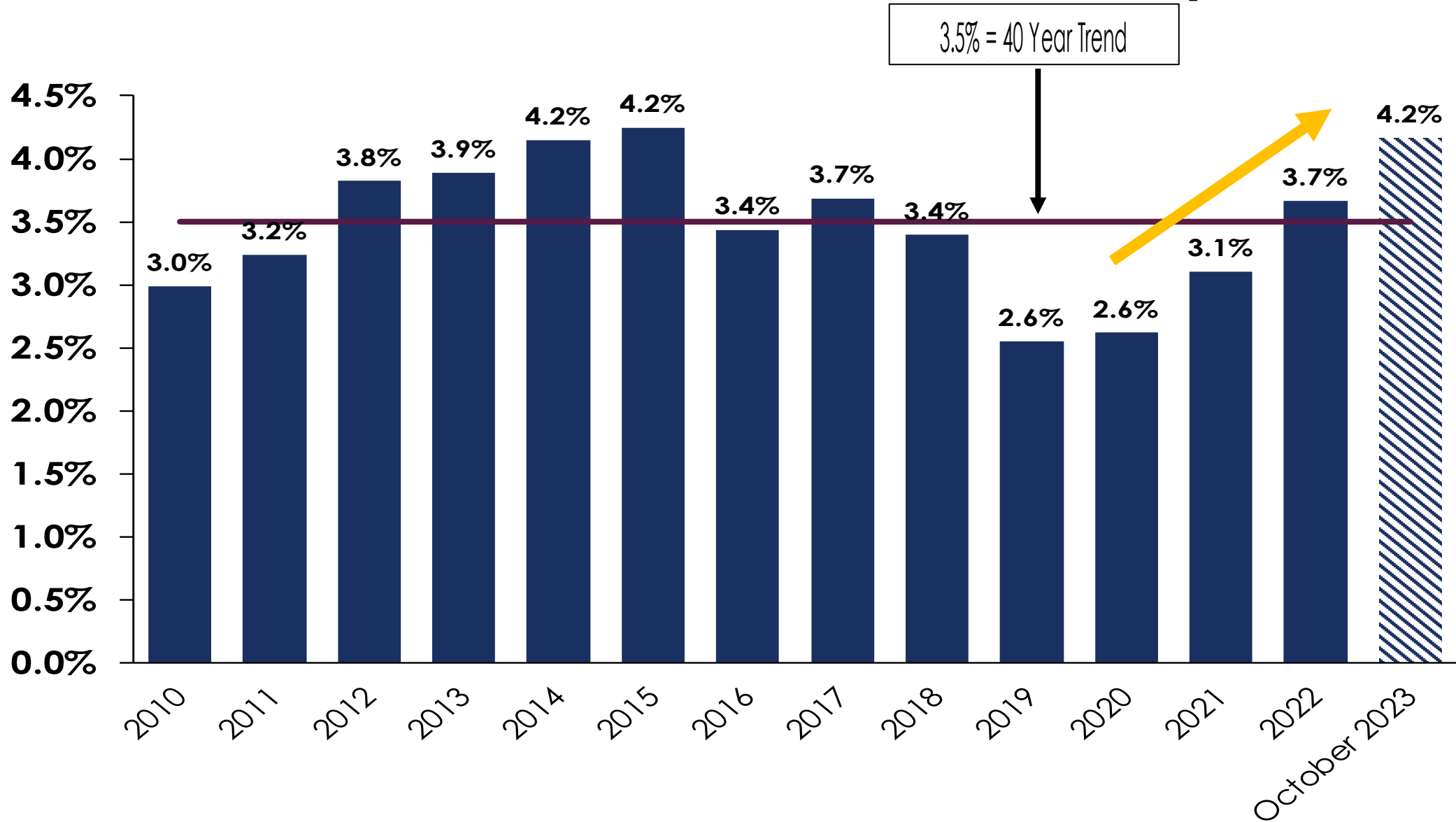


Economic and Credit Union Update

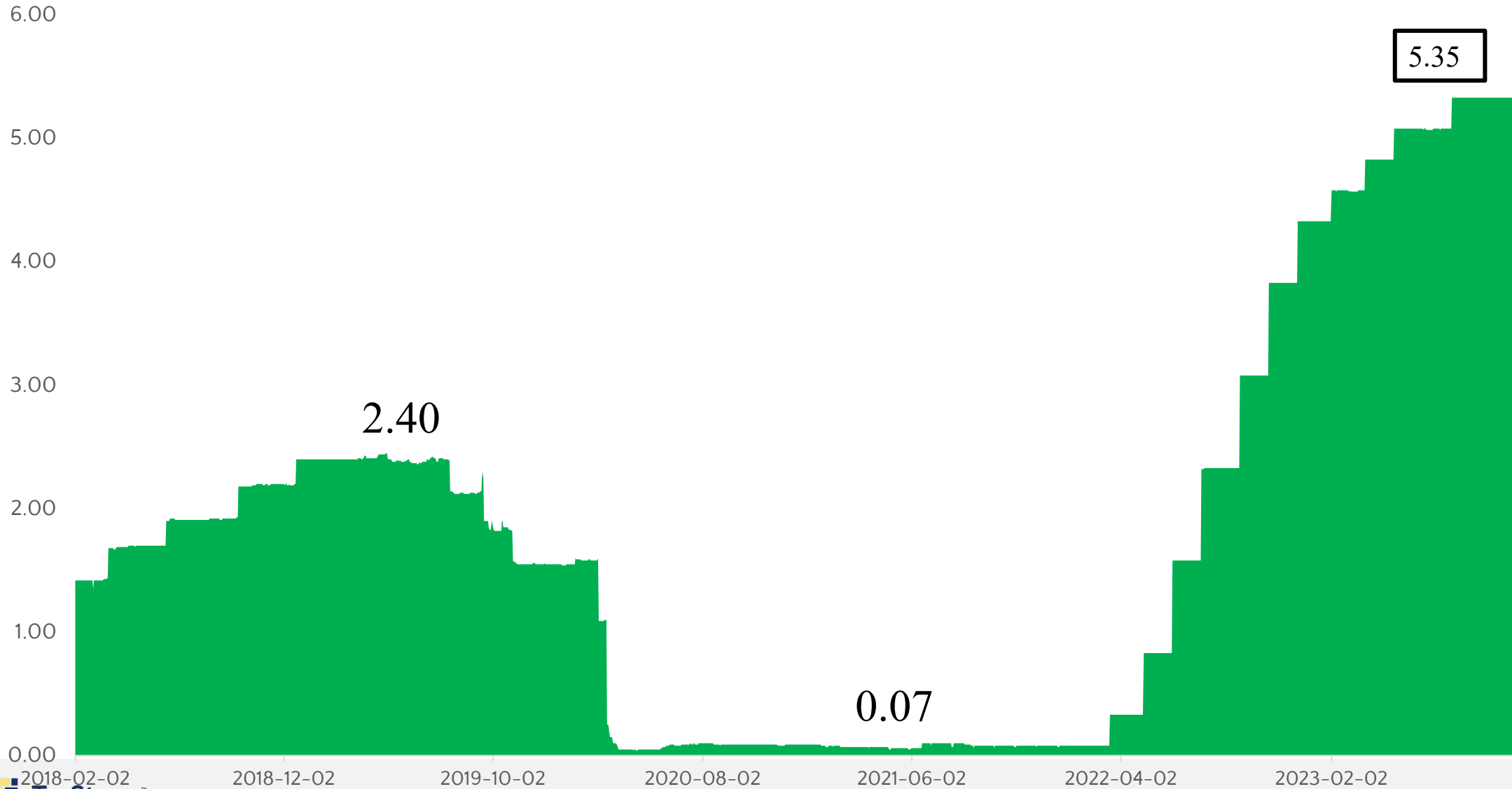
March 2024

If you have any questions or
comments, please contact:
Steven Rick, Chief Economist
TruStage - Economics
800.356.2644, Ext. 665.5454
Steve.rick@TruStage.com

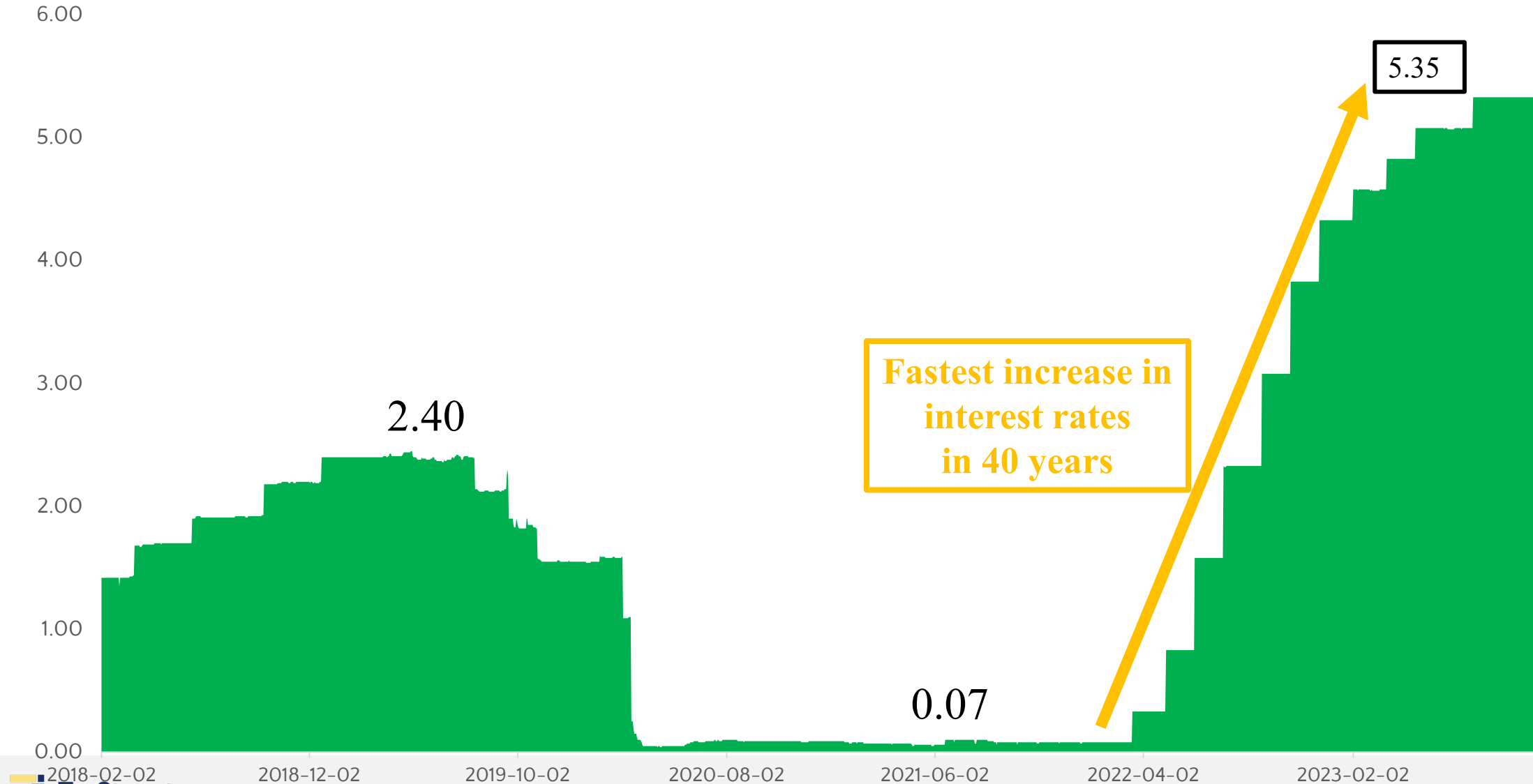
Annual Contraction Rate in CU Marketplace



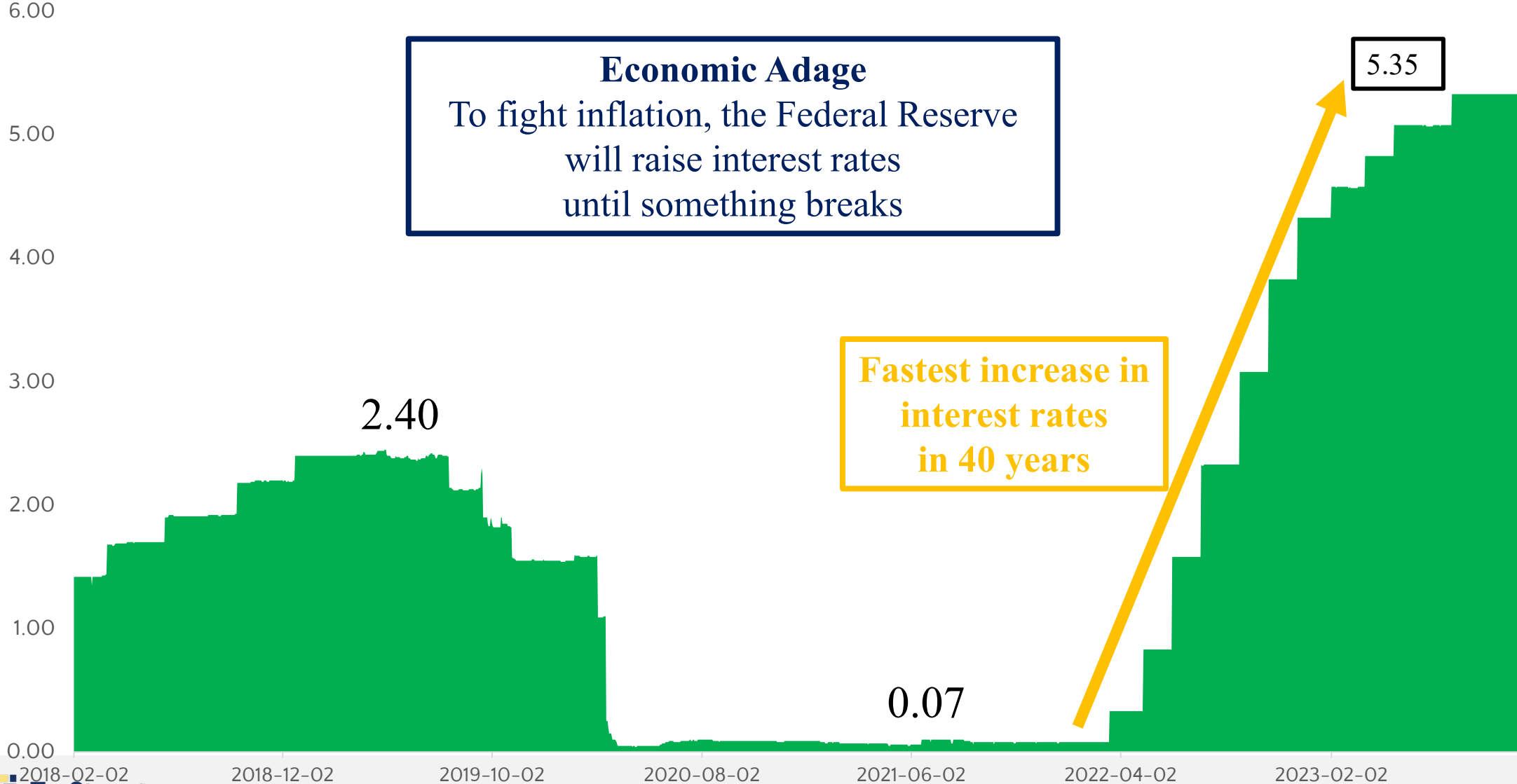
Federal Funds Rate, 2018 - 2023



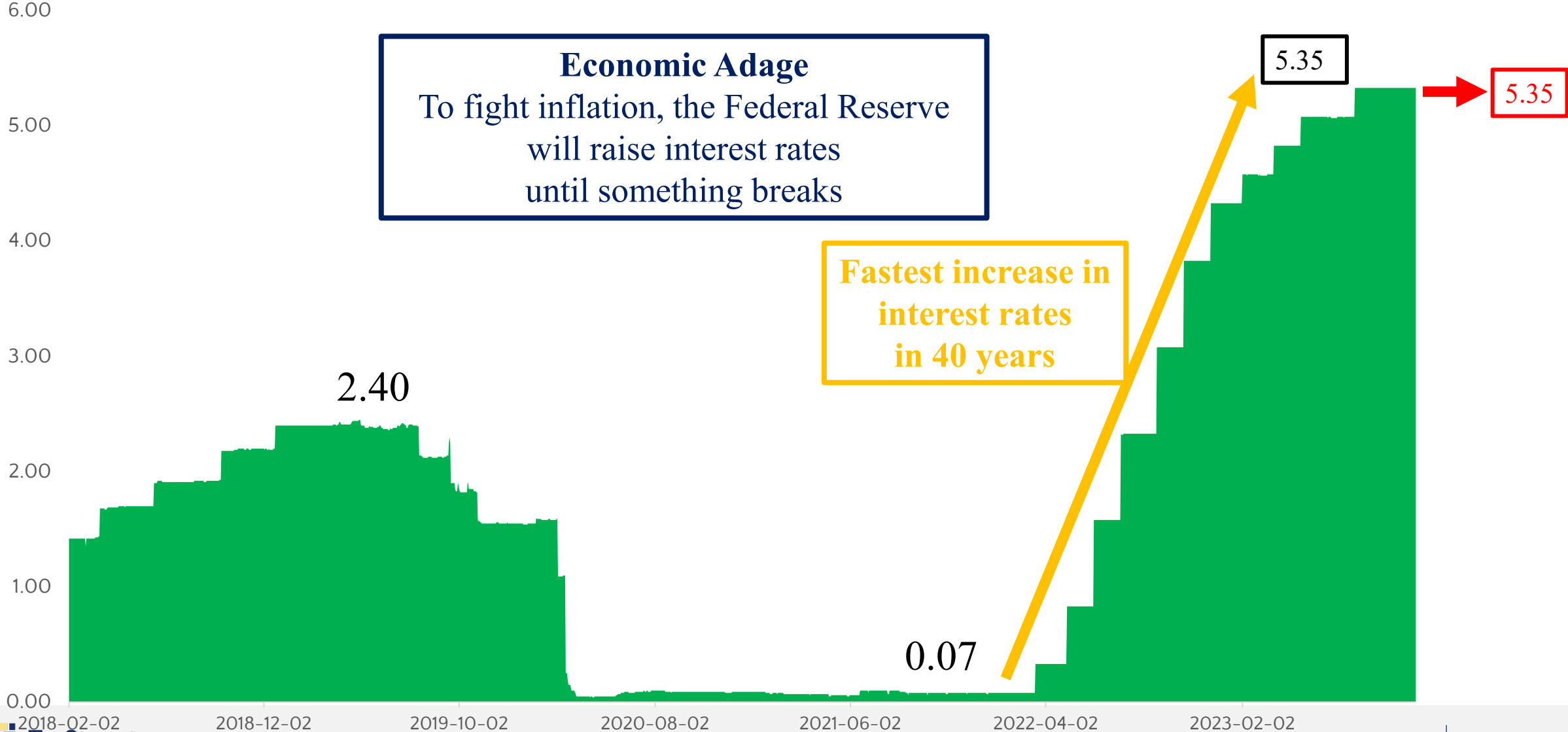
Federal Funds Rate, 2018 - 2023



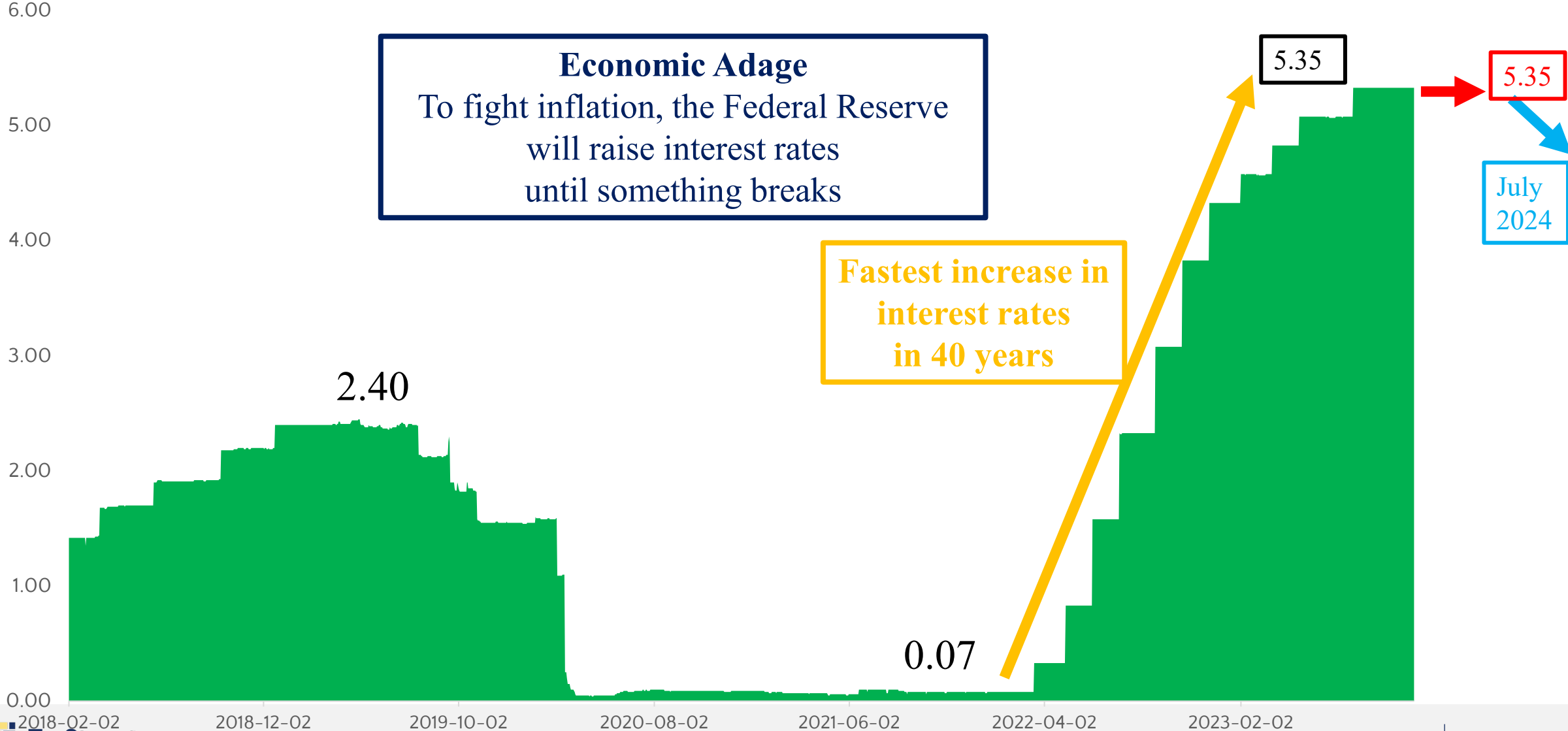
Federal Funds Rate, 2018 - 2023



Federal Funds Rate, 2018 - 2023



Federal Funds Rate, 2018 - 2023



Economic Adage
To fight inflation, the Federal Reserve will raise interest rates until something breaks

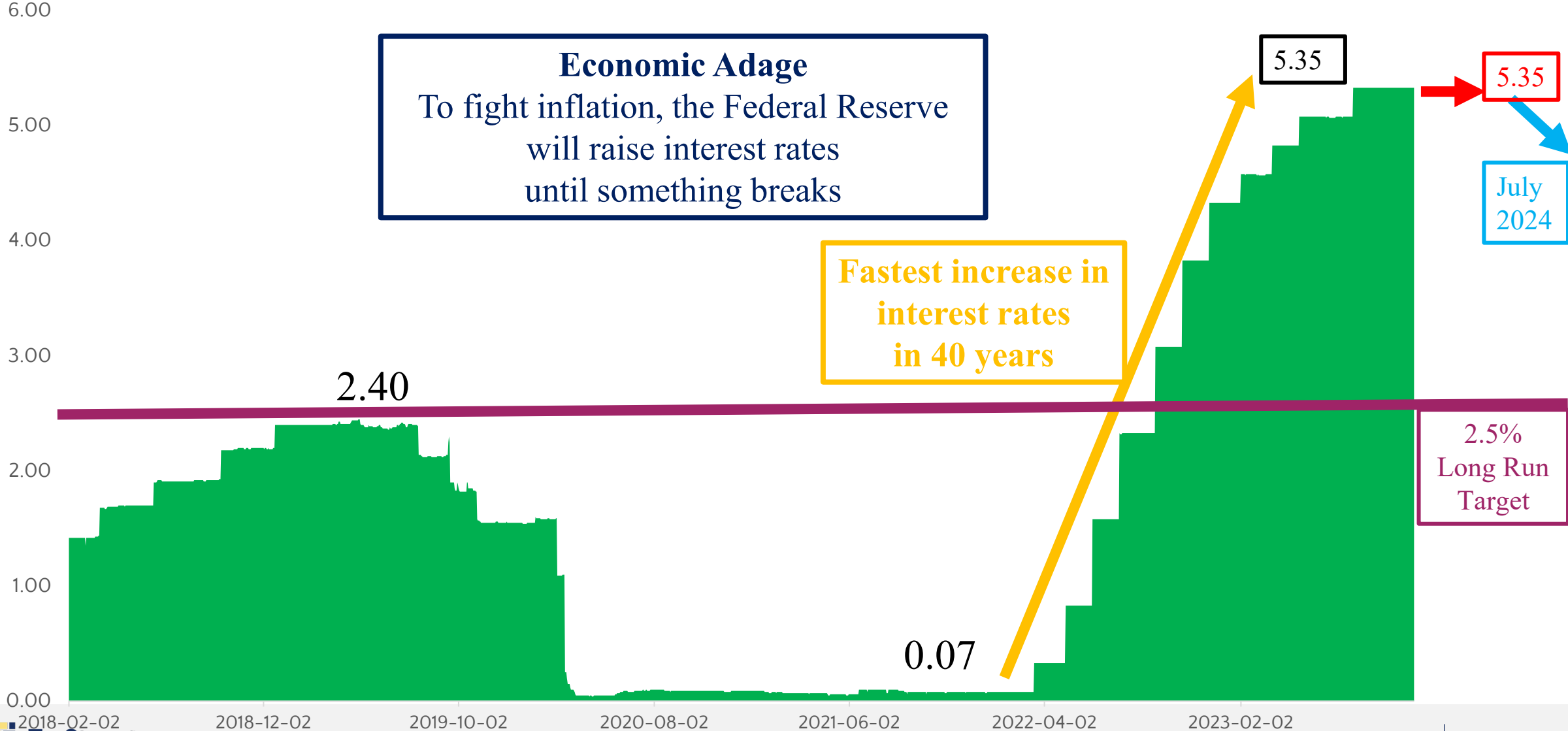
Fastest increase in interest rates in 40 years

