORMANCE

RECENT TRENDS (CONTINUED)

Net-charge offs in Q3 2022 increased for Massachusetts banks, banks nationwide also saw an increase in net-charge offs to total loans. On January 1, 2023, all financial institutions that have not previously adopted CECL (aka ASC Topic 326) will adopt CECL. In Massachusetts, about 90% of all banks will not have not adopted CECL prior to January 1, 2023

Massachusetts Aggregate Charge-offs and Recoveries



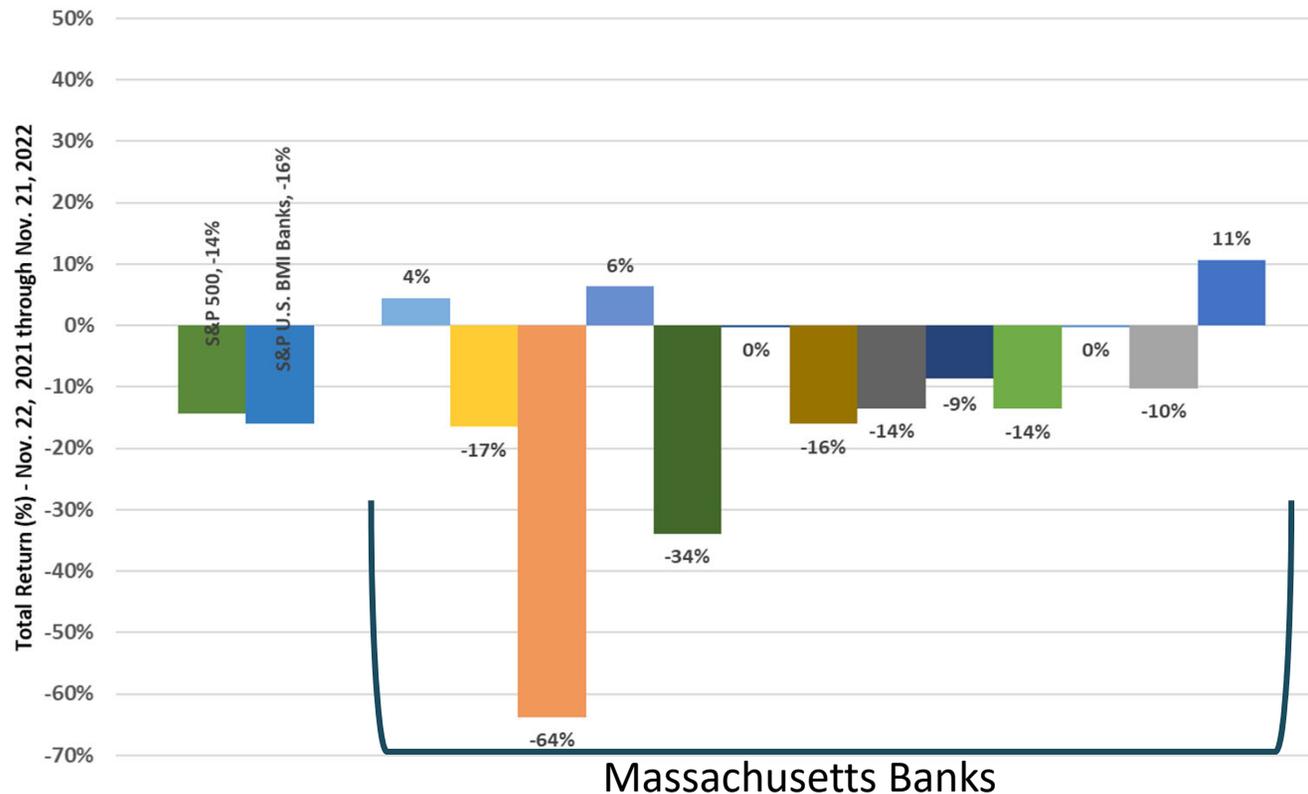
Source: The Kafafian Group, Inc. and S&P Capital IQ Pro. Data for the quarter ended 9/30/2022 and includes both commercial and mutual bank data.



TOTAL RETURN

TOTAL RETURN: NOVEMBER 22, 2021 THROUGH NOVEMBER 21, 2022

Publicly traded Massachusetts headquartered banks were slightly above the S&P U.S. BMI Banks Index and the S&P 500 as of November 21, 2022. The median total return for Massachusetts banks was -10%, while the S&P U.S. BMI Banks Index was -16% and the S&P 500 was -11%.



Source: The Kafafian Group, Inc. and S&P Capital IQ Pro data as of 11/21/2022

OTHER INDUSTRY RESOURCES

INSIGHT AND ANALYSIS FROM INDUSTRY EXPERTS

Our podcasts and insights focus on different topics throughout our five service lines of business. Below are our most recent insight publications. Click any of the topics to be taken to the podcast or perspective article!



TKG Monthly Podcast

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[Navigating the Moat Your Core Processor Has Built Around Your Data](#)

[Banks are Responsible for Building Bankers!](#)

[Totem, the First Challenger Bank for Native Americans](#)



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[Strategic Alignment: Accountabilities](#)

[And Just Like That...](#)

[How Will Higher Interest Rates Impact Loan & Deposit Product Profitability?](#)

[The Talent and Customer Portal in the New Year](#)

Source: www.kafafiangroup.com

THE KAFAFIAN GROUP, INC.

FIRM OVERVIEW – LINES OF BUSINESS



Performance Measurement

- Outsourced profitability reporting
- Funds transfer pricing (FTP)
- Activity-based cost (ABC) assignments
- Capital assignment and risk-adjusted return on capital (RAROC)
- Profitability system audits and implementations
- Peer group reporting



Strategic Management

- Strategic planning
- Board and management retreat facilitation
- Capital planning
- Stress testing
- Profit planning
- Business planning
- Customer and data analytics
- Feasibility studies



Profit and Process Improvement

- Profit improvement studies (whole institution or divisions or units)
- Process improvement studies (whole institution or divisions or units)



Management Advisory

- Board and management studies
- Regulatory distress assistance
- Regulatory applications
- Board and management training
- Model validation and documentation
- Risk management



Financial Advisory

- Whole institution M&A
- Fee-based lines of businesses
- Branch purchase or sale
- Fairness opinions
- Valuation reports
- Strategic alternatives (TKG's 360 View) and value gap planning
- Capital management strategies
- Expert witness
- Forensic accounting

Source: www.kafafiangroup.com