July 2024

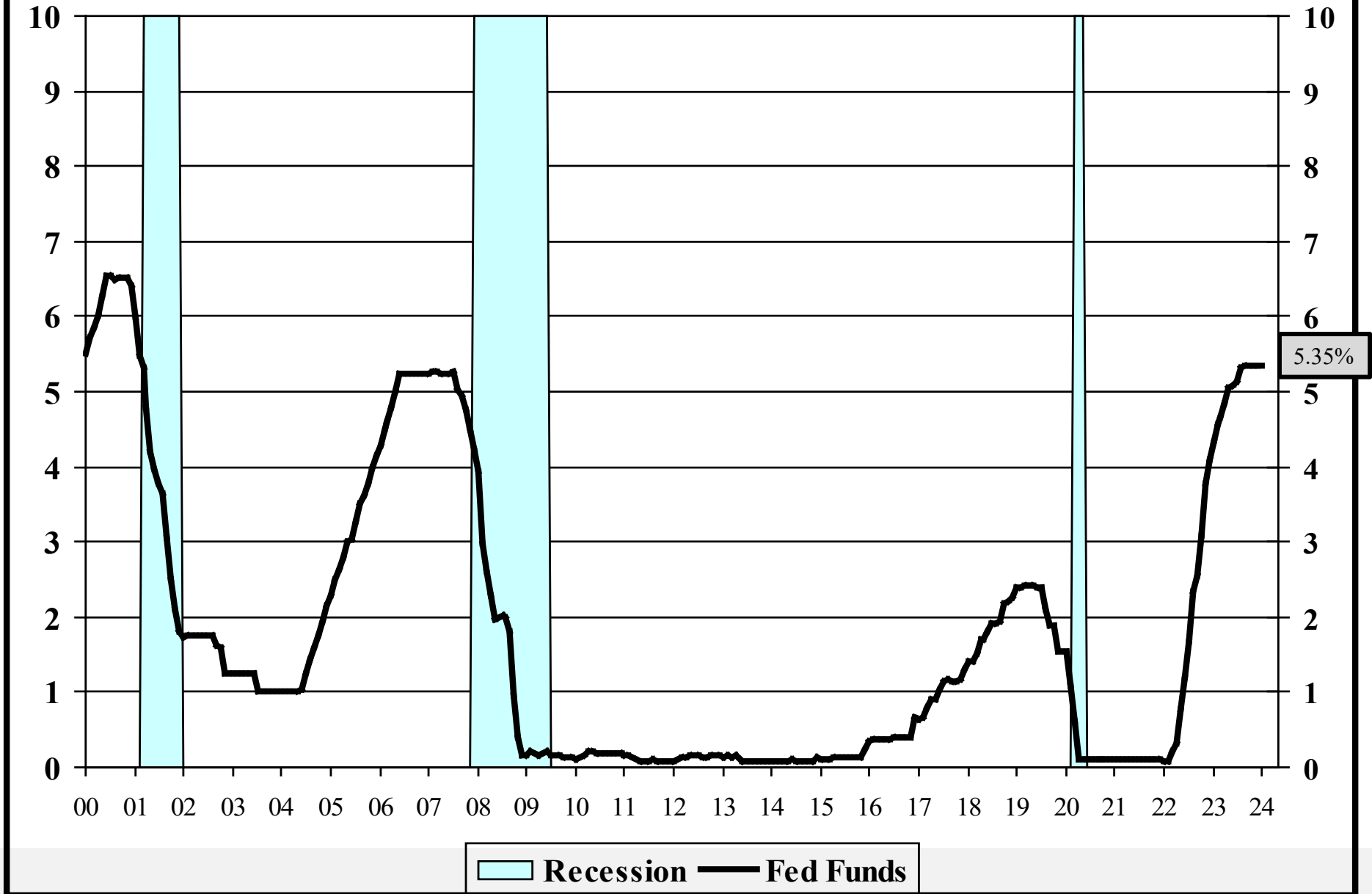
5.35

5.35

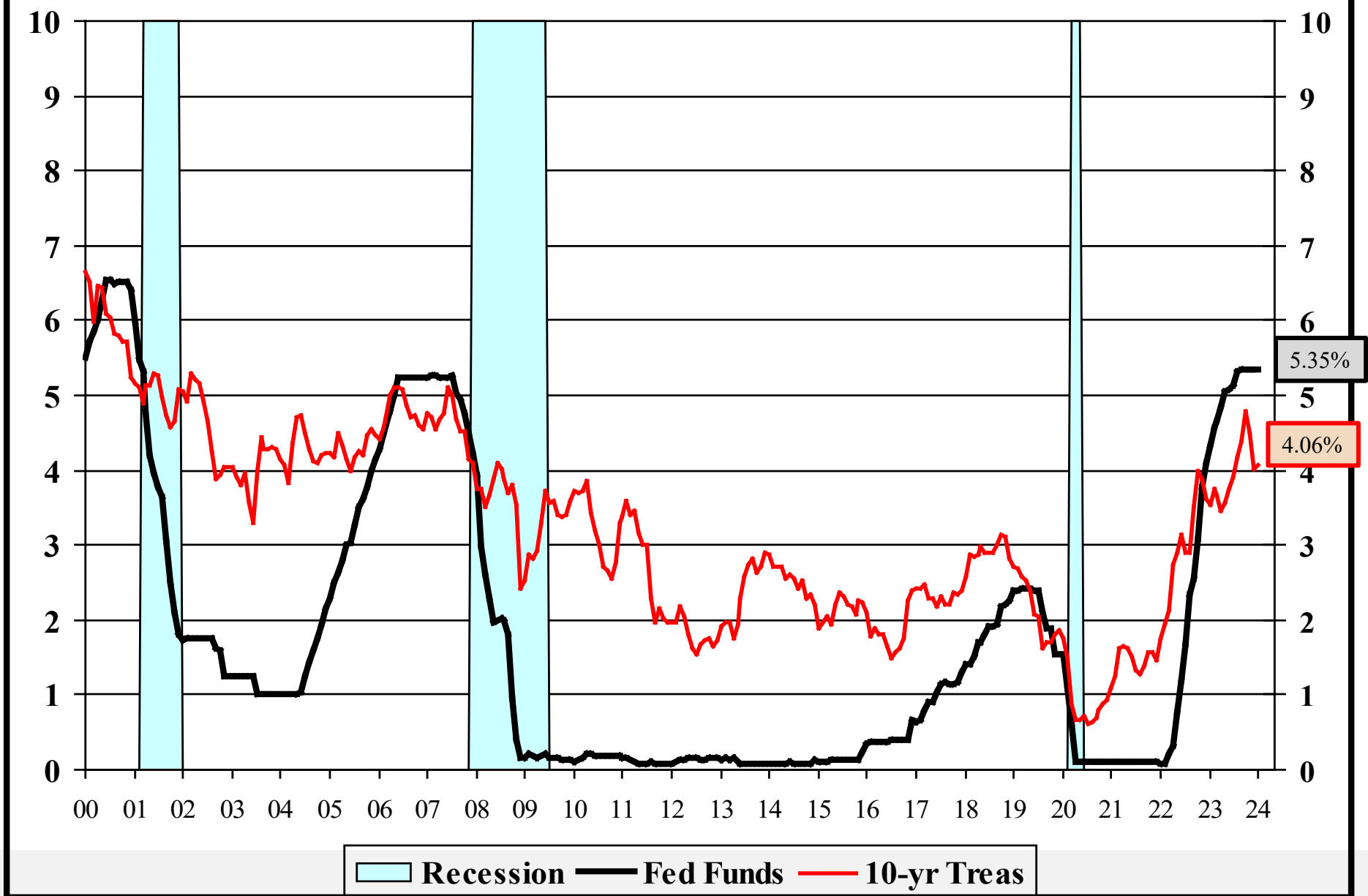
Federal Funds Rate, 2018 - 2023



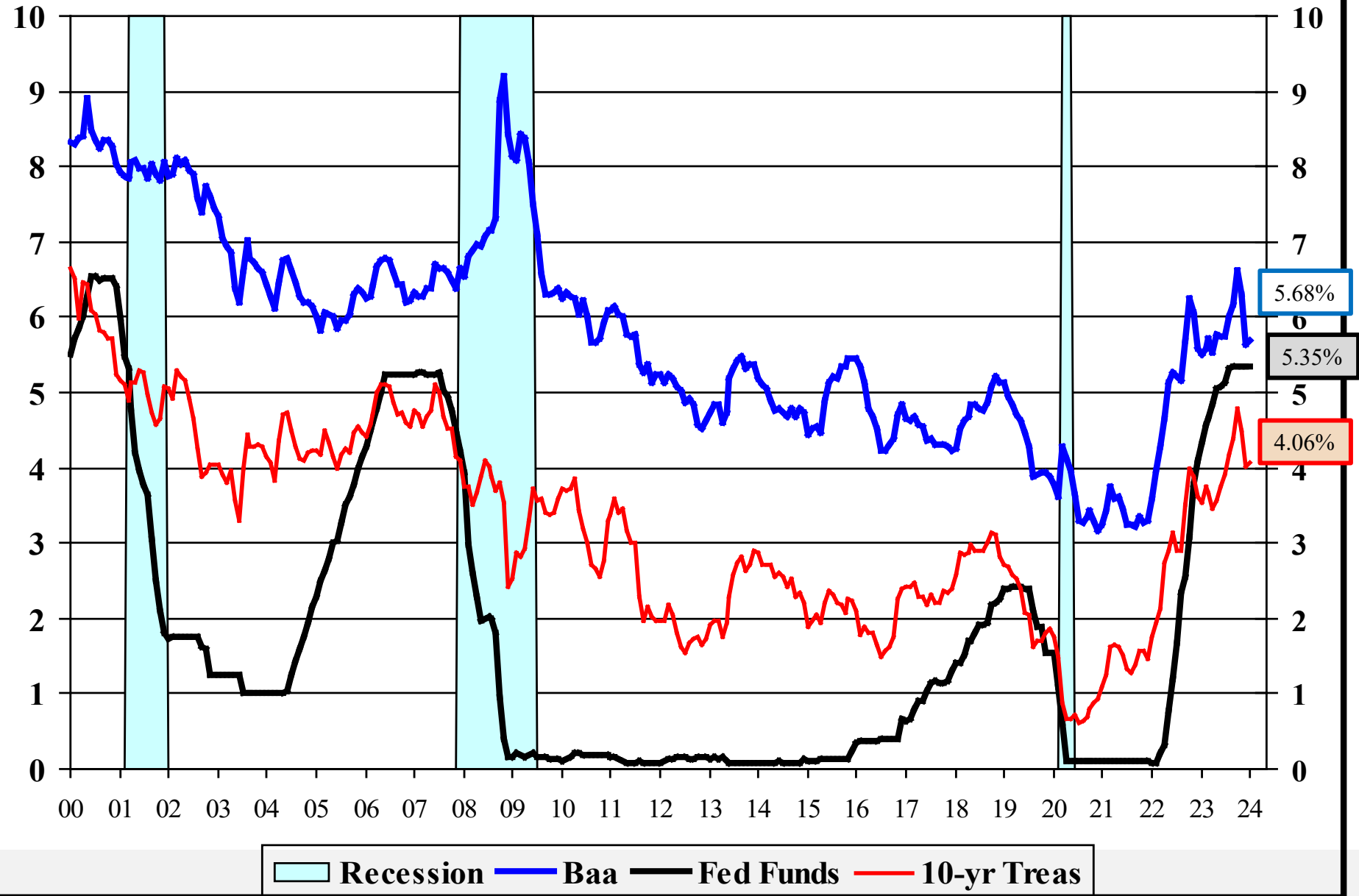
Interest Rates and Recessions



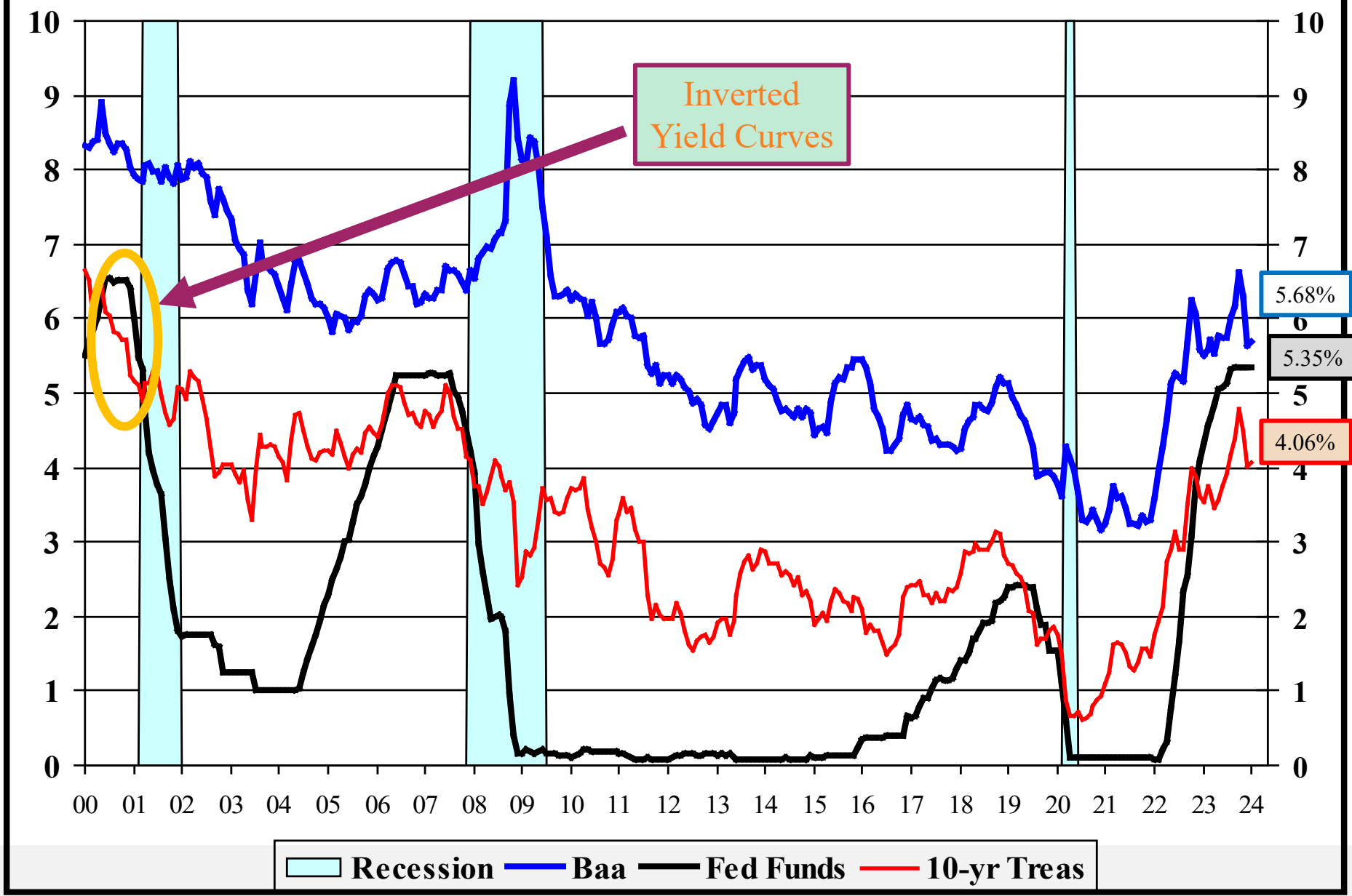
Interest Rates and Recessions



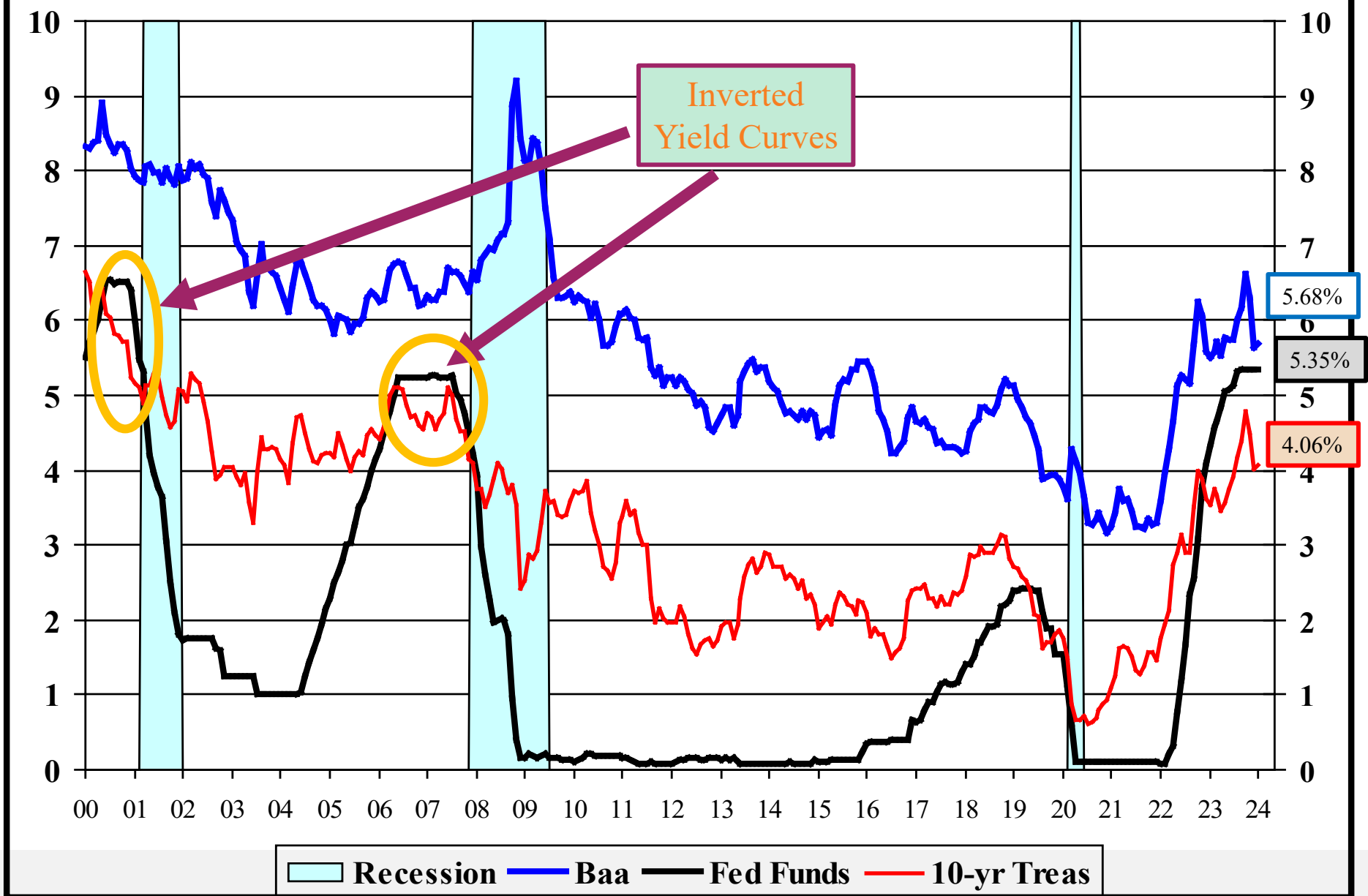
Interest Rates and Recessions



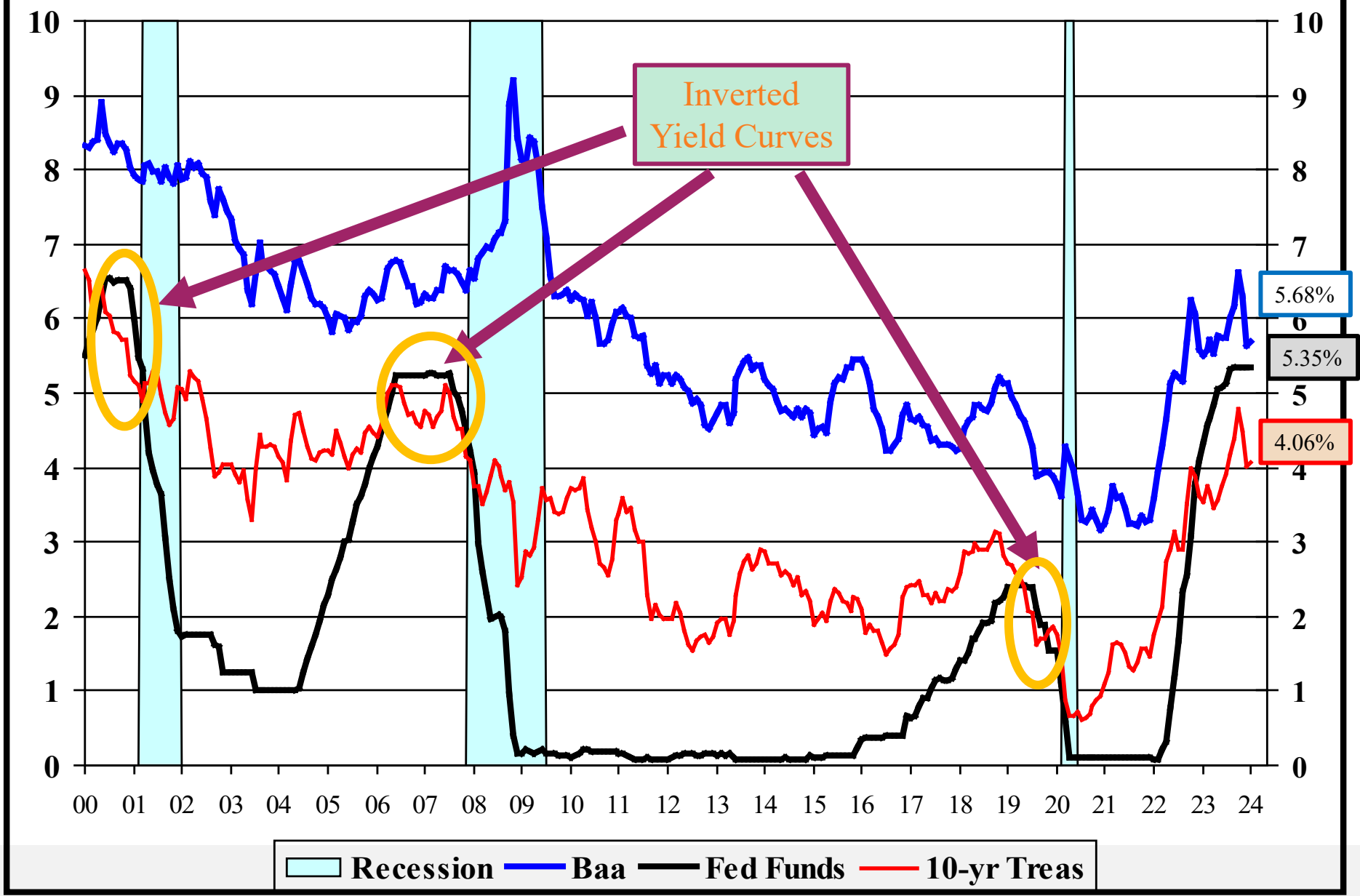
Interest Rates and Recessions



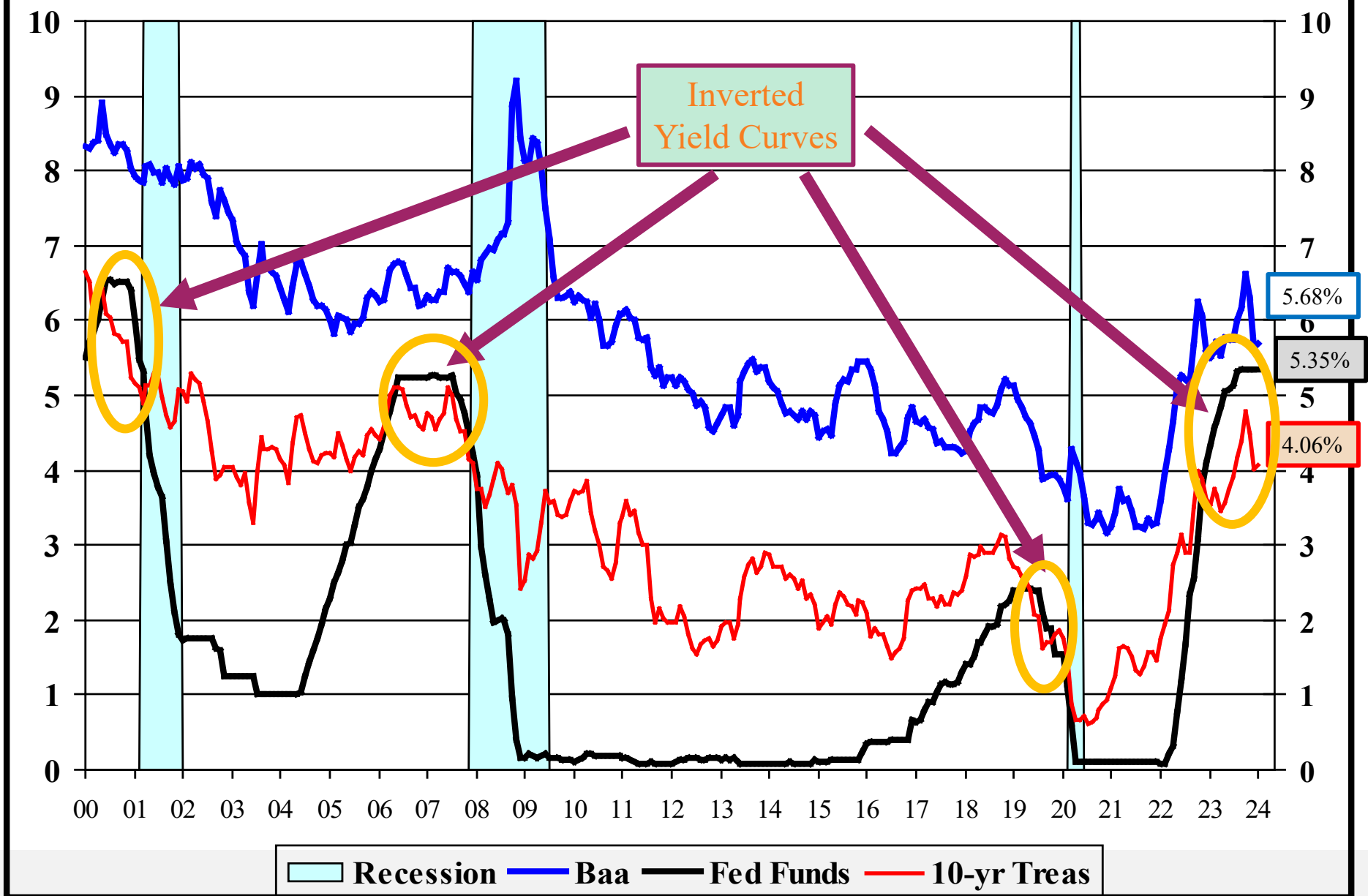
Interest Rates and Recessions



Interest Rates and Recessions

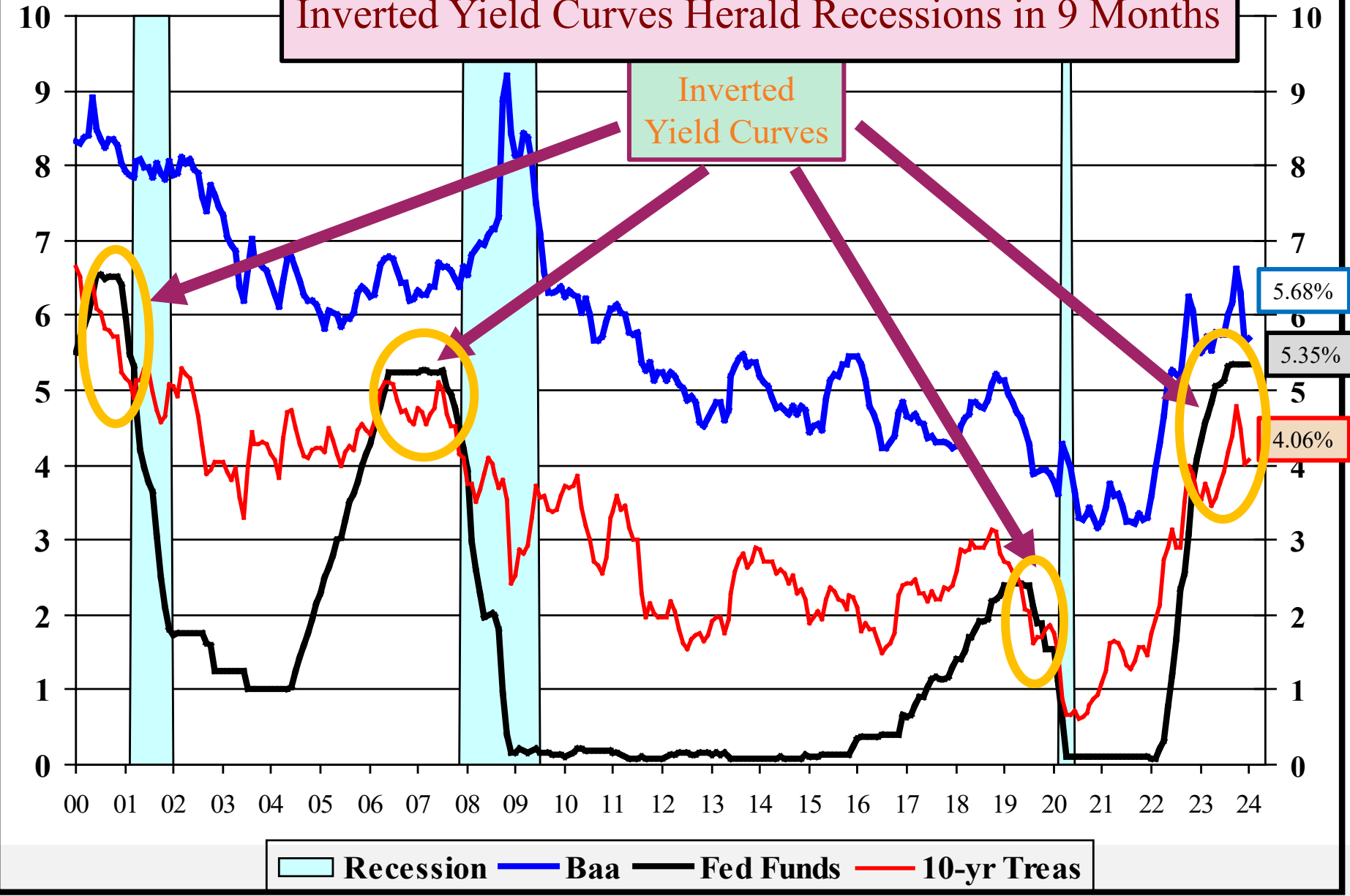


Interest Rates and Recessions



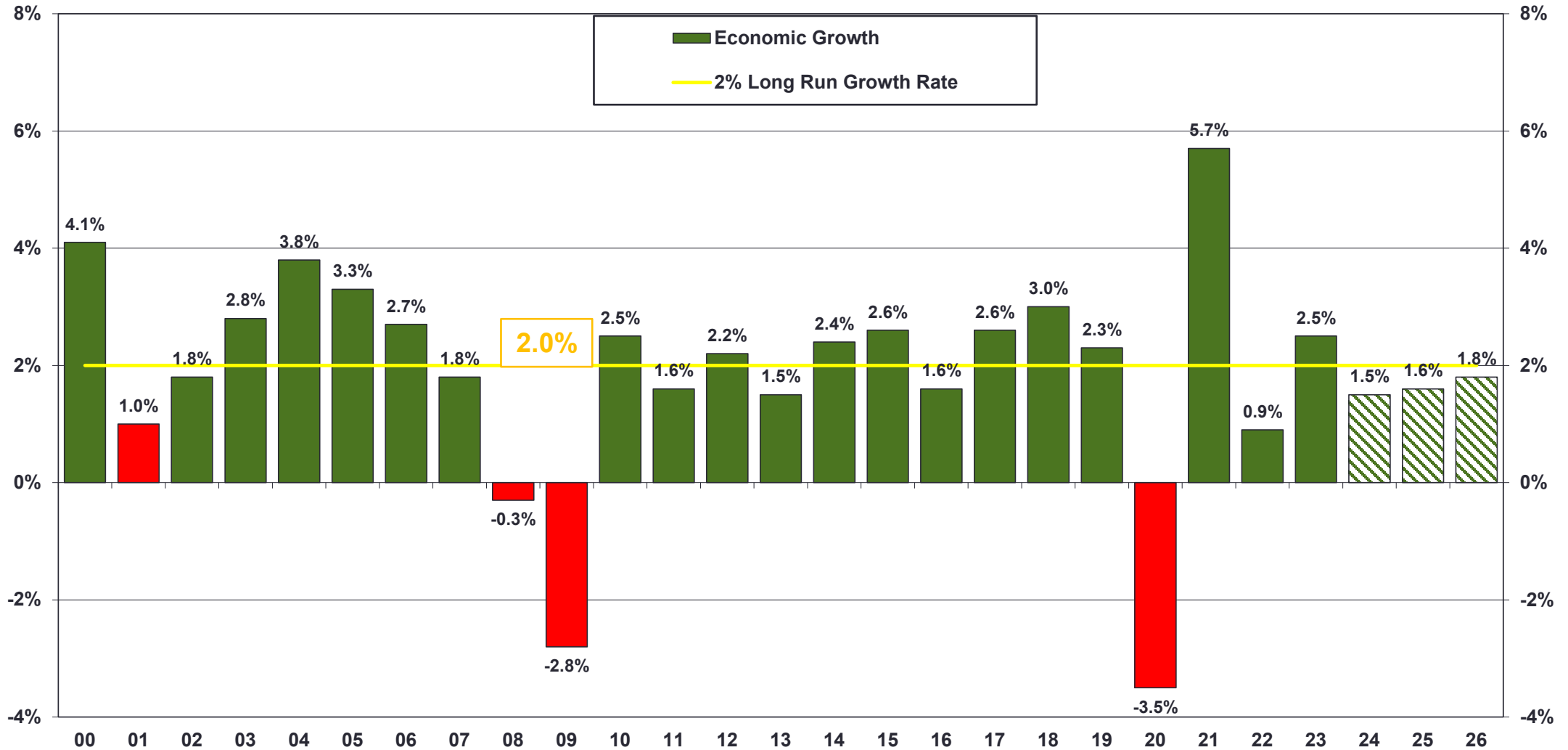
Interest Rates and Recessions

Inverted Yield Curves Herald Recessions in 9 Months



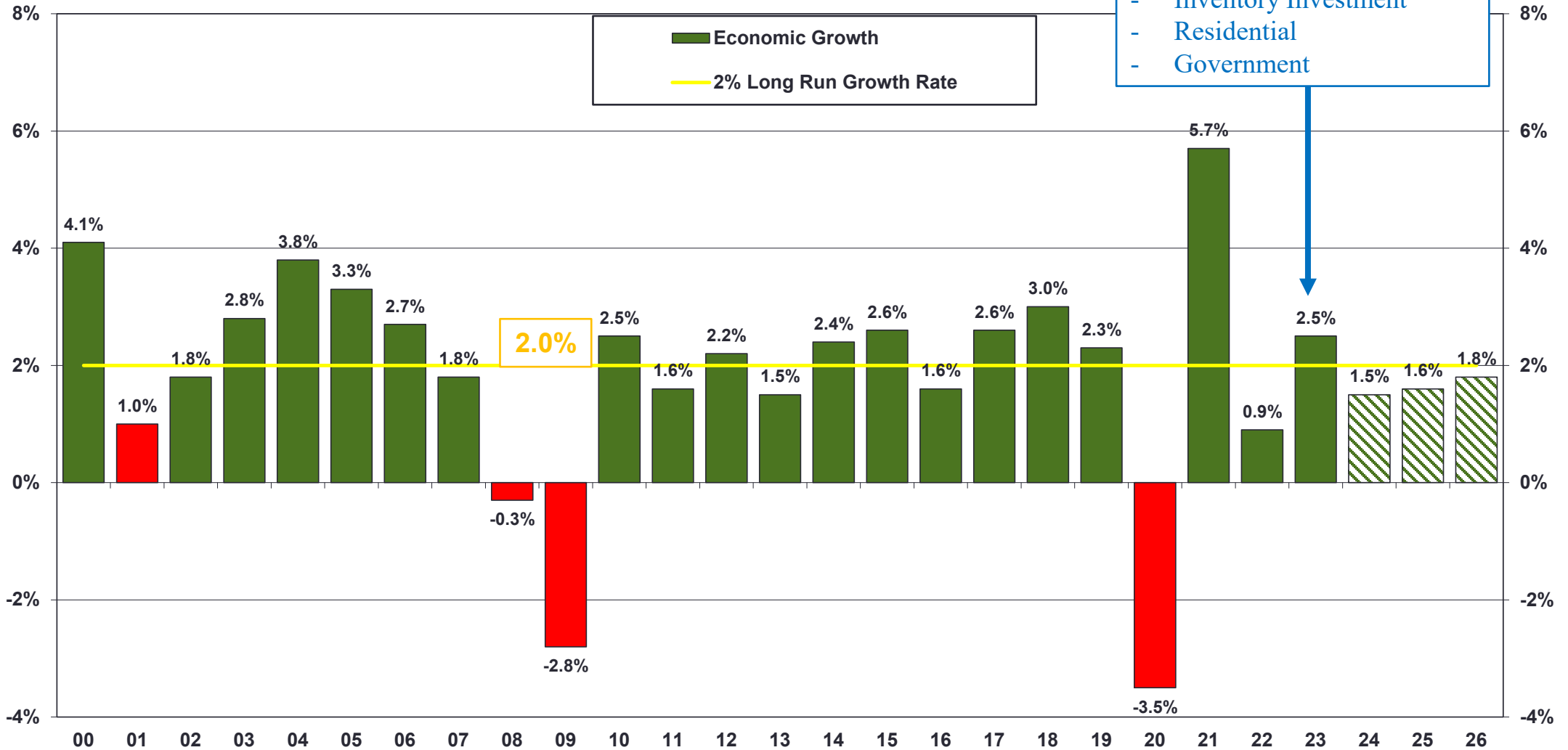
Slower Economic Growth for Next 2 Years

U.S. Economic Growth Rate



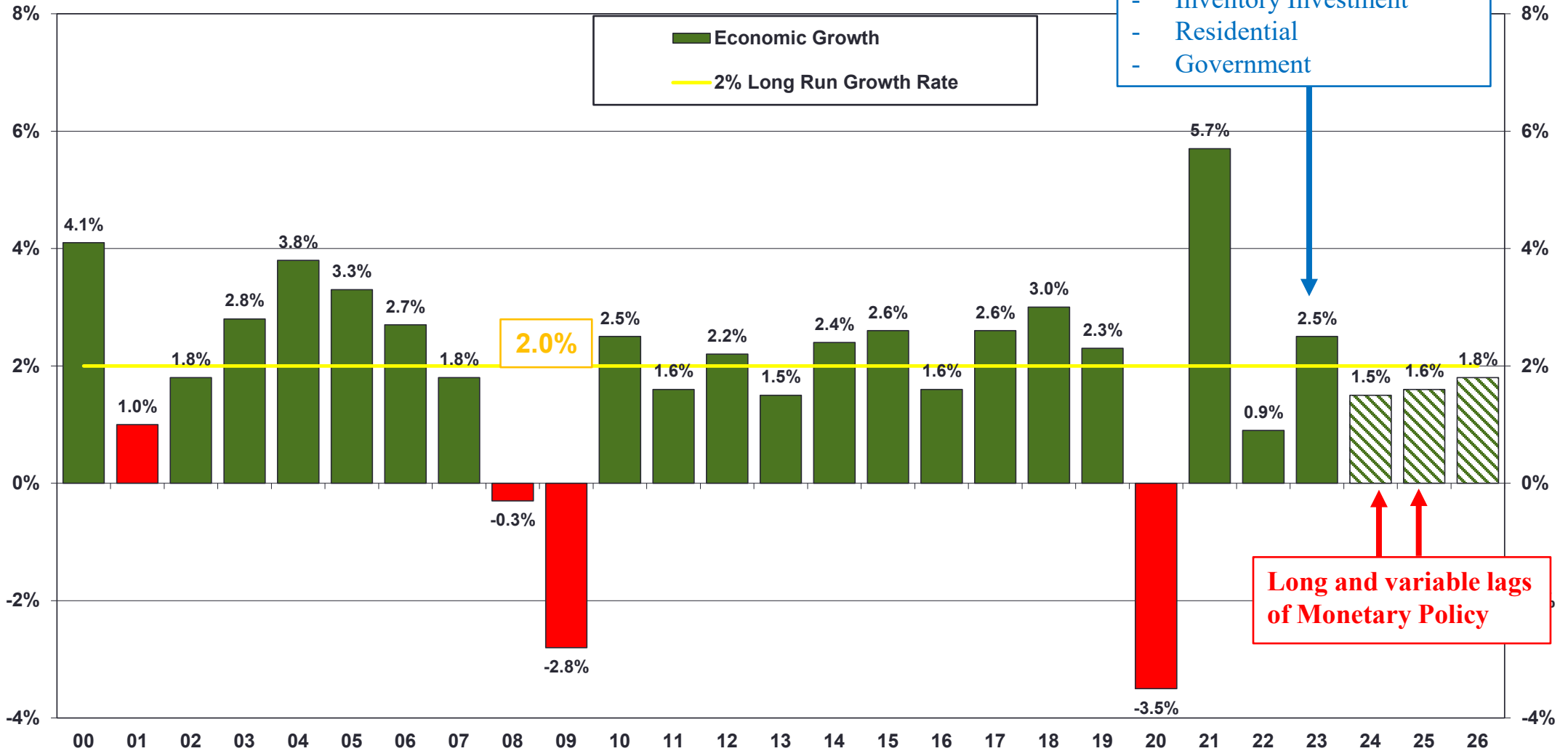
Slower Economic Growth for Next 2 Years

U.S. Economic Growth Rate

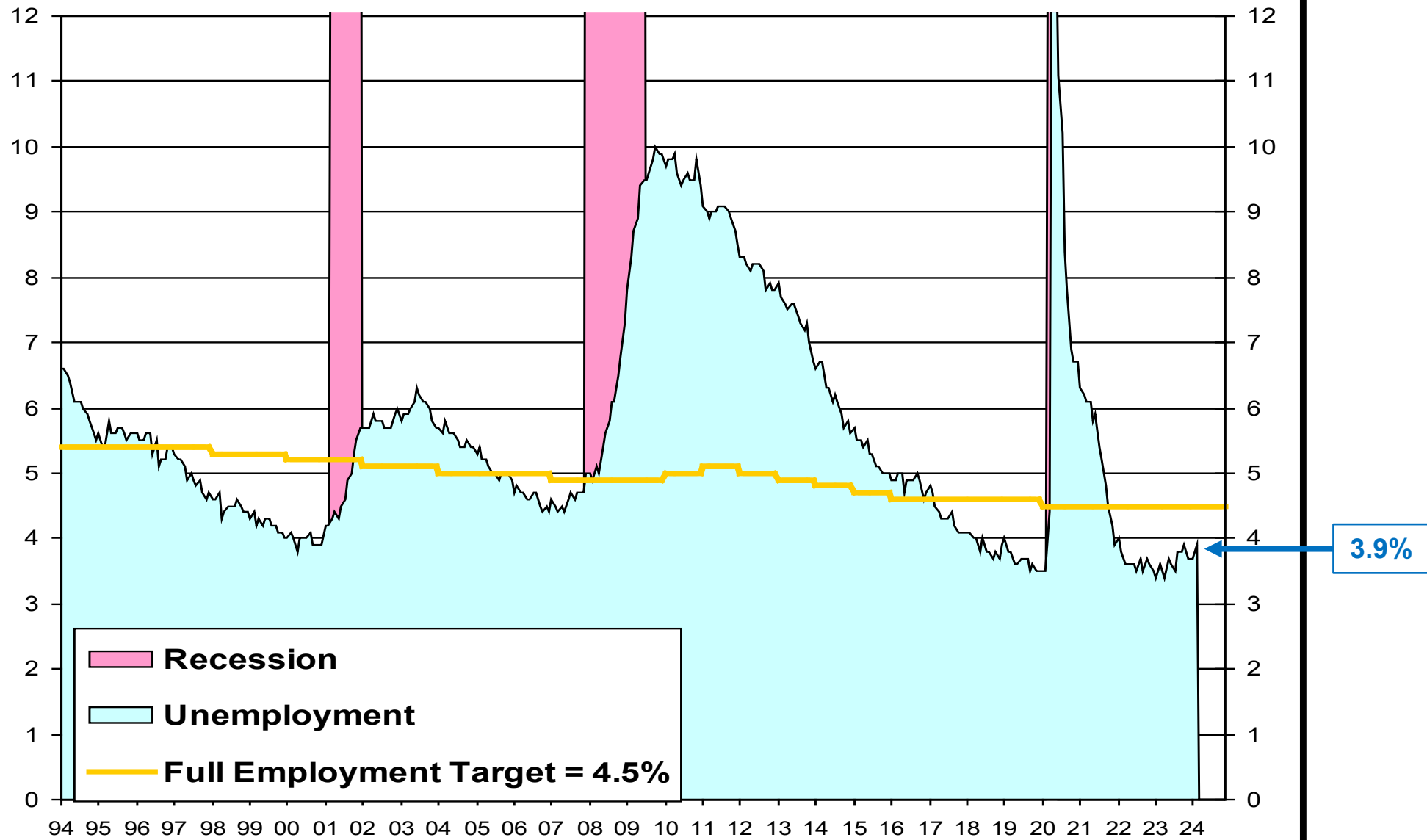


Slower Economic Growth for Next 2 Years

U.S. Economic Growth Rate

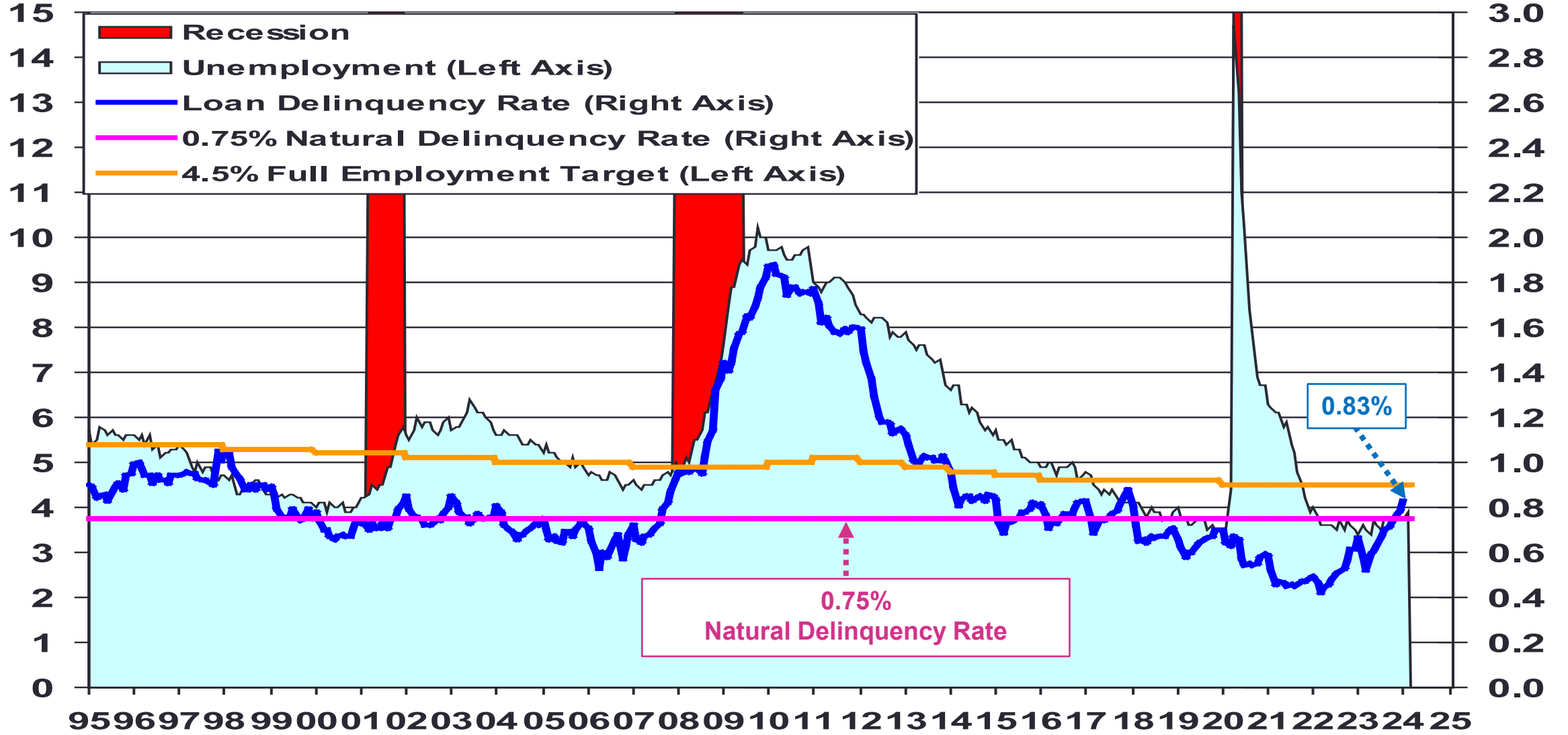


Unemployment Rate

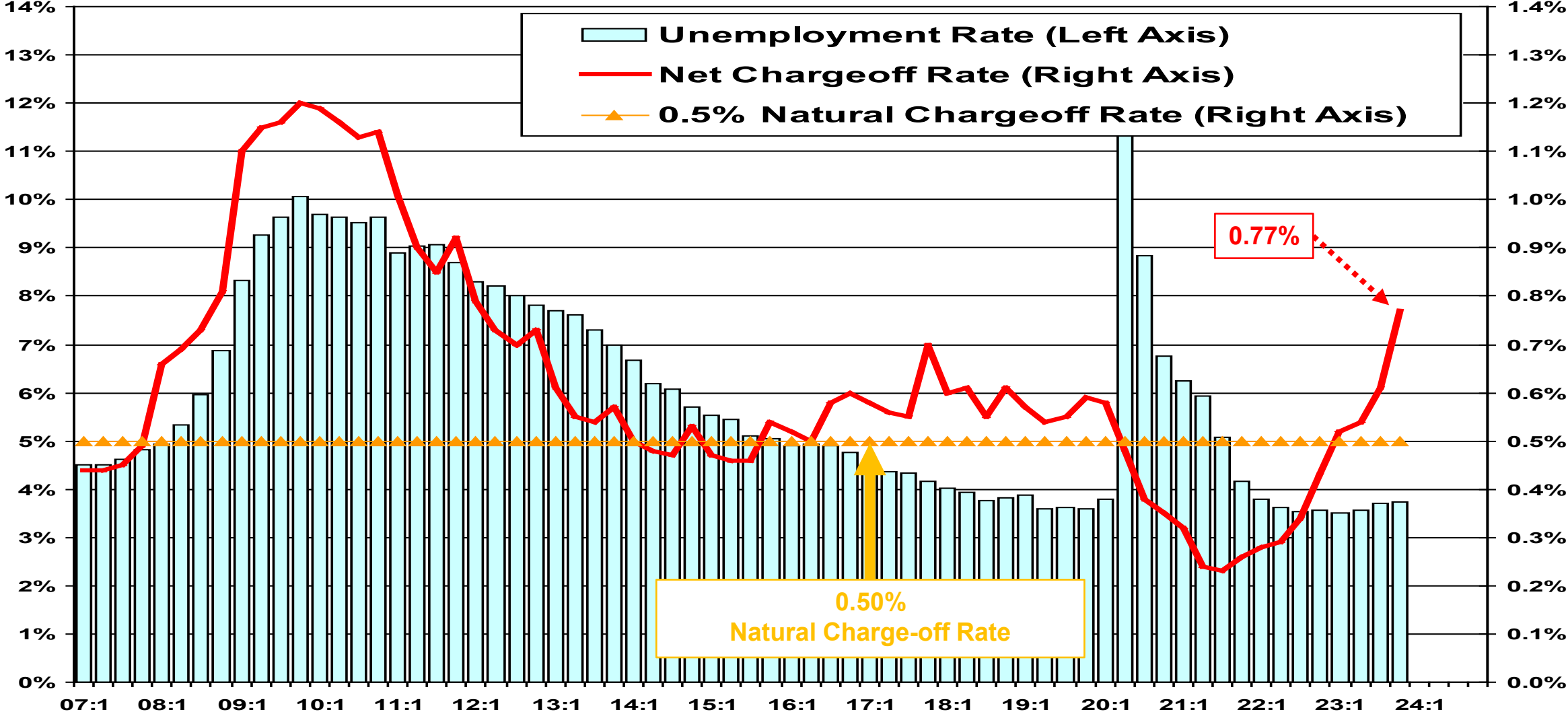


Source: Department of Labor.

CU Delinquency Rate Versus Unemployment Rate

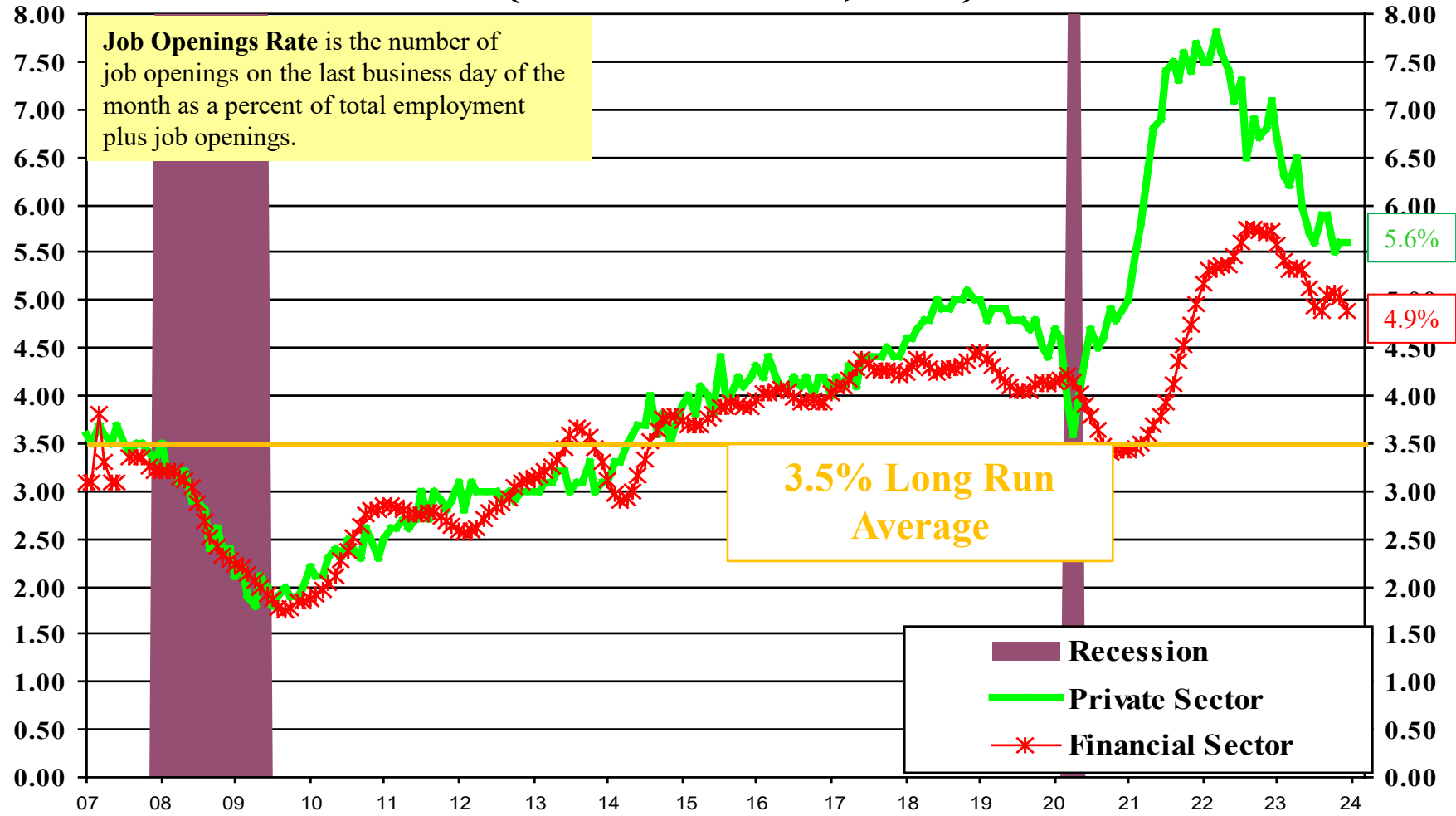


CU Net Chargeoff Rate Versus Unemployment Rate

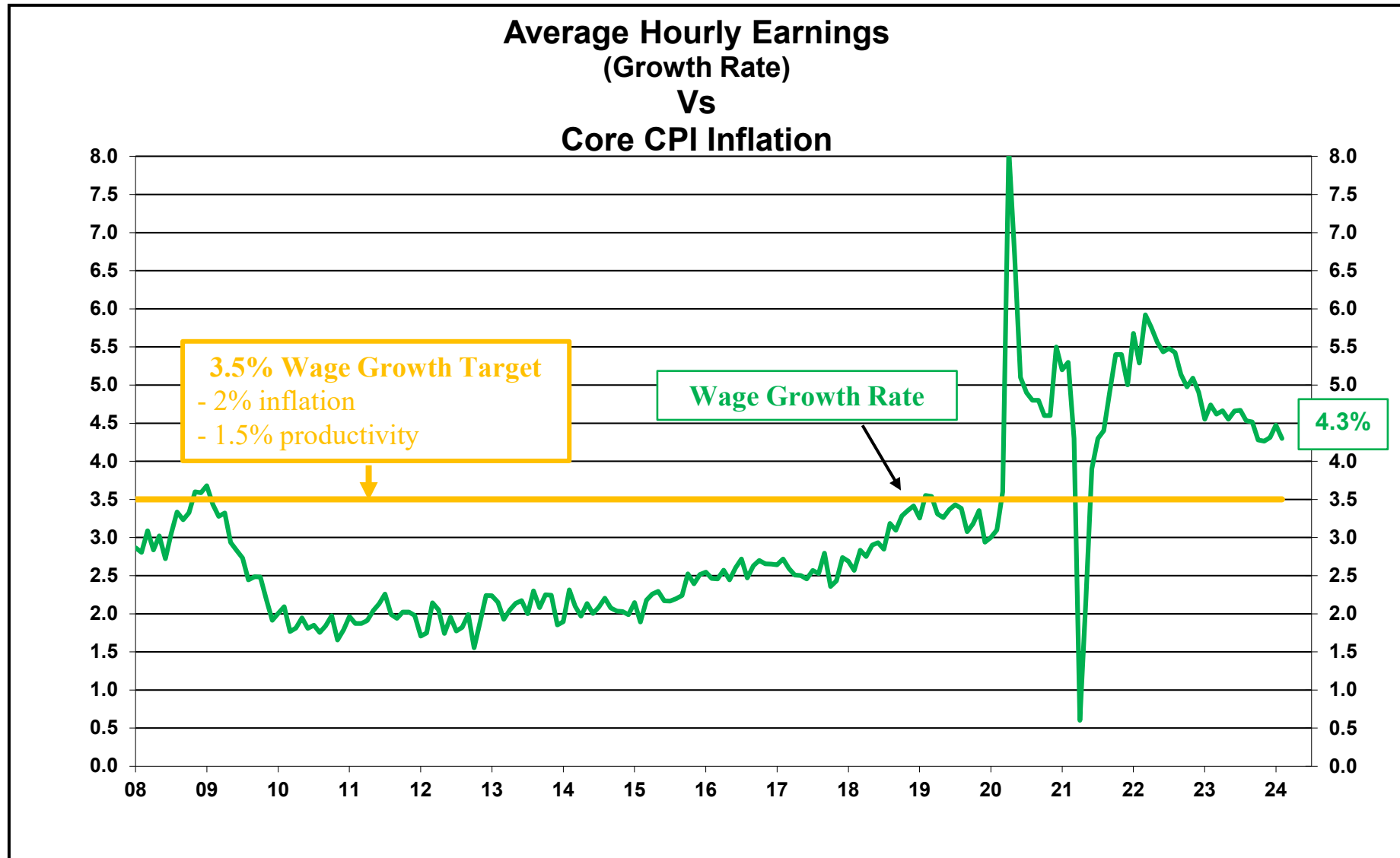


Source: Department of Labor, NCUA, CUNA

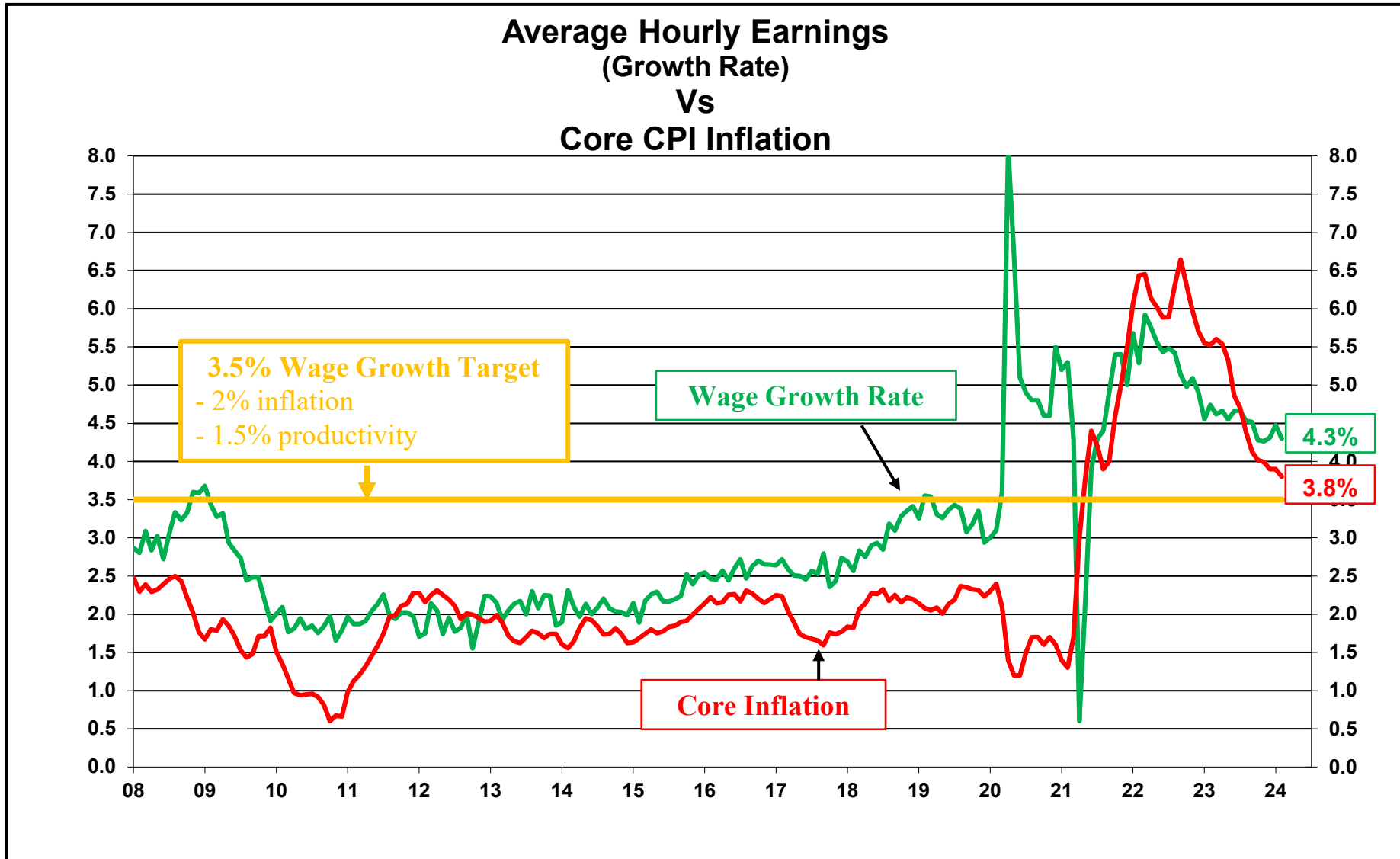
Job Openings Rate (Thousands, SA)



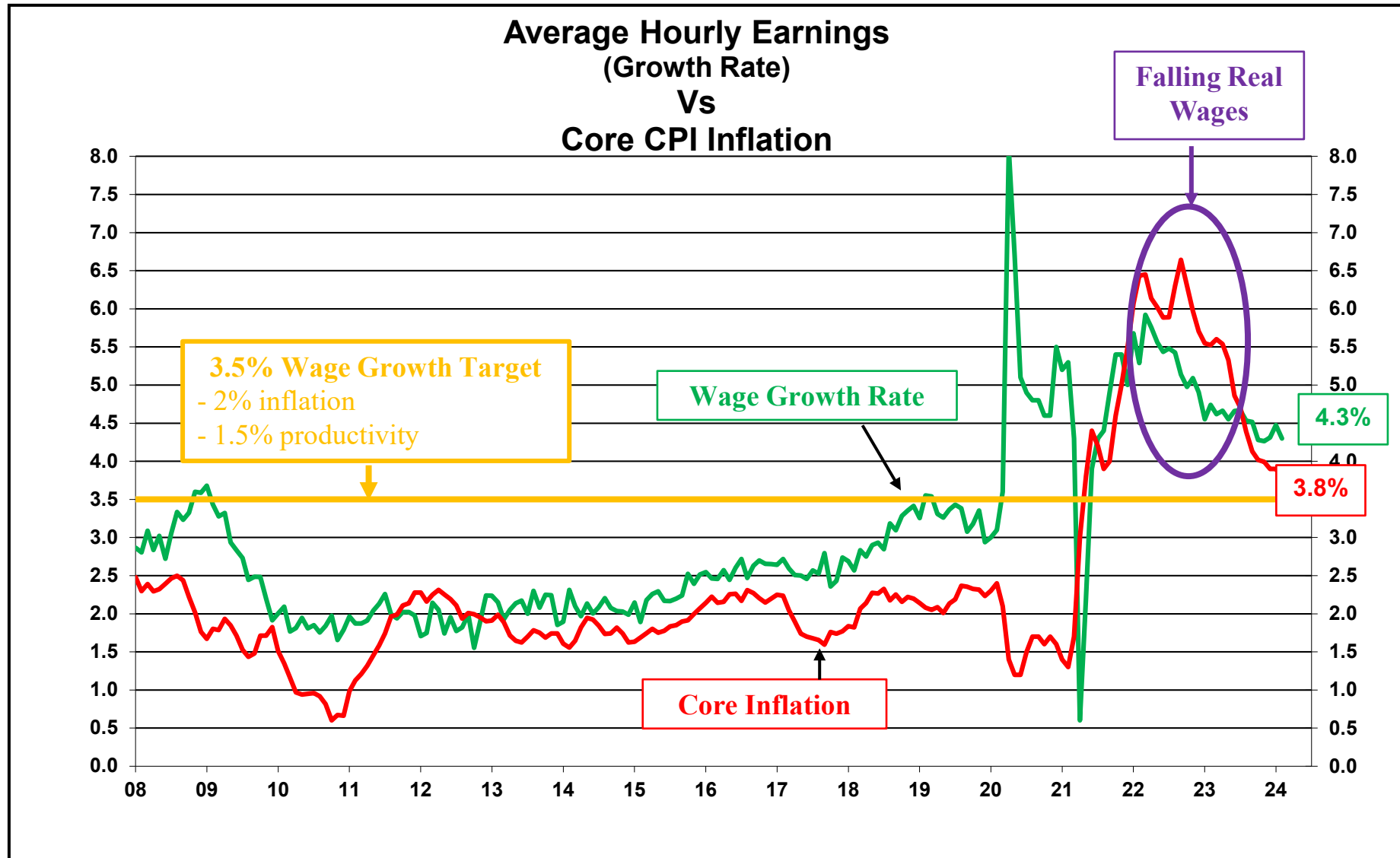
Wage Growth Slowing as Core Inflation Falls



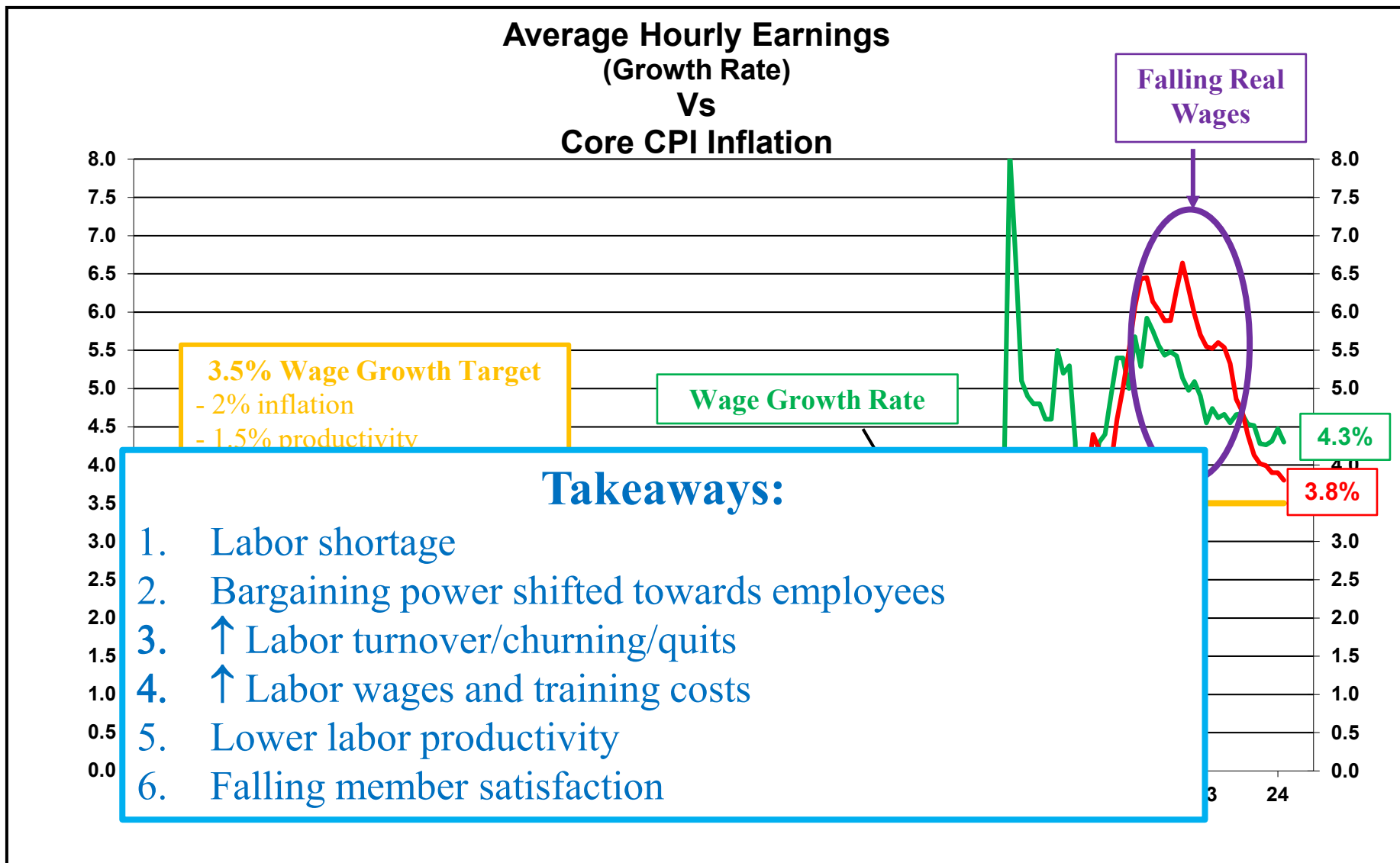
Wage Growth Slowing as Core Inflation Falls



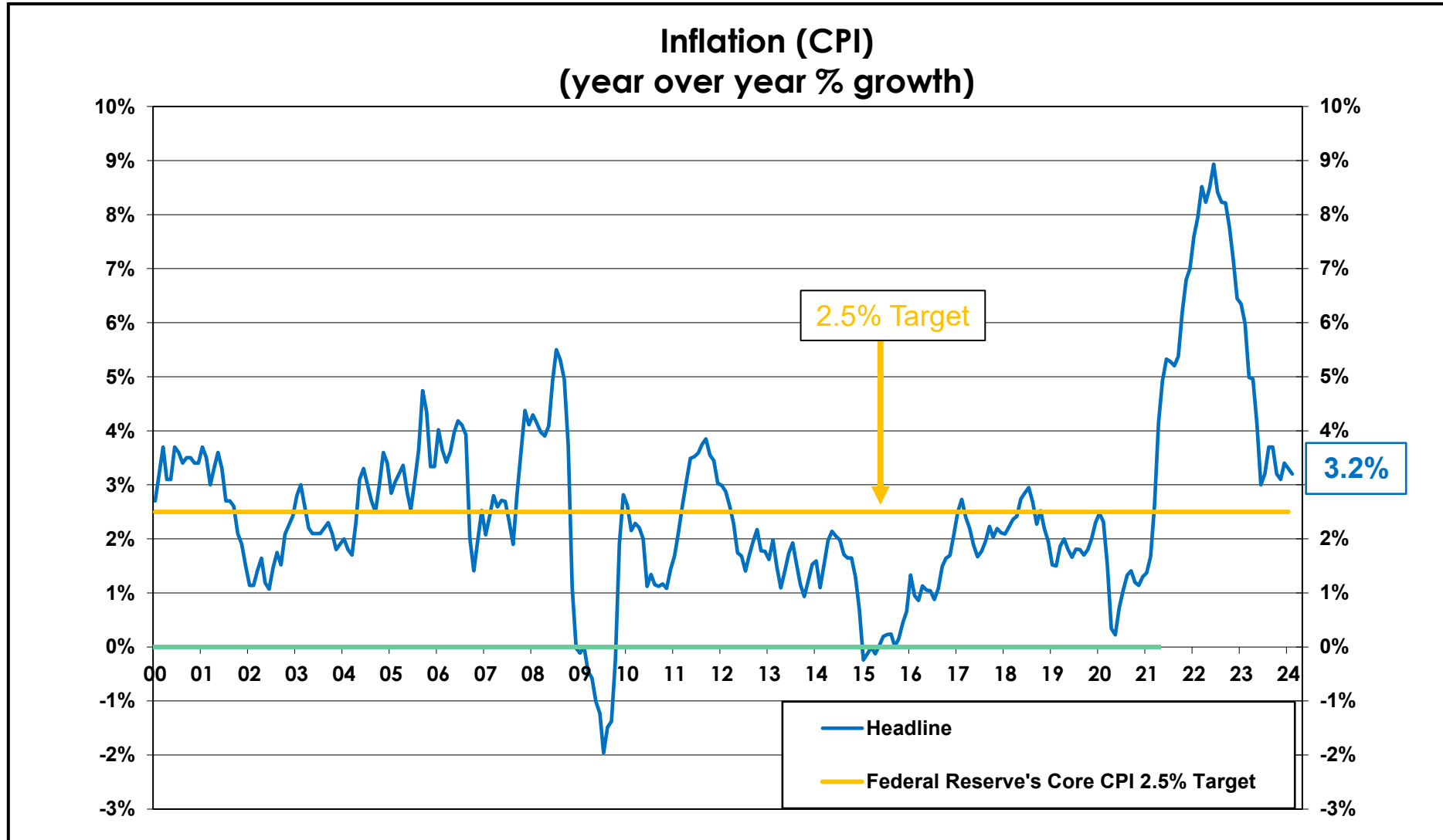
Wage Growth Slowing as Core Inflation Falls



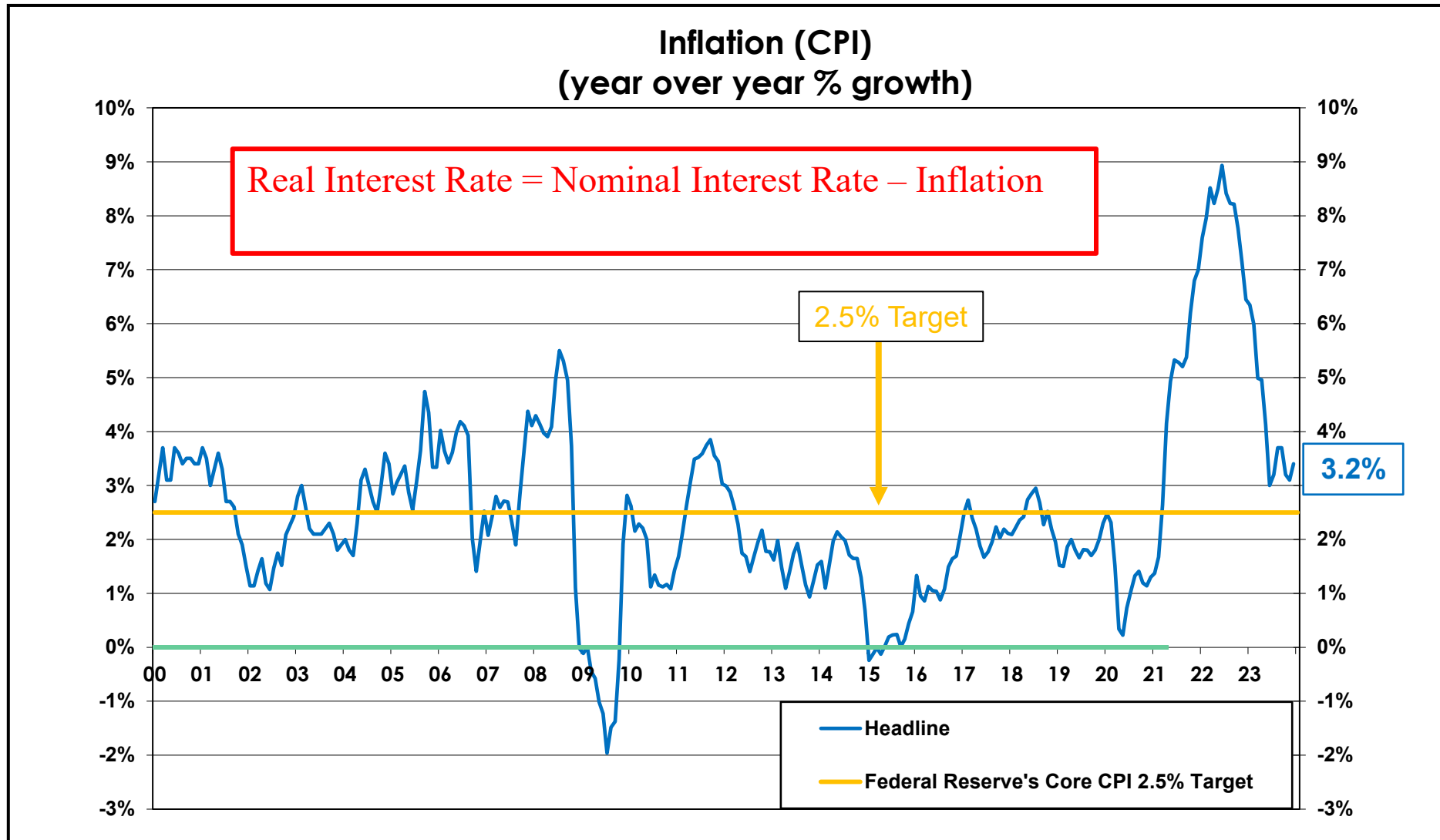
Wage Growth Slowing as Core Inflation Falls



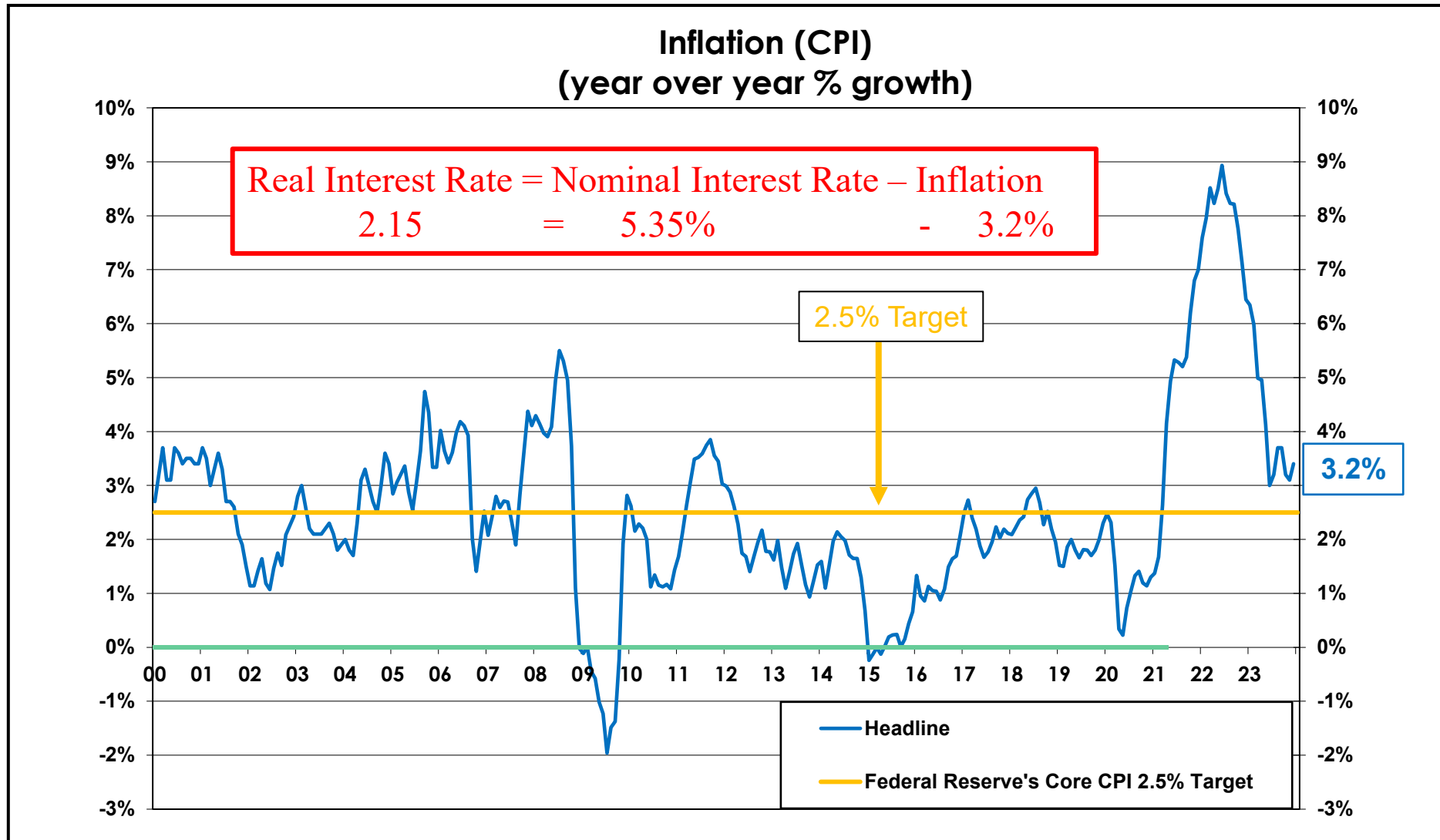
High Inflation for the Next Year



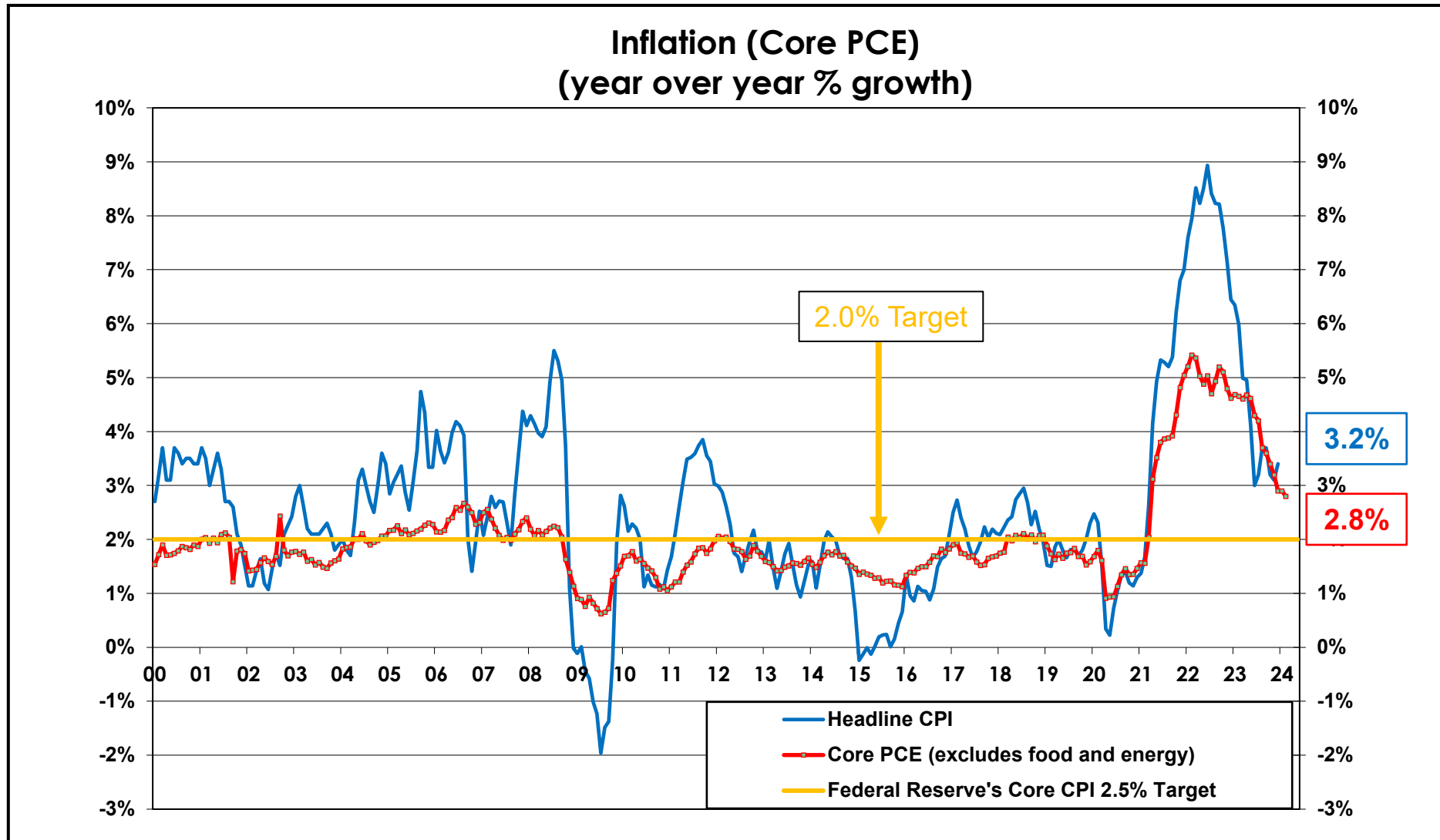
High Inflation for the Next Year



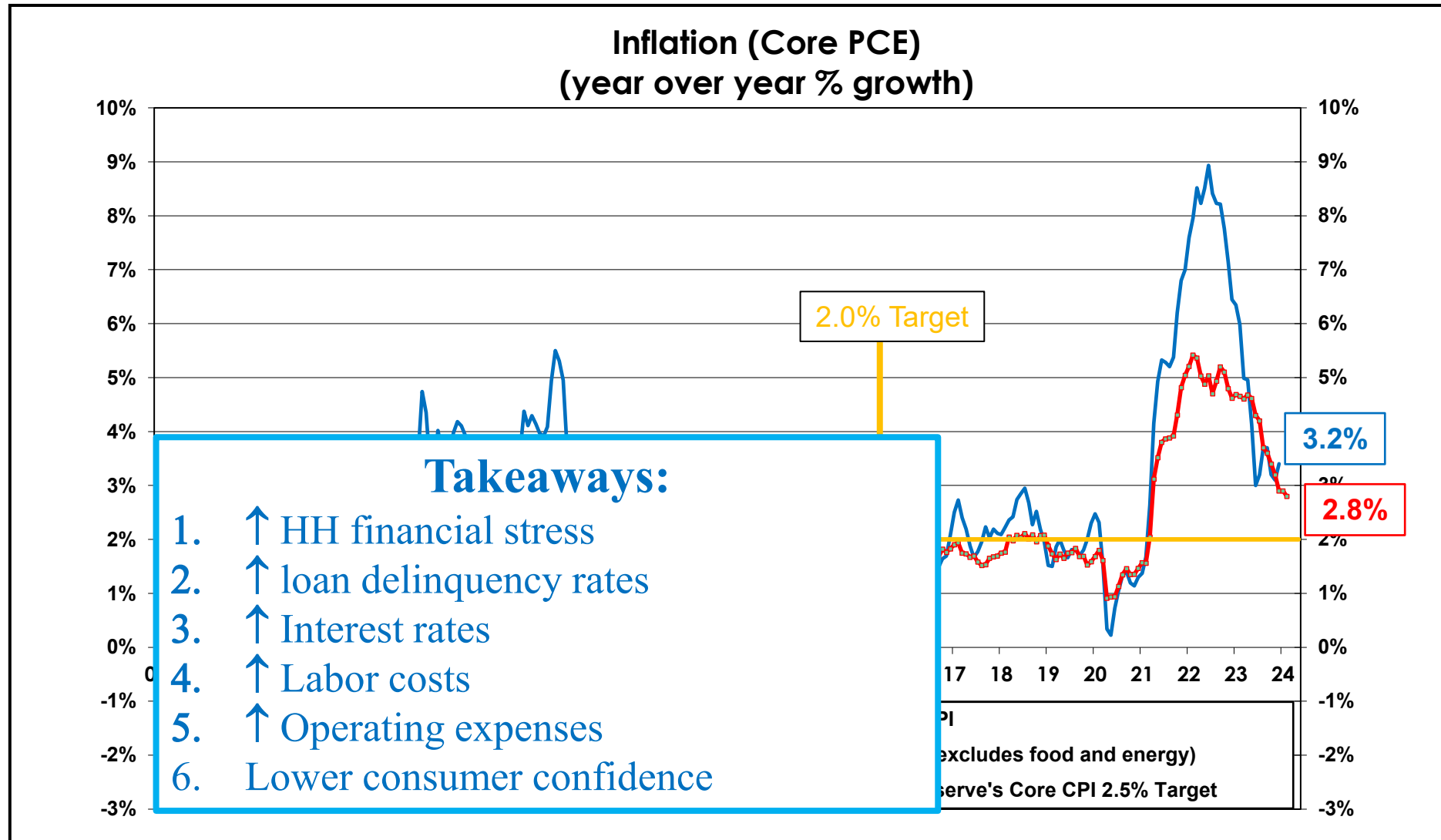
High Inflation for the Next Year



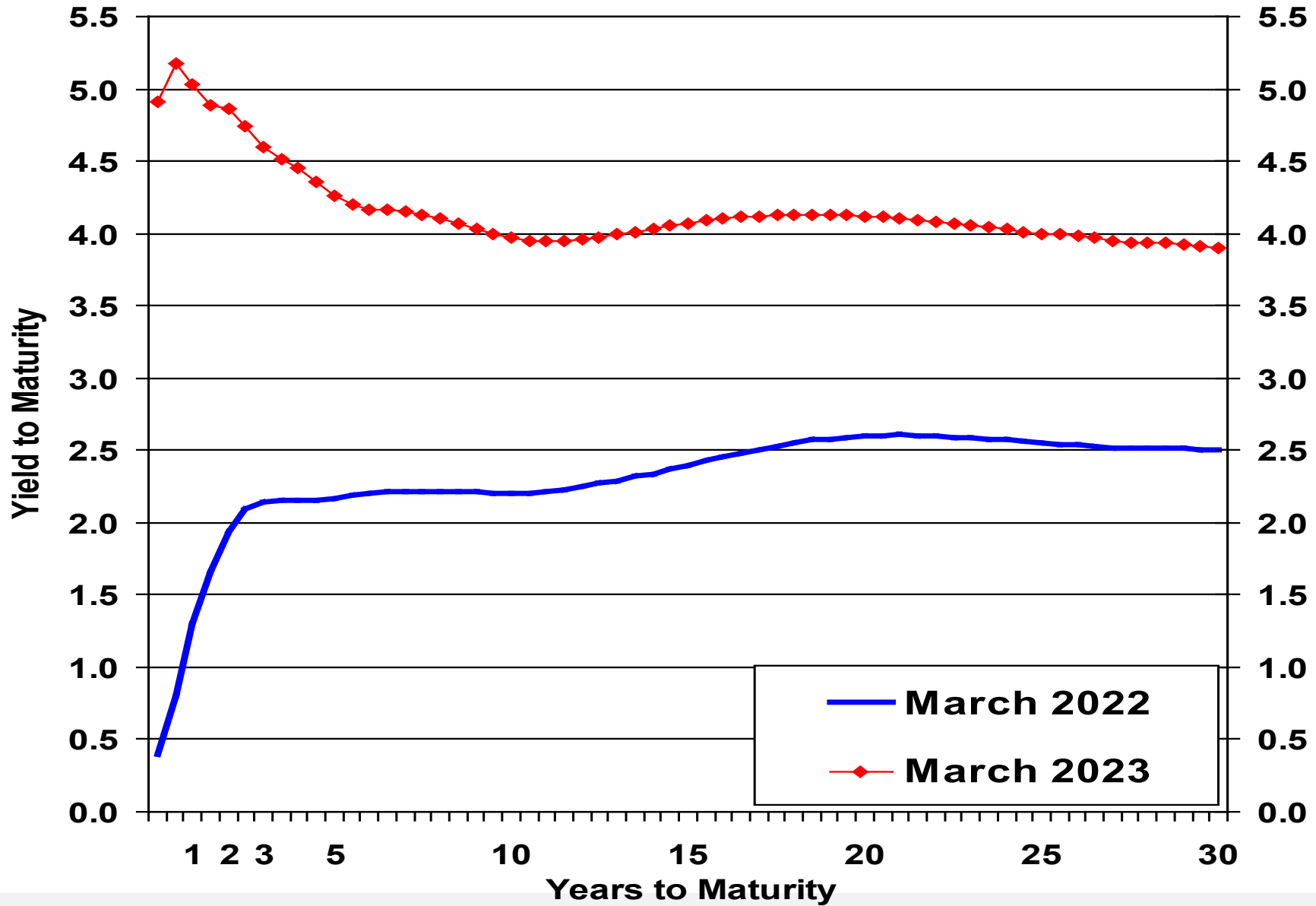
High Inflation for the Next Year



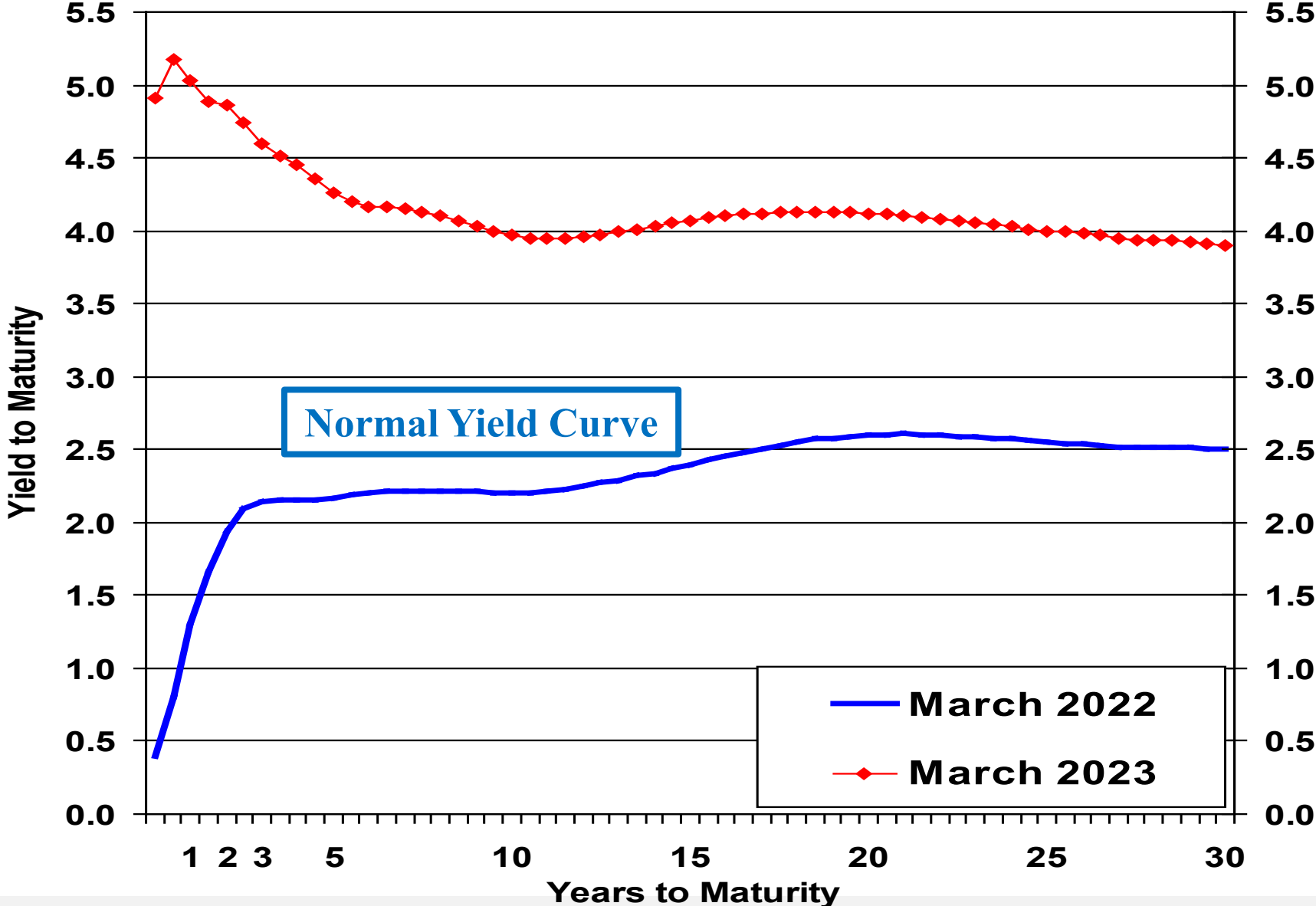
High Inflation for the Next Year



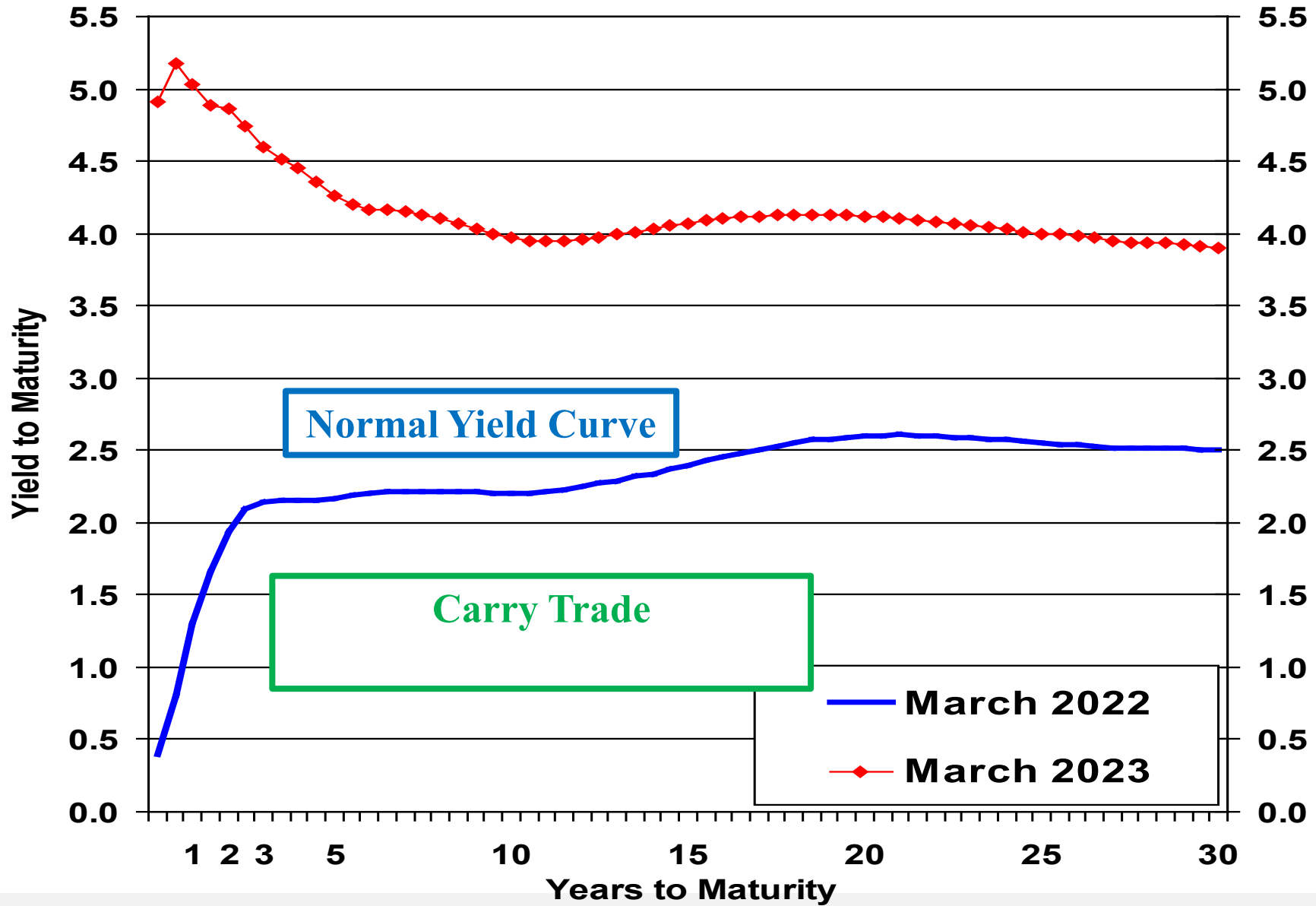
Treasury Yield Curves



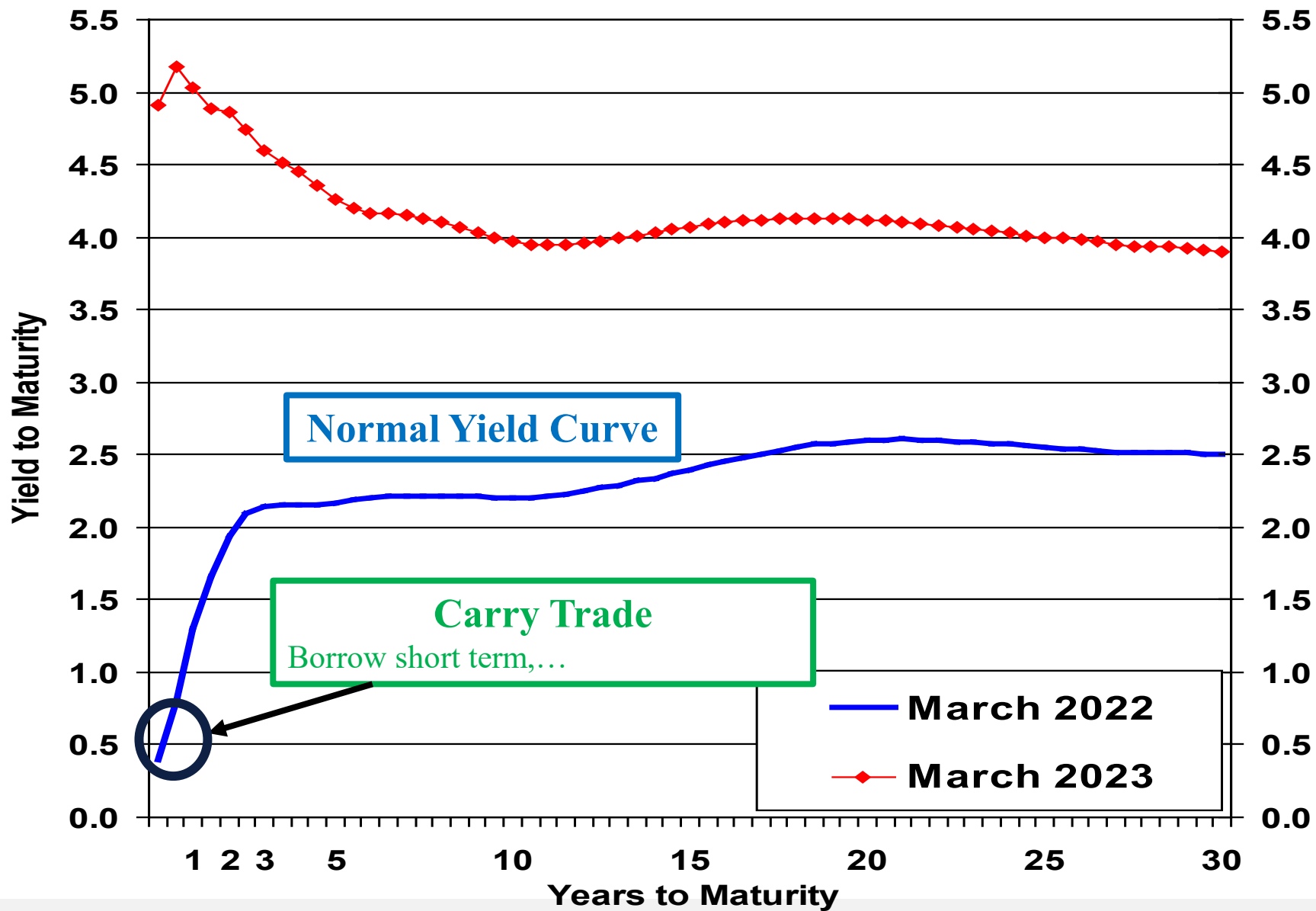
Treasury Yield Curves



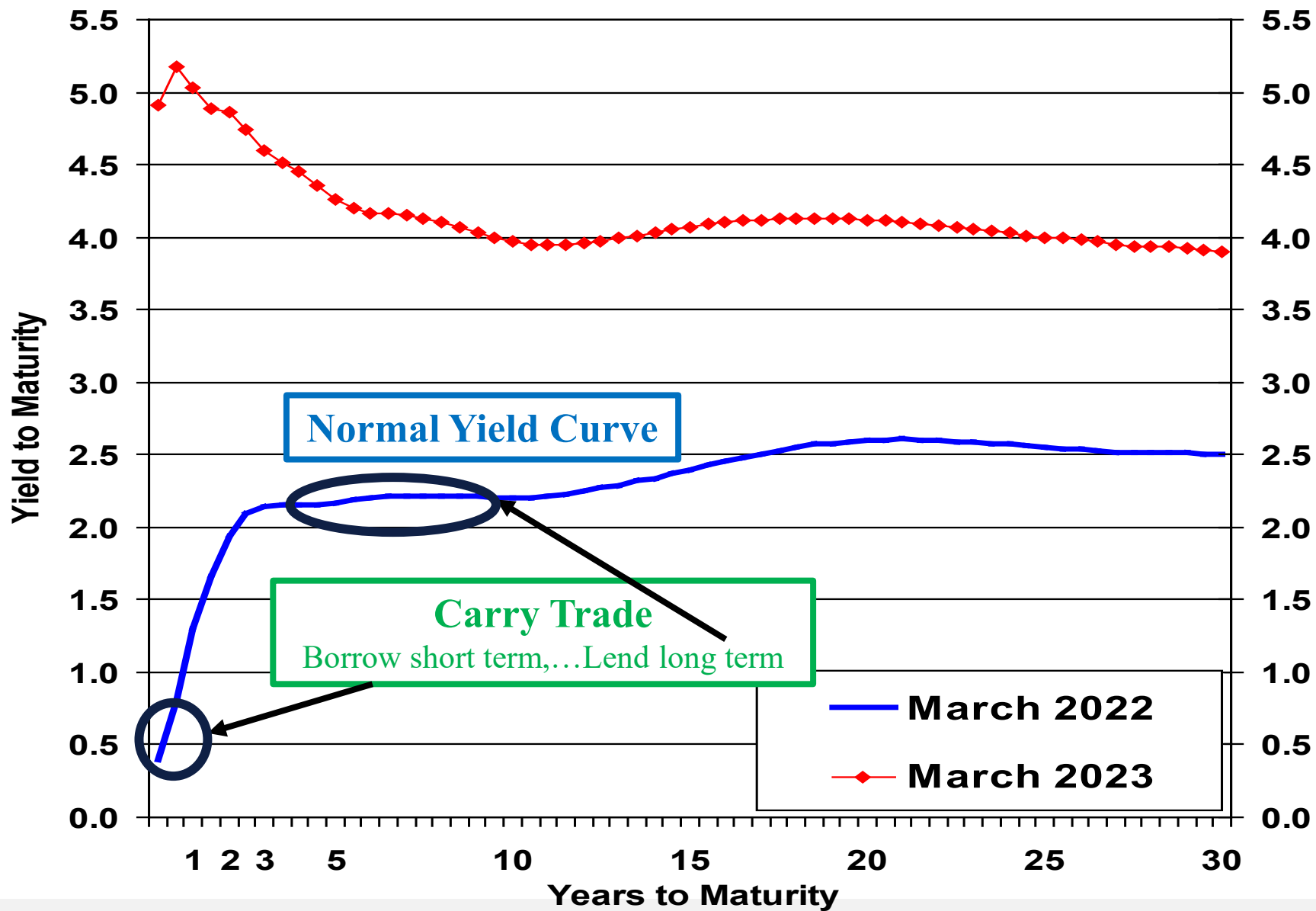
Treasury Yield Curves



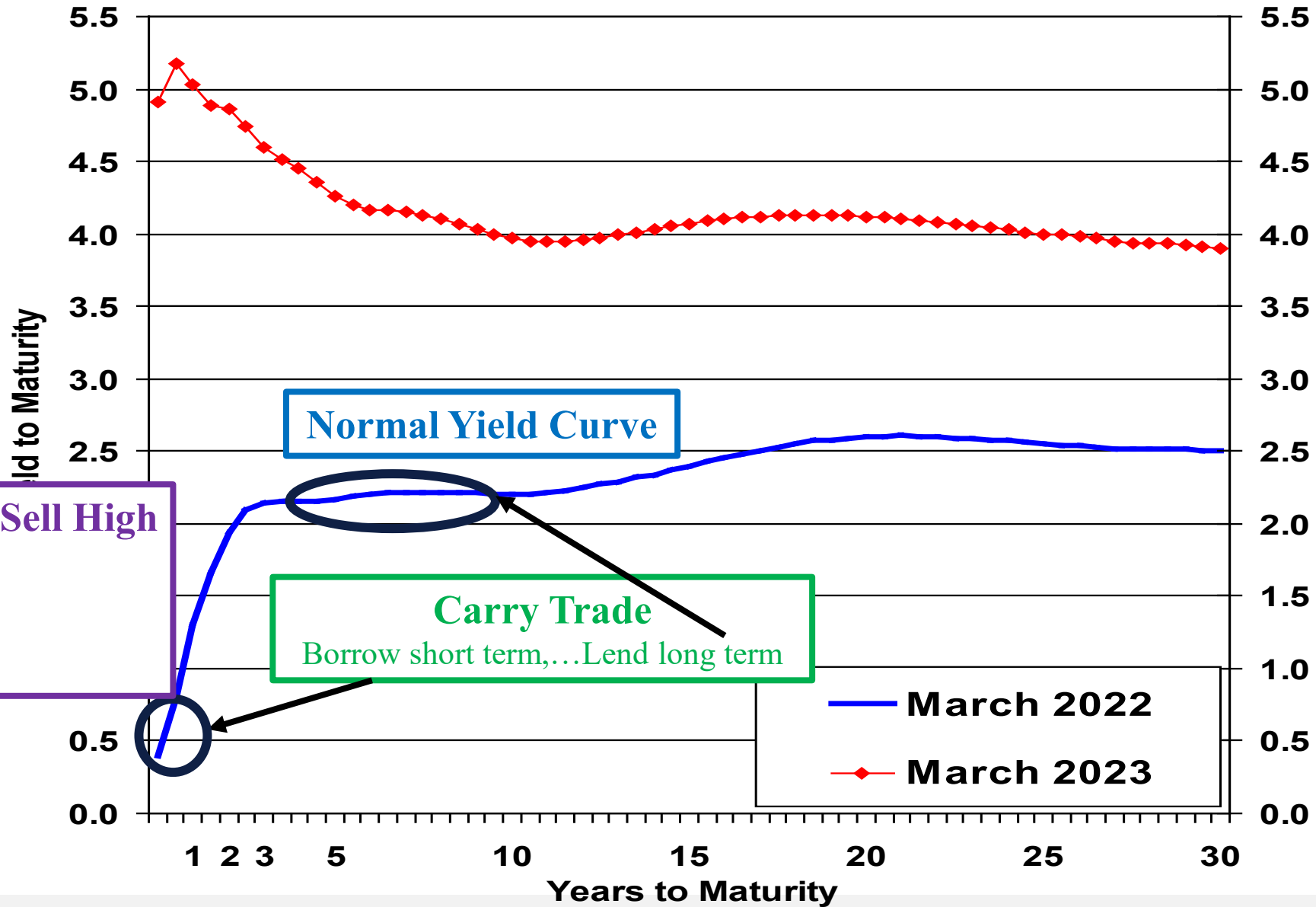
Treasury Yield Curves



Treasury Yield Curves



Treasury Yield Curves



Buy Low...

...Sell High

Normal Yield Curve

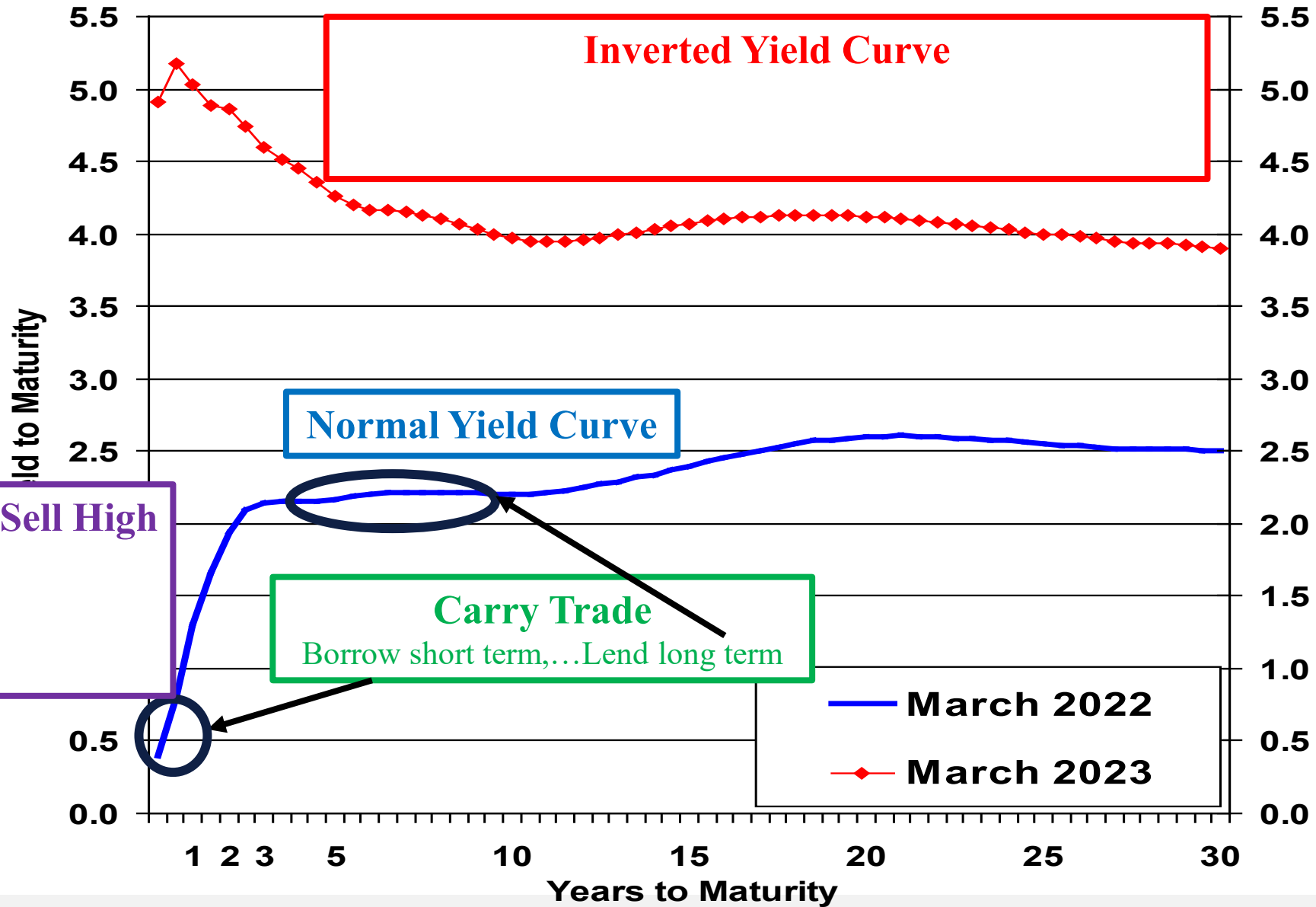
Carry Trade

Borrow short term, ...Lend long term

March 2022

March 2023

Treasury Yield Curves



Buy Low...
...Sell High

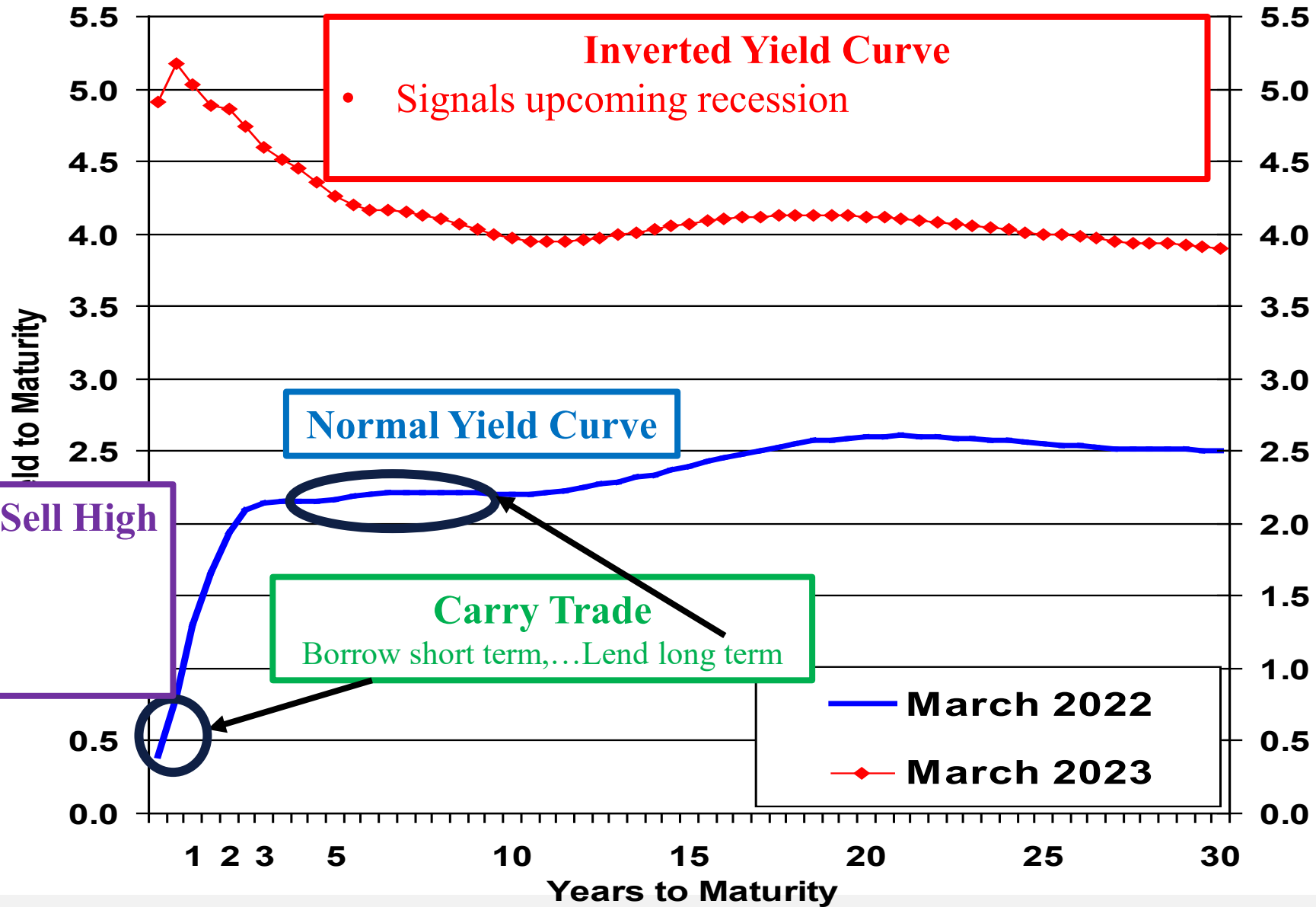
Normal Yield Curve

Carry Trade
Borrow short term, ...Lend long term

Inverted Yield Curve

March 2022
March 2023

Treasury Yield Curves

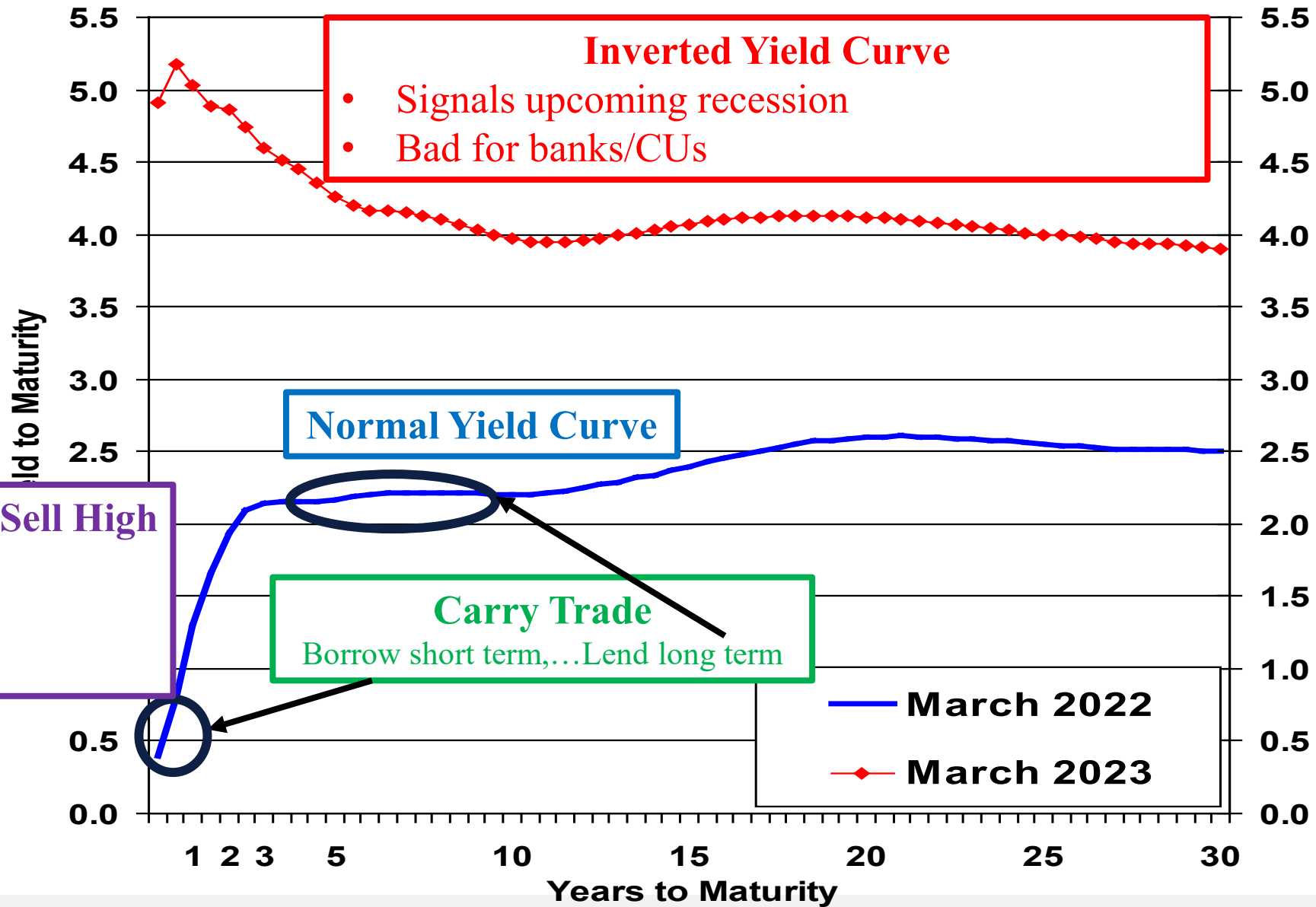


Buy Low...

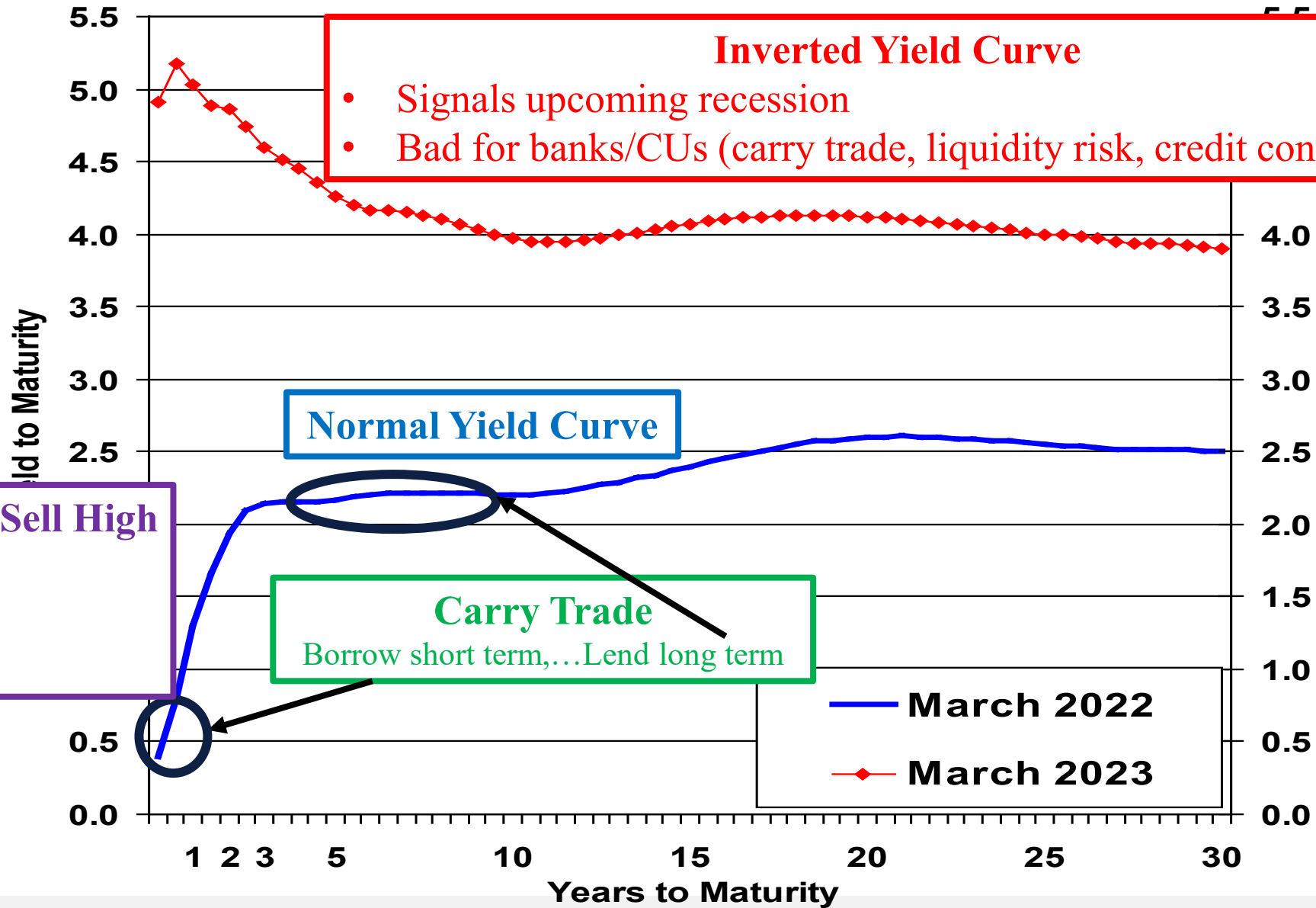
...Sell High

Carry Trade
Borrow short term, ... Lend long term

Treasury Yield Curves



Treasury Yield Curves



Inverted Yield Curve

- Signals upcoming recession
- Bad for banks/CUs (carry trade, liquidity risk, credit contraction)

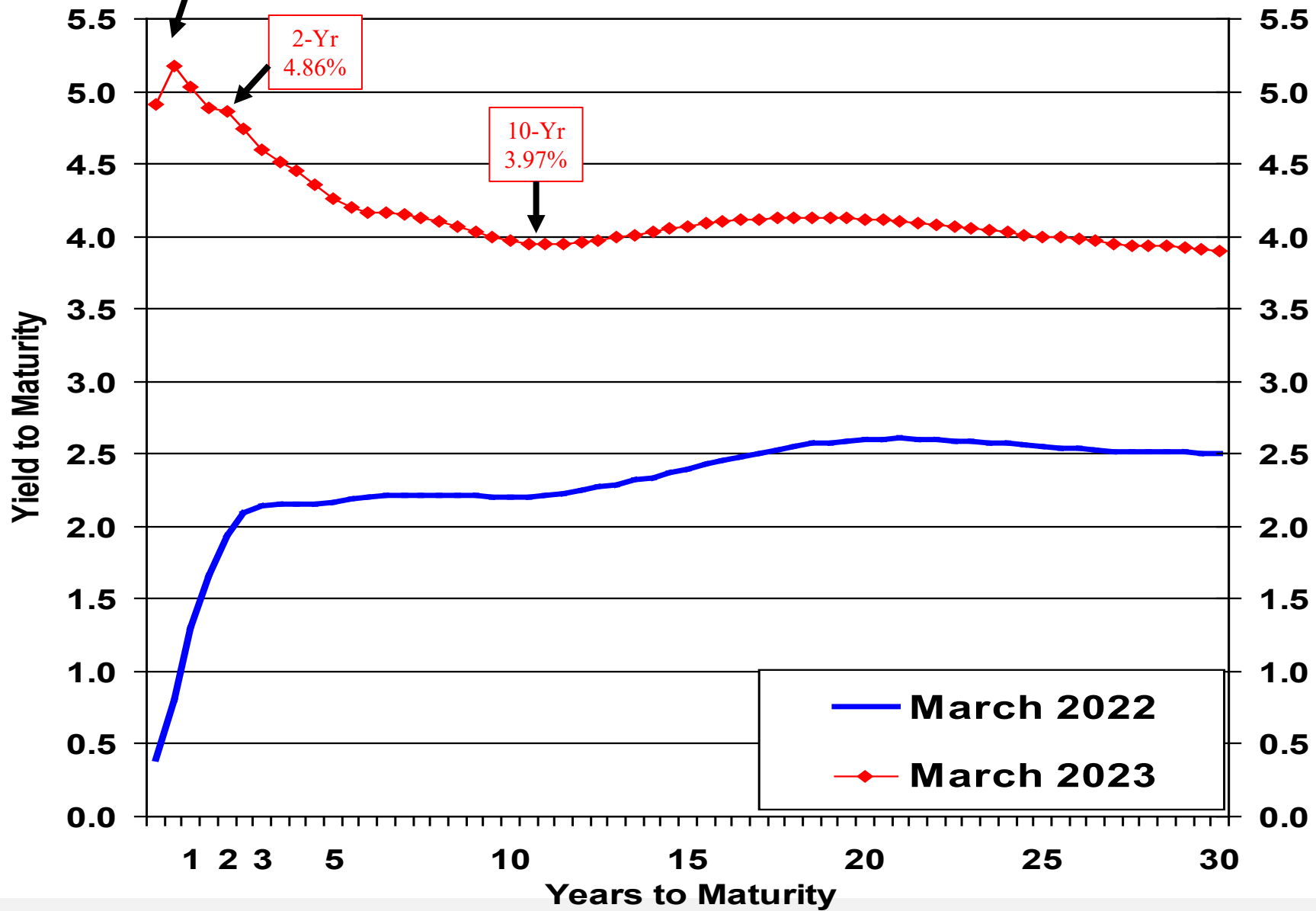
Normal Yield Curve

Carry Trade
Borrow short term, ... Lend long term

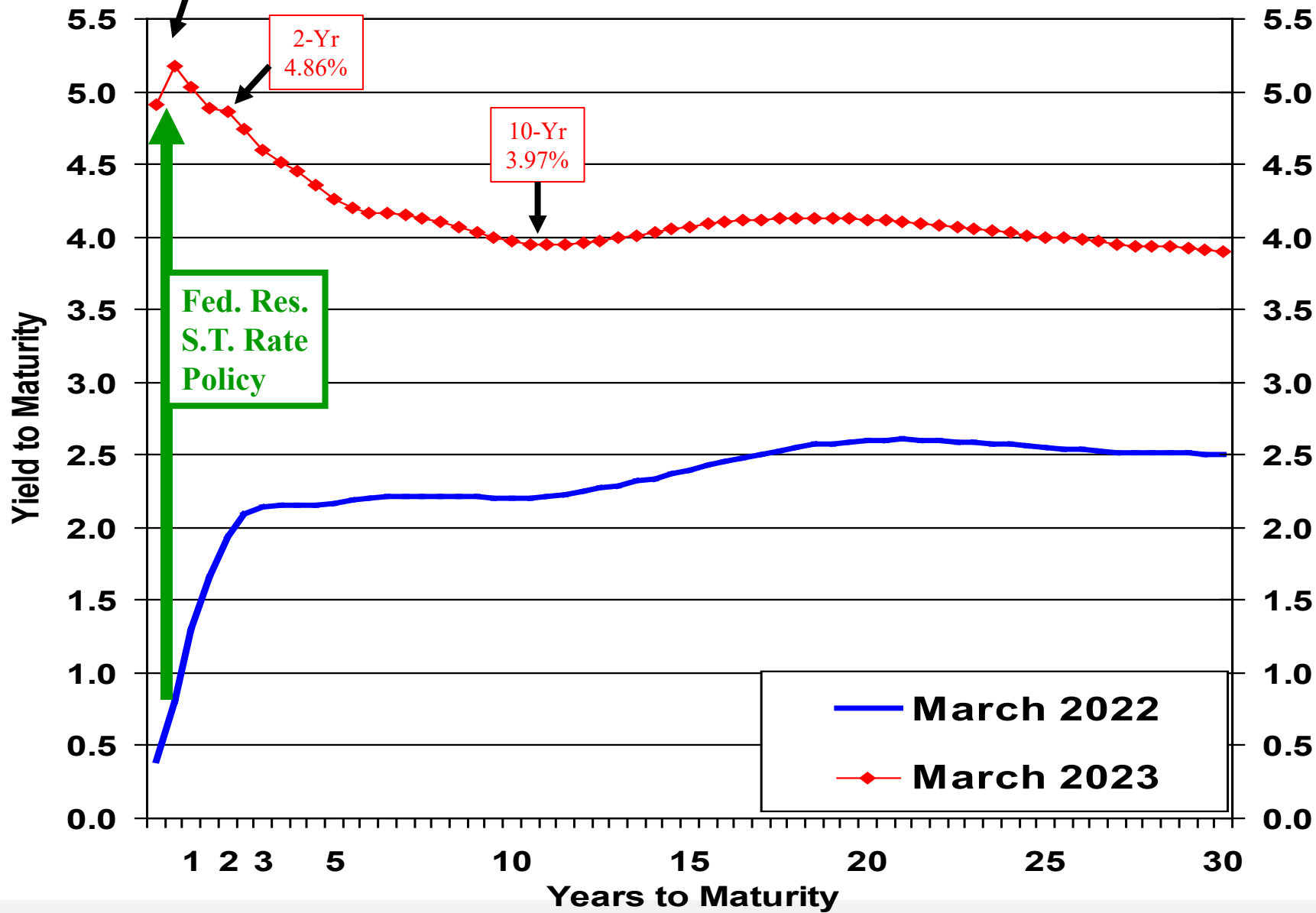
Buy Low...
...Sell High

— March 2022
—♦ March 2023

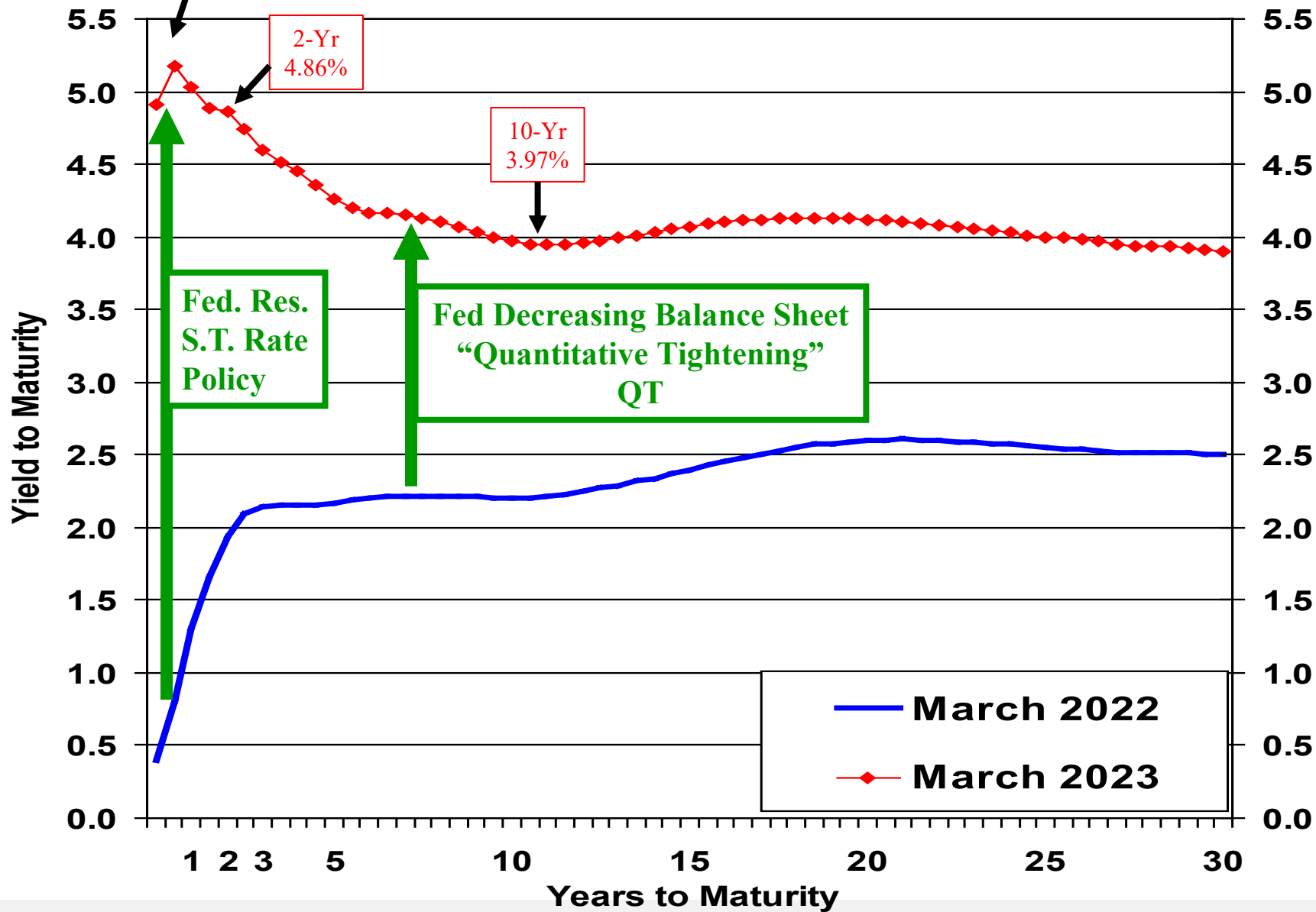
Treasury Yield Curves



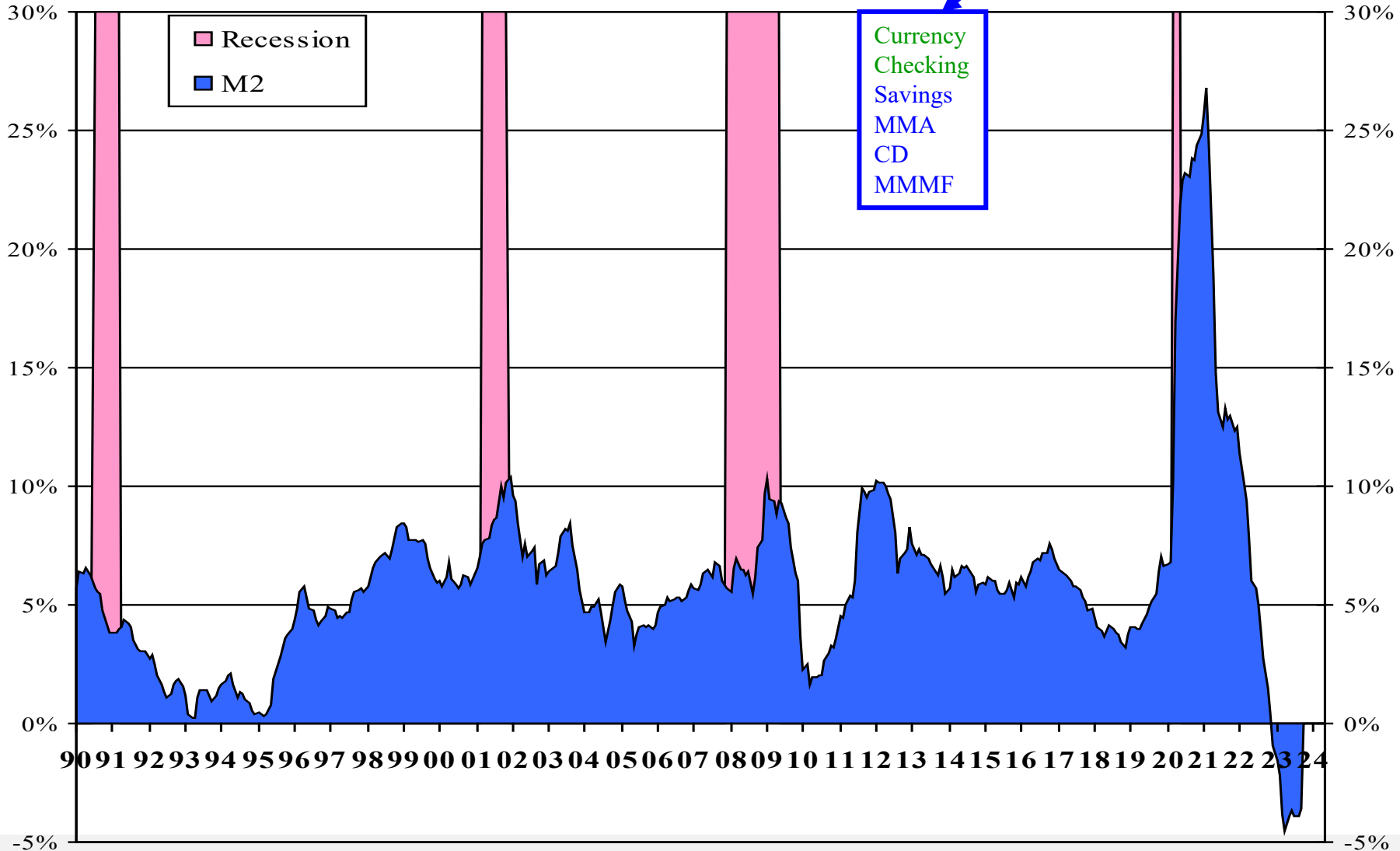
Treasury Yield Curves



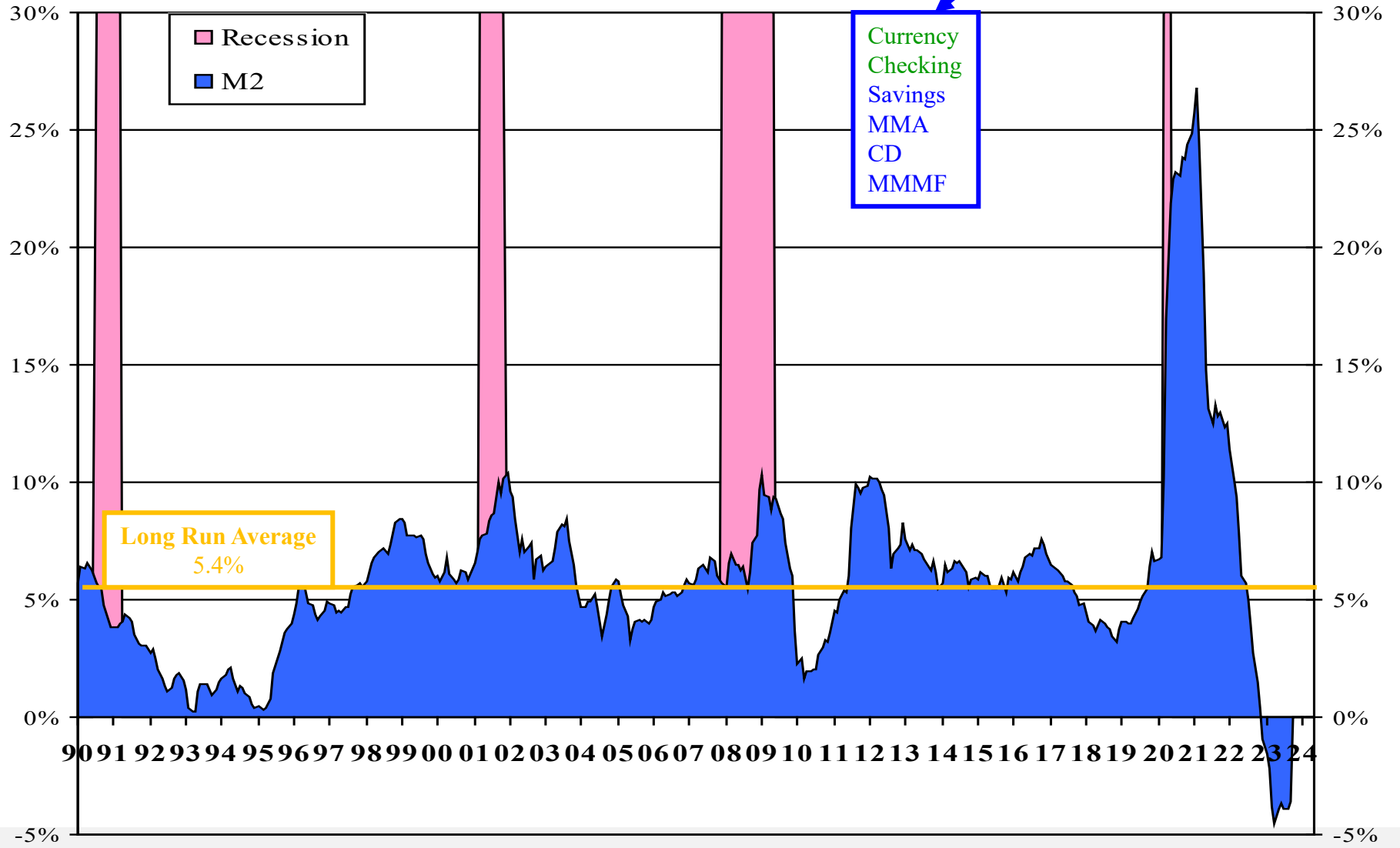
Treasury Yield Curves



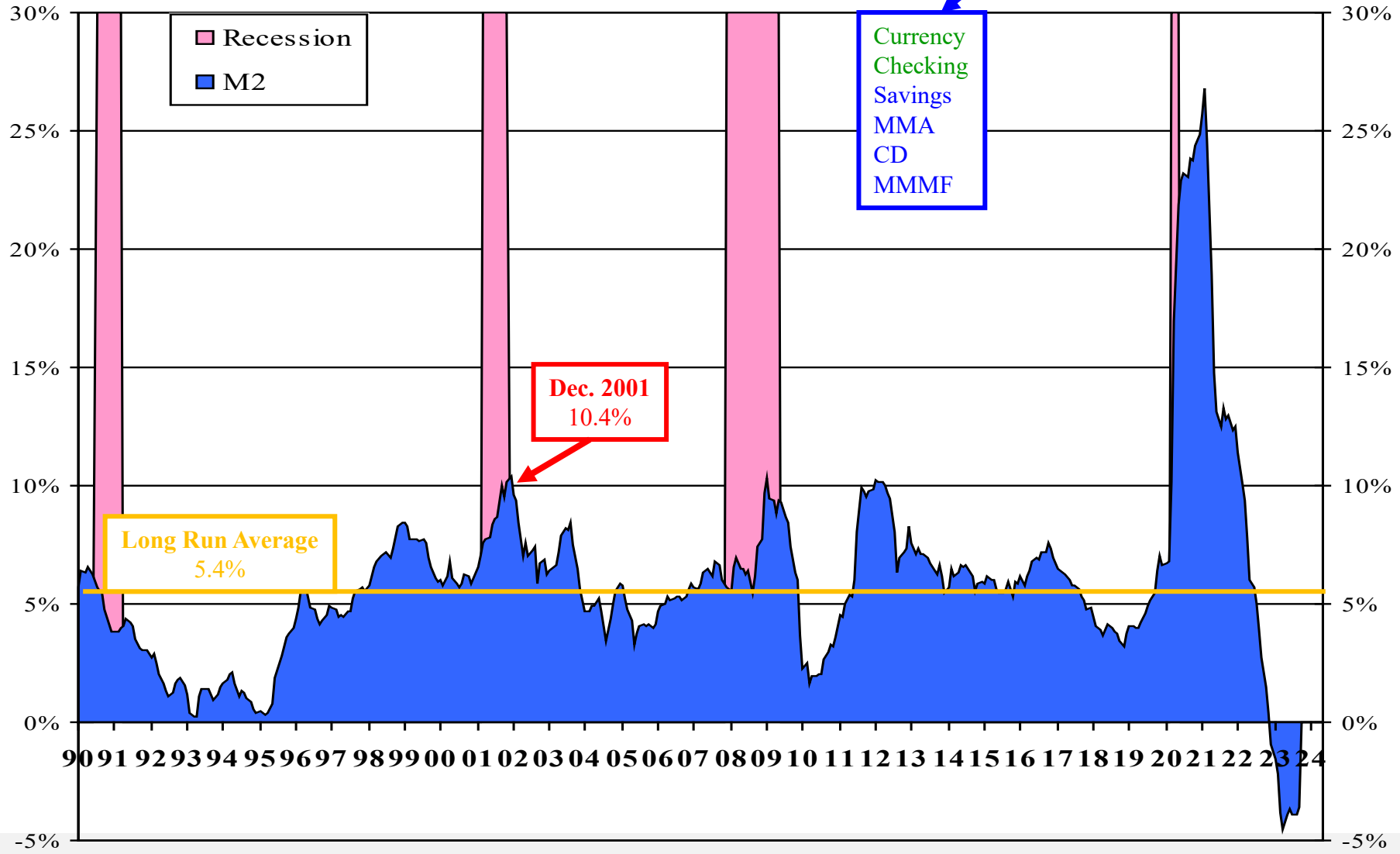
Money Supply Growth, M2



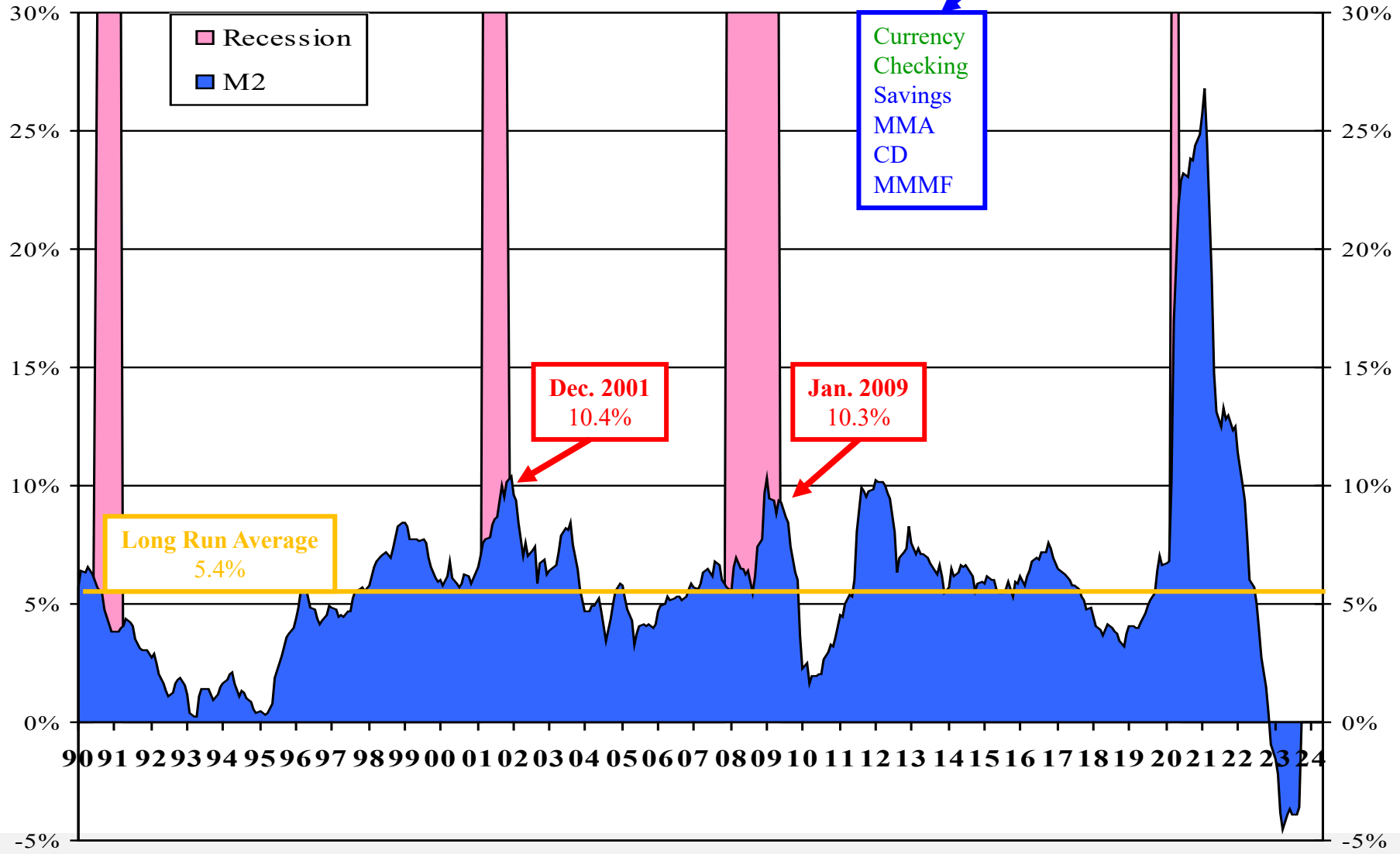
Money Supply Growth, M2



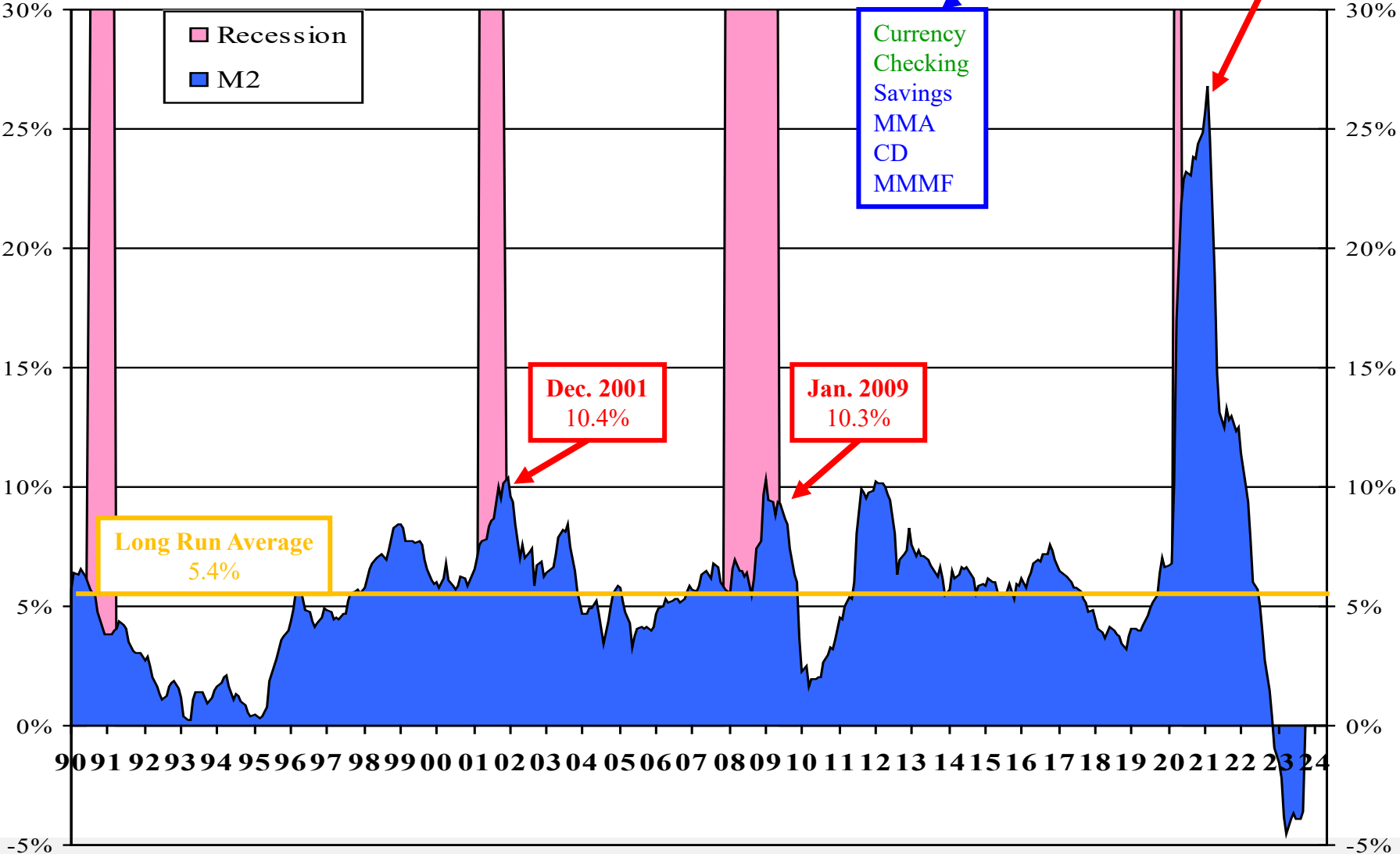
Money Supply Growth, M2



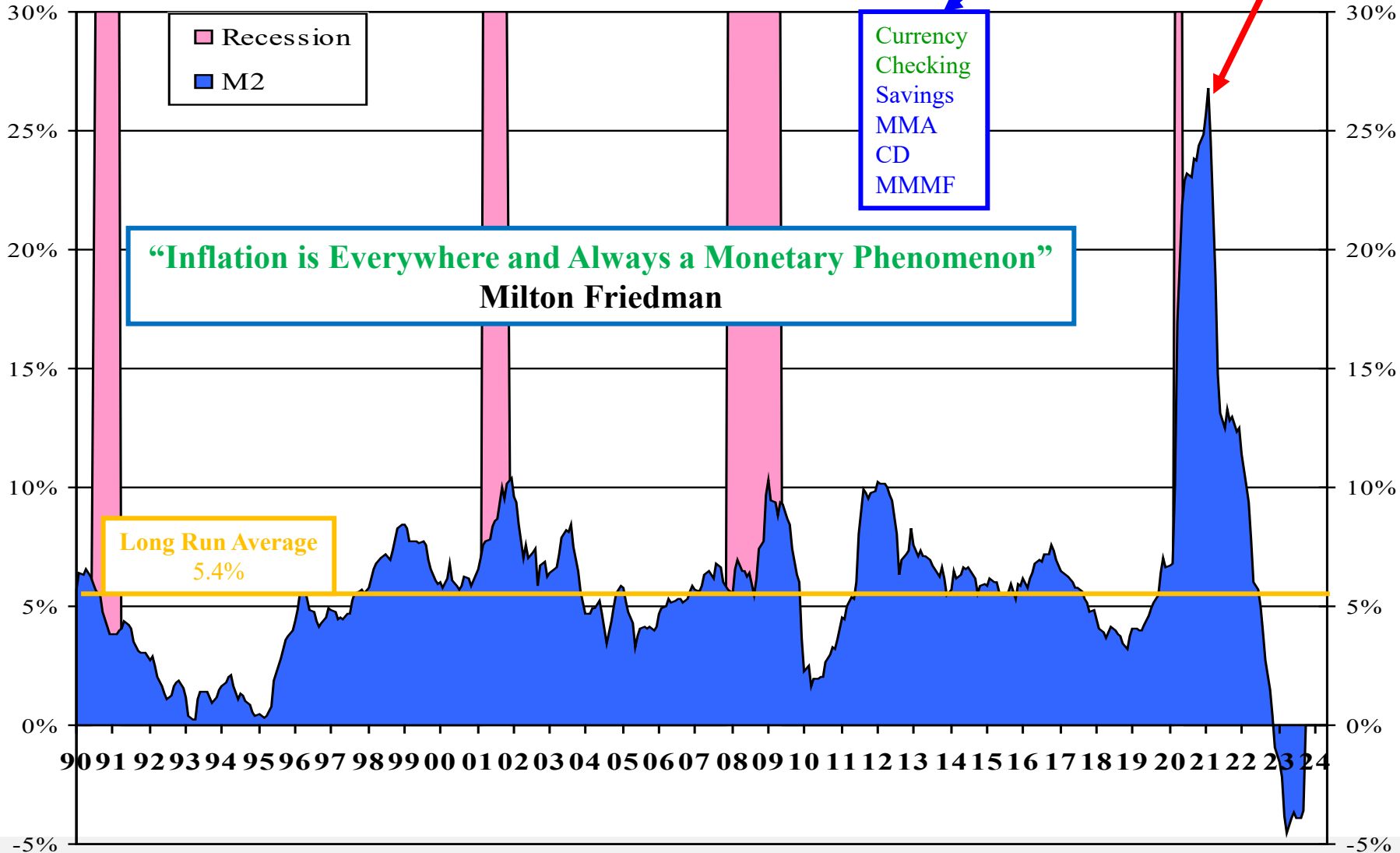
Money Supply Growth, M2



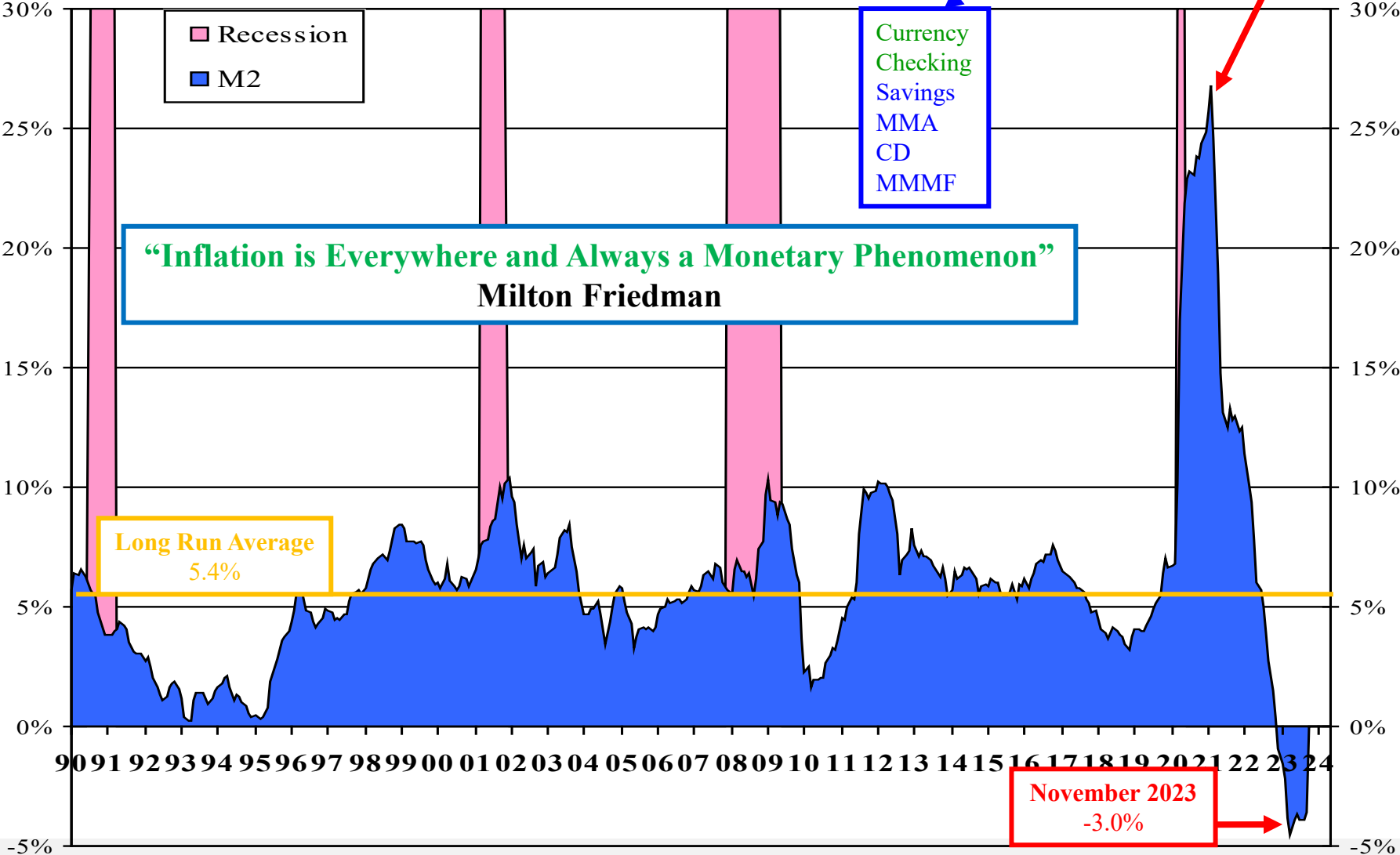
Money Supply Growth, M2



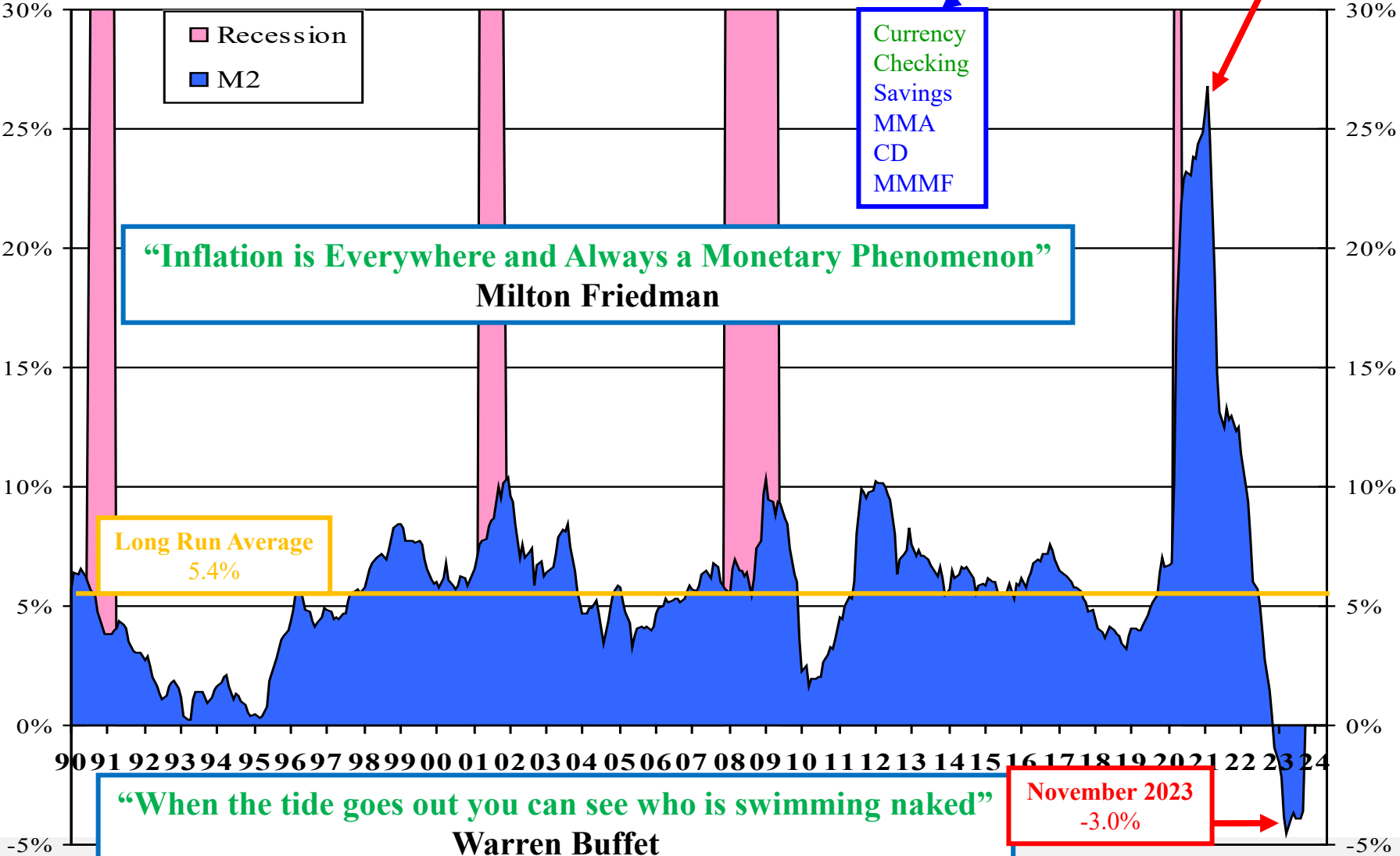
Money Supply Growth, M2



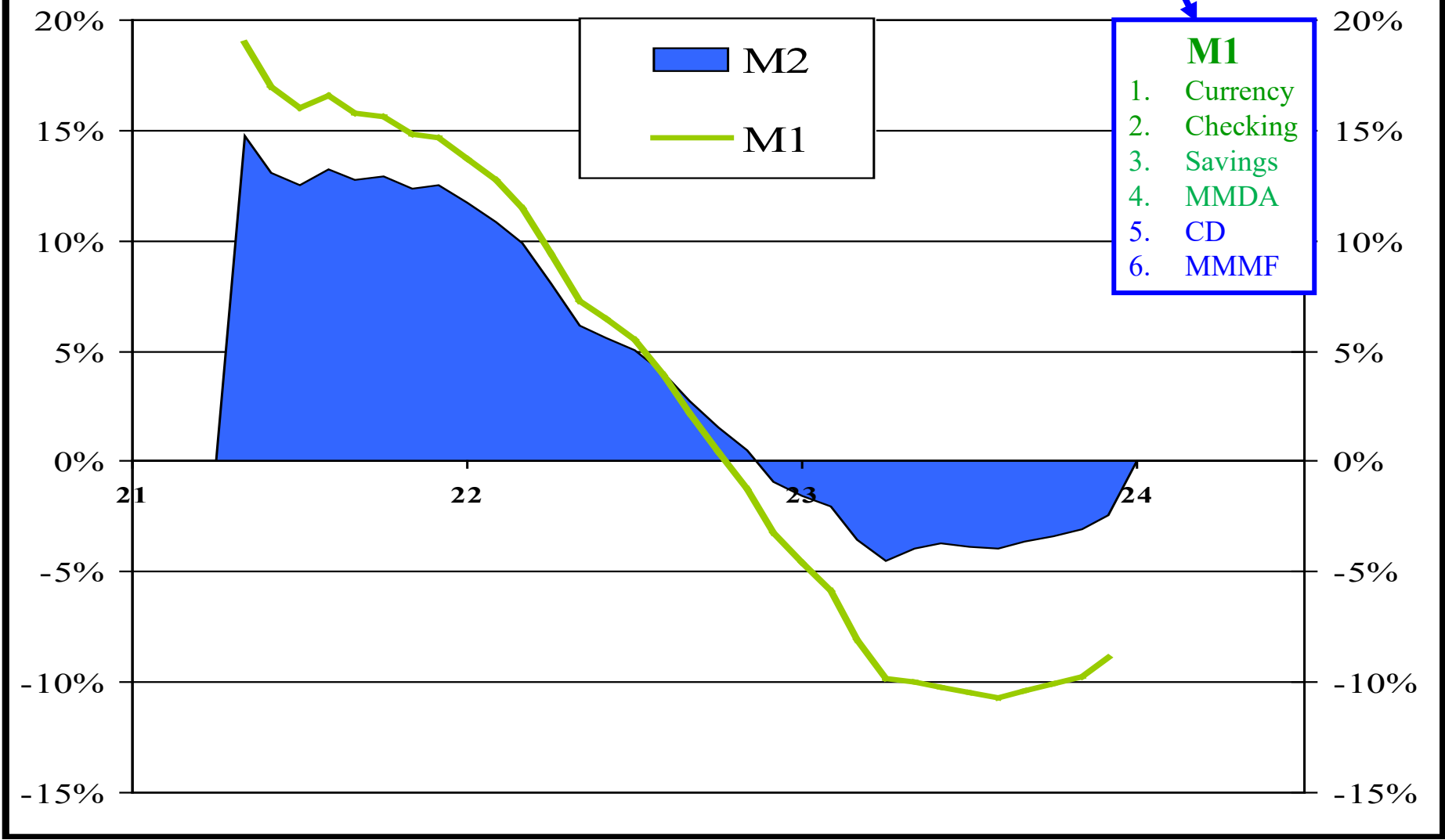
Money Supply Growth, M2



Money Supply Growth, M2

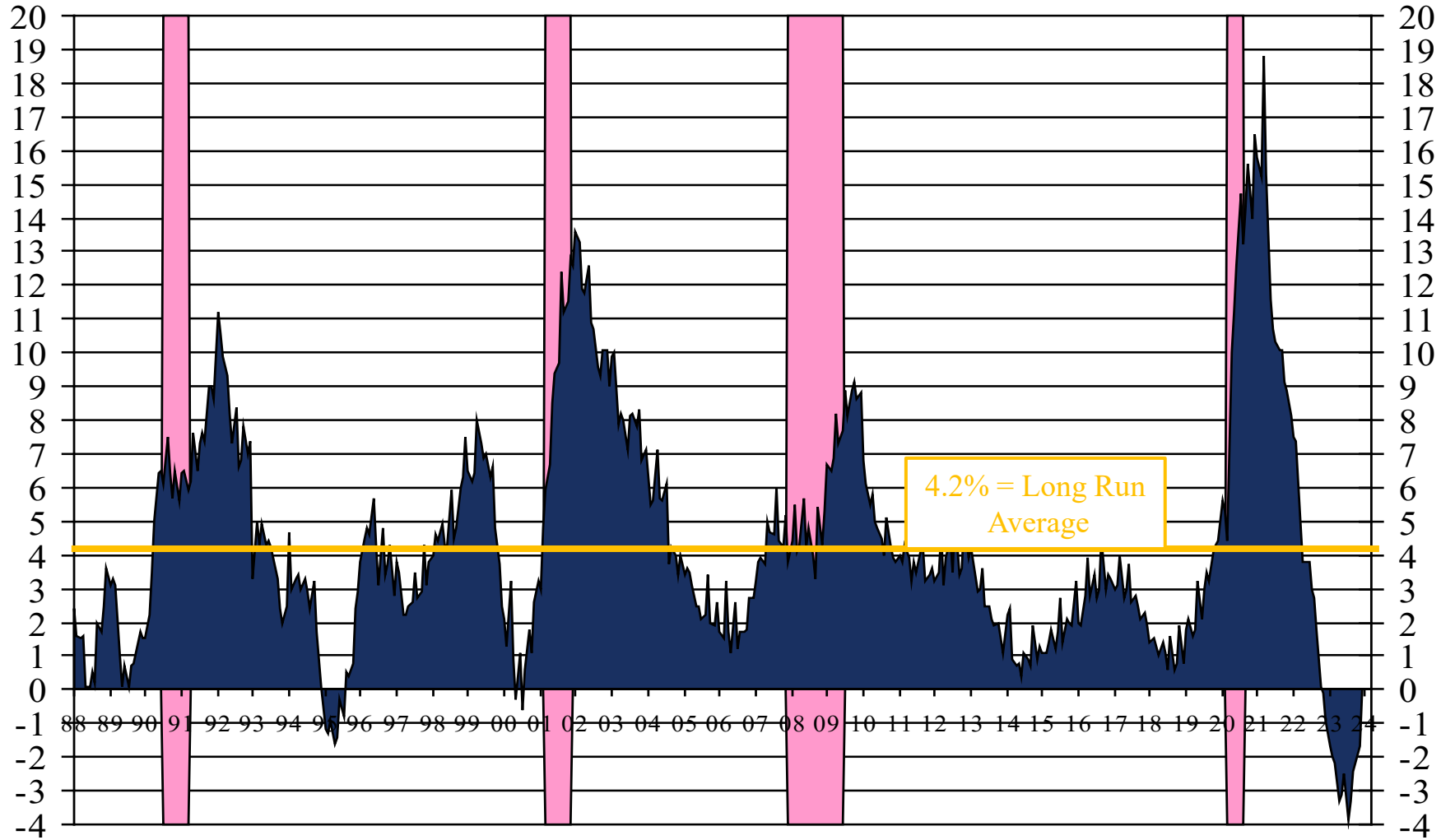


Money Supply Growth, M1&M2 (% change year ago)

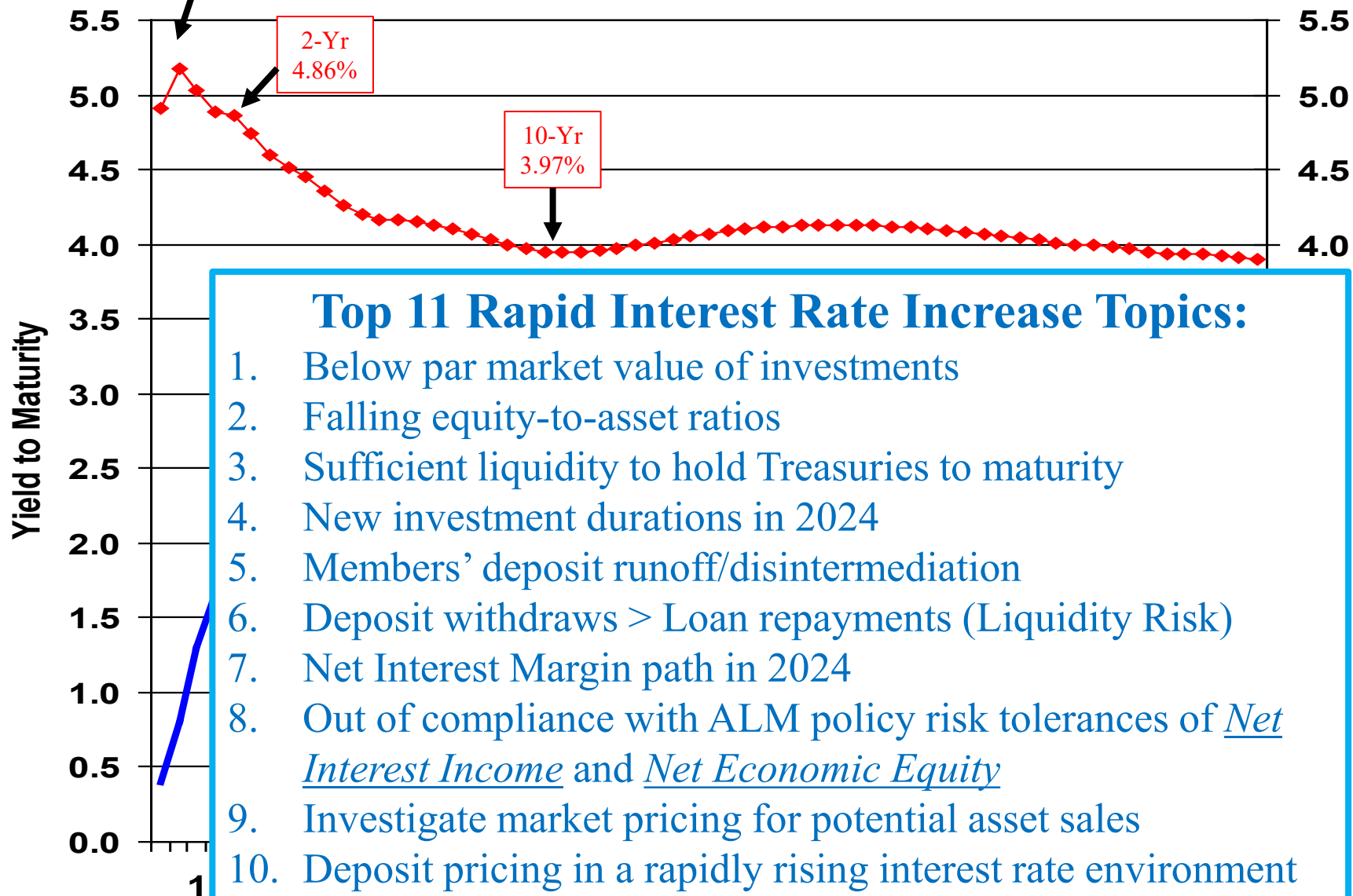


- M1**
1. Currency
 2. Checking
 3. Savings
 4. MMDA
 5. CD
 6. MMMF

Savings per Member Growth Rate



Treasury Yield Curves



Top 11 Rapid Interest Rate Increase Topics:

1. Below par market value of investments
2. Falling equity-to-asset ratios
3. Sufficient liquidity to hold Treasuries to maturity
4. New investment durations in 2024
5. Members' deposit runoff/disintermediation
6. Deposit withdraws > Loan repayments (Liquidity Risk)
7. Net Interest Margin path in 2024
8. Out of compliance with ALM policy risk tolerances of *Net Interest Income* and *Net Economic Equity*
9. Investigate market pricing for potential asset sales
10. Deposit pricing in a rapidly rising interest rate environment
11. Rely on wholesale borrowings to maintain sufficient liquidity

Credit Union Balance Sheet

The image shows a large T-shaped frame, which is a common layout for a balance sheet. It consists of a horizontal line at the top and a vertical line extending downwards from the center of the horizontal line. The space above the horizontal line is intended for the title, and the space below is divided into two columns for assets and liabilities/equity.

Credit Union Balance Sheet

Assets

**Credit Union
Balance Sheet**

Assets

Liabilities + Capital

Credit Union Balance Sheet

Assets

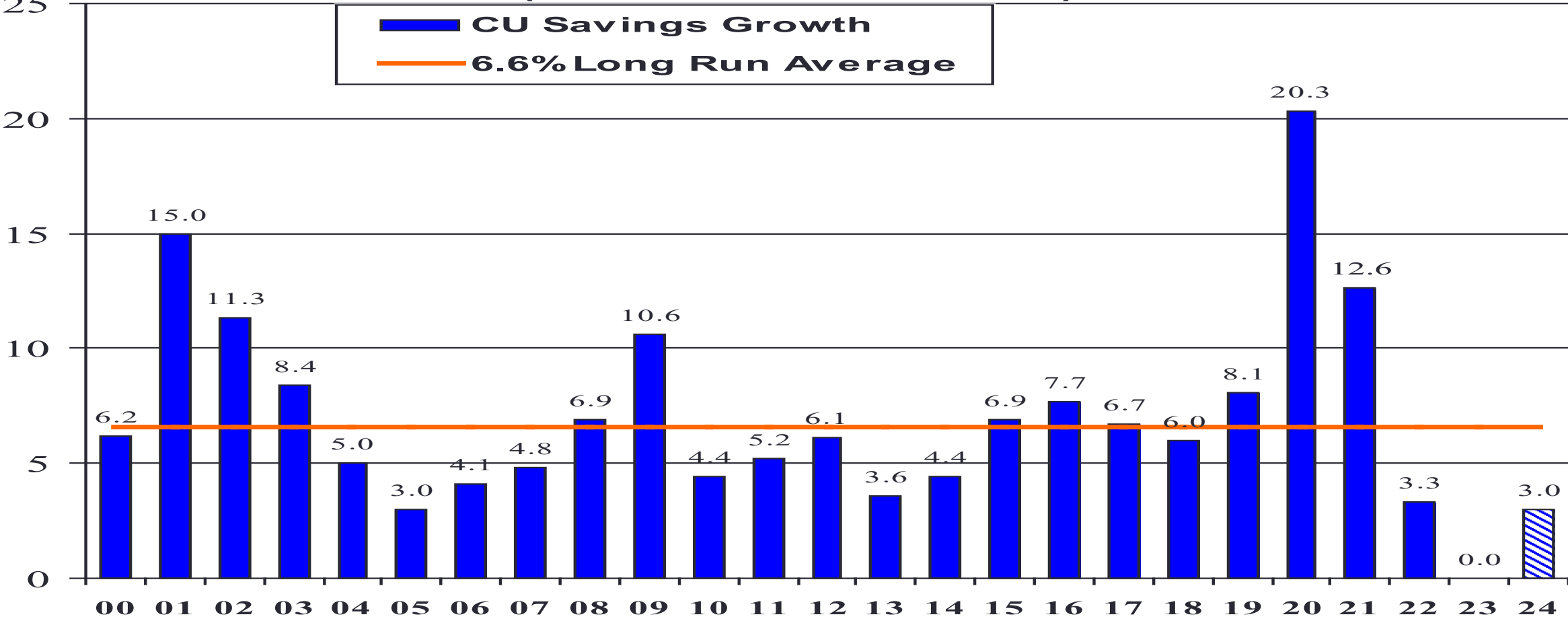
Liabilities + Capital

Deposits

- Checking Accounts
- Savings
- Money Market Deposits
- Certificates of Deposits

Slowing Credit Union Savings Growth

Credit Union Savings Growth (Annual Percent Growth)



Credit Union Balance Sheet

Assets

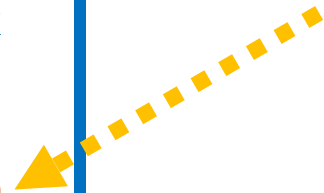
Liabilities + Capital

Deposits

- Checking Accounts
- Savings
- Money Market Deposits
- Certificates of Deposits

Borrowings

- Federal Home Loan Bank
- Corporate Line of Credit
- Fed Funds Purchased
- Bank Term Funding Program



Credit Union Balance Sheet

Assets

Liabilities + Capital

Deposits

- Checking Accounts
- Savings
- Money Market Deposits
- Certificates of Deposits

Borrowings

- Federal Home Loan Bank
- Corporate Line of Credit
- Fed Funds Purchased
- Bank Term Funding Program

Equity (Net Capital)

1. Undivided Earnings
2. Regular Reserves
3. Gains (losses) on Available For Sale (AFS) Securities

Credit Union Balance Sheet

Assets

Liabilities + Capital

Cash (Reserves)

Deposits

- Checking Accounts
- Savings
- Money Market Deposits
- Certificates of Deposits

Borrowings

- Federal Home Loan Bank
- Corporate Line of Credit
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Credit Union Balance Sheet

Assets

Liabilities + Capital

Cash (Reserves)

Fixed Assets

- Land
- Building
- Equipment

Deposits

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- Certificates of Deposits

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Credit Union Balance Sheet

Assets

Liabilities + Capital

Cash (Reserves)

Fixed Assets

- Land
- Building
- Equipment

Investments

- < 1 year maturity
- 1–3-year maturity
- > 3-year maturity

Deposits

- Checking Accounts
- Savings
- Money Market Deposits
- Certificates of Deposits

Borrowings

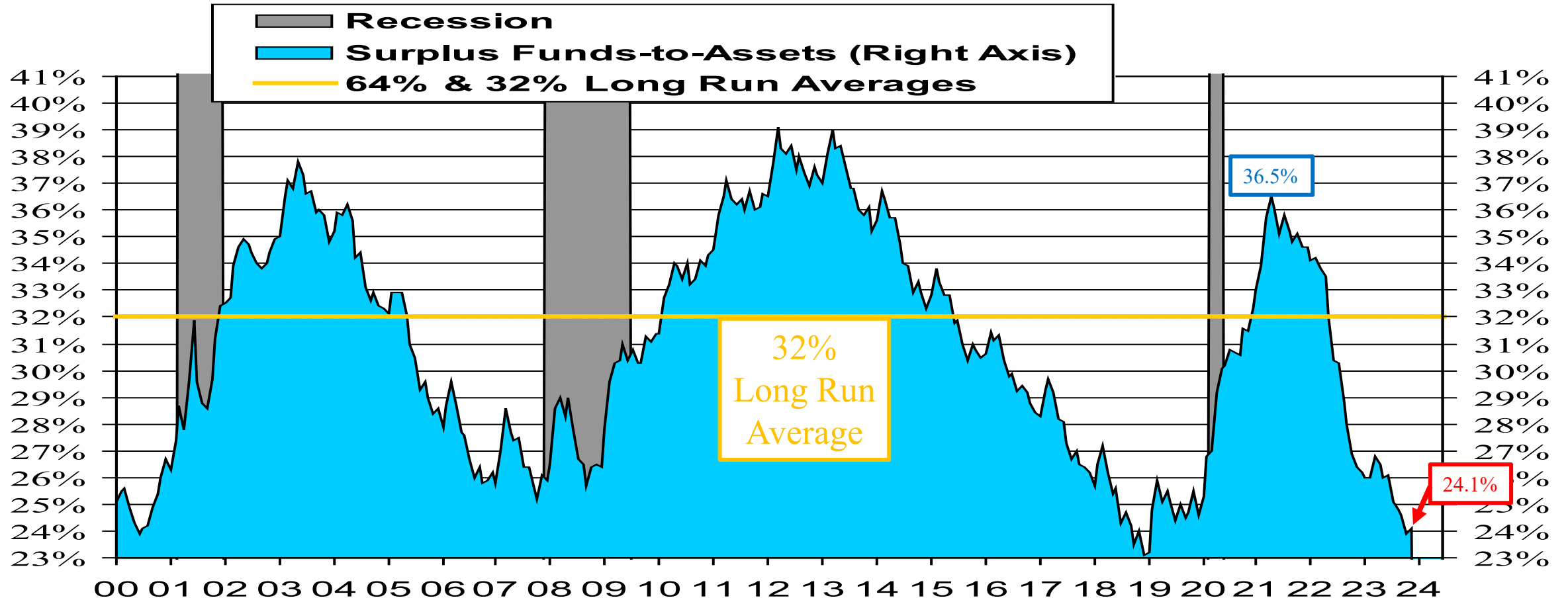
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- Corporate Line of Credit
- Fed Funds Purchased
- Bank Term Funding Program

Equity (Net Capital)

1. Undivided Earnings
2. Regular Reserves
3. Gains (losses) on Available For Sale (AFS) Securities

Investments Are Falling and Yields Are Rising

CU Surplus Funds (Cash + Investments)



Credit Union Balance Sheet

Assets

Liabilities + Capital

Cash (Reserves)

Fixed Assets

- Land
- Building
- Equipment

Investments

- < 1 year maturity
- 1–3-year maturity
- > 3-year maturity

Loans

- Commercial
- Auto
- Home
- Credit Card

Deposits

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Borrowings

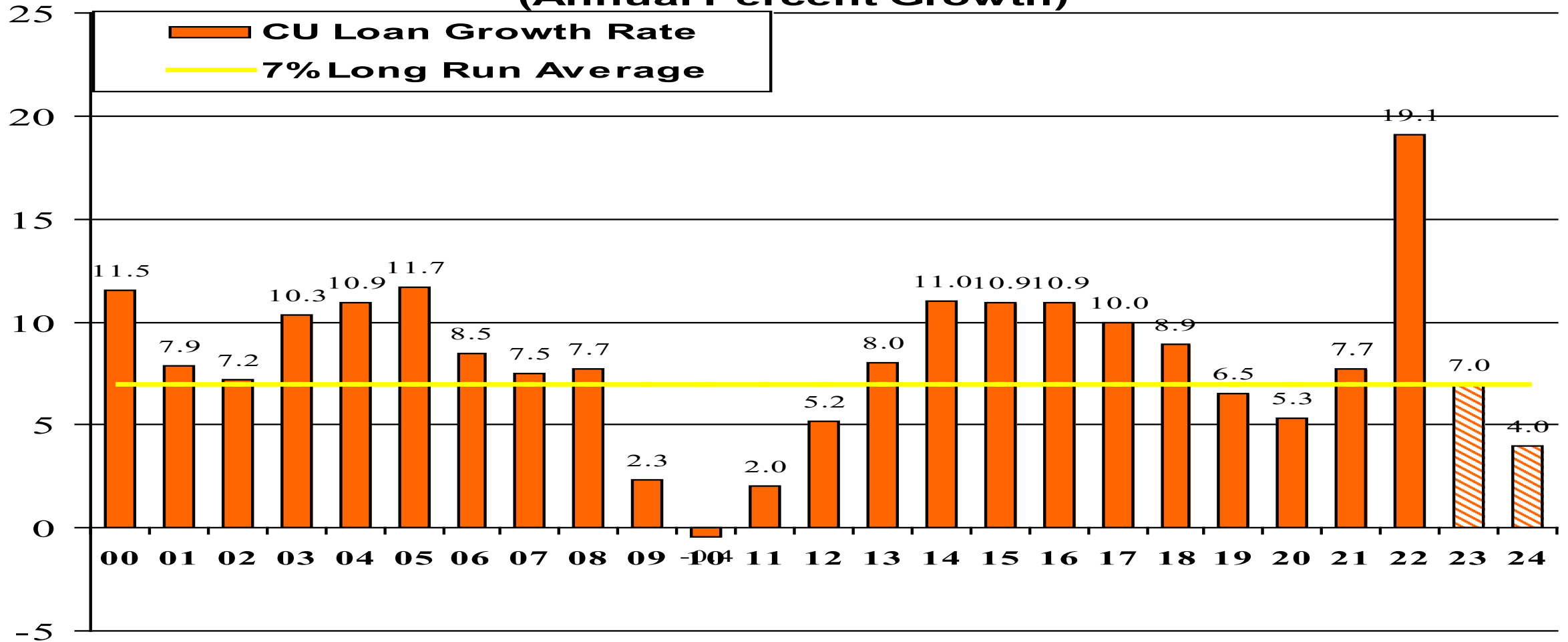
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Equity (Net Capital)

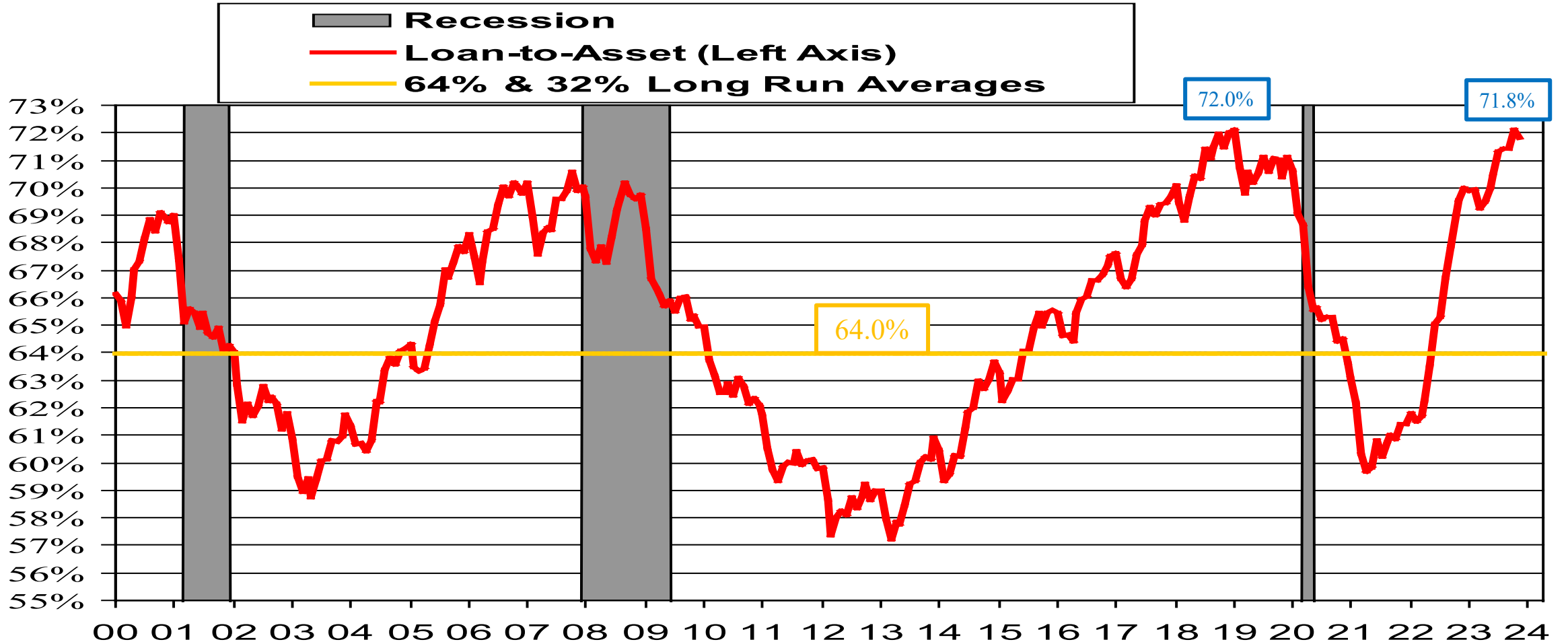
1. Undivided Earnings
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Slowing Credit Union Loan Growth

Credit Union Loan Growth (Annual Percent Growth)



CU Loan to Asset Ratio



Credit Union Balance Sheet

Assets

Liabilities + Capital

Cash (Reserves)

Fixed Assets

- Land
- Building
- Equipment

Investments

- < 1 year maturity
- 1–3-year maturity
- > 3-year maturity

Loans

- Commercial
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- Credit Card

Deposits

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Liabilities + Capital

Cash (Reserves)

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Investments

- < 1 year maturity
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- > 3-year maturity

Loans

- Commercial
- Auto
- Home
- Credit Card

Allowance for Loan Loss

Deposits

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“Non progredi est regredi”

Credit Union Balance Sheet

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“Non progredi est regredi”

To not go forward is to go backward

Credit Union Balance Sheet

Assets

Liabilities + Capital

Cash (Reserves)

Fixed Assets

- Land
- Building
- Equipment

Investments

- < 1 year maturity
- 1–3-year maturity
- > 3-year maturity

Loans

- Commercial
- Auto
- Home
- Credit Card

Allowance for Loan Loss

Deposits

- Checking Accounts
- Savings
- Money Market Deposits
- Certificates of Deposits

Borrowings

- Federal Home Loan Bank
- Corporate Line of Credit
- Fed Funds Purchased
- Bank Term Funding Program

Equity (Net Capital)

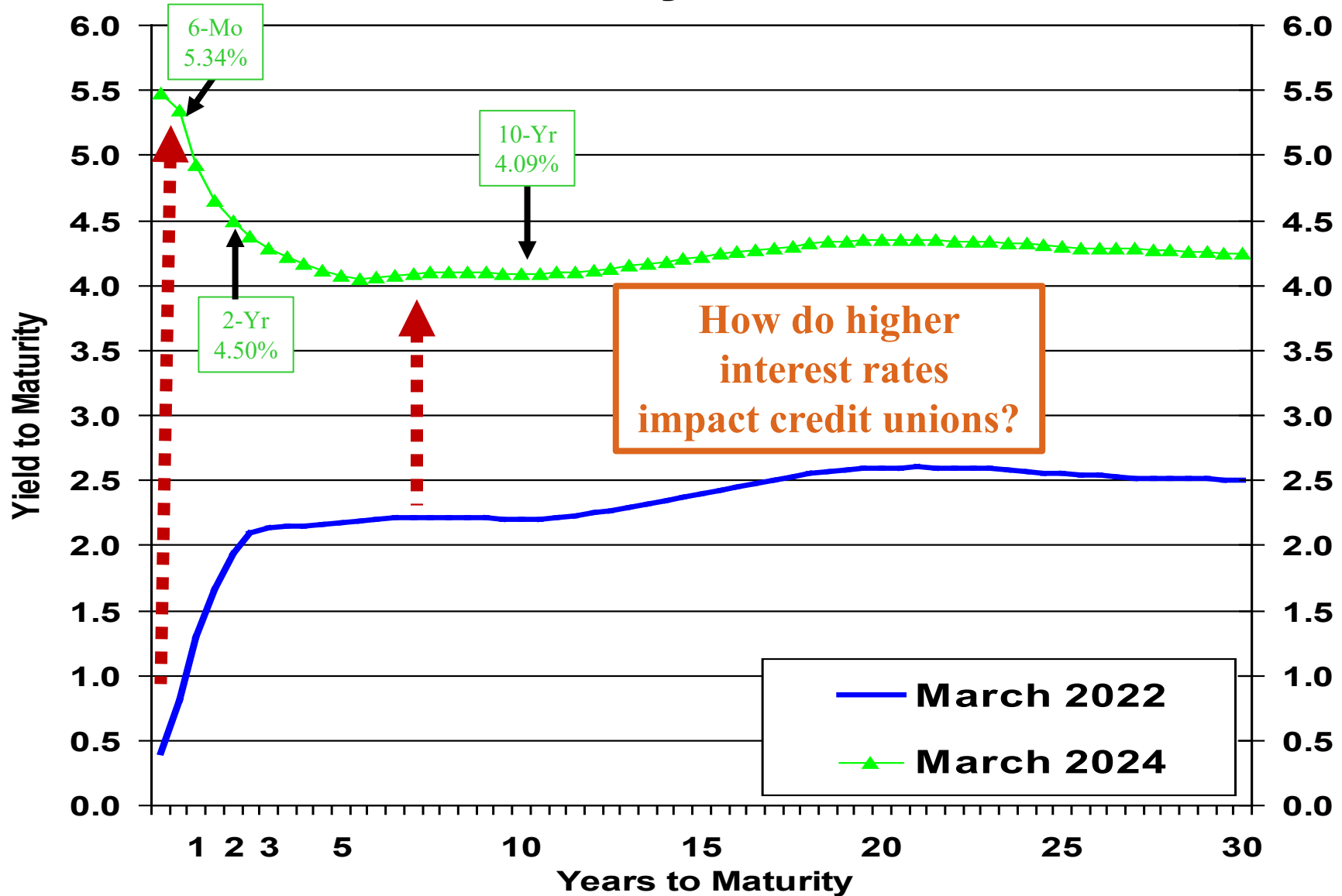
1. Undivided Earnings
2. Regular Reserves
3. Gains (losses) on Available For Sale (AFS) Securities

“Non progredi est regredi”

To not go forward is to go backward

If you're not growing, you're dying

Treasury Yield Curves



Credit Union Balance Sheet

Assets

Liabilities + Capital

Cash (Reserves)

Fixed Assets

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How do higher interest rates impact credit unions?

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↑ interest rates => ↓ Bond Prices

1. Below par market value of investments

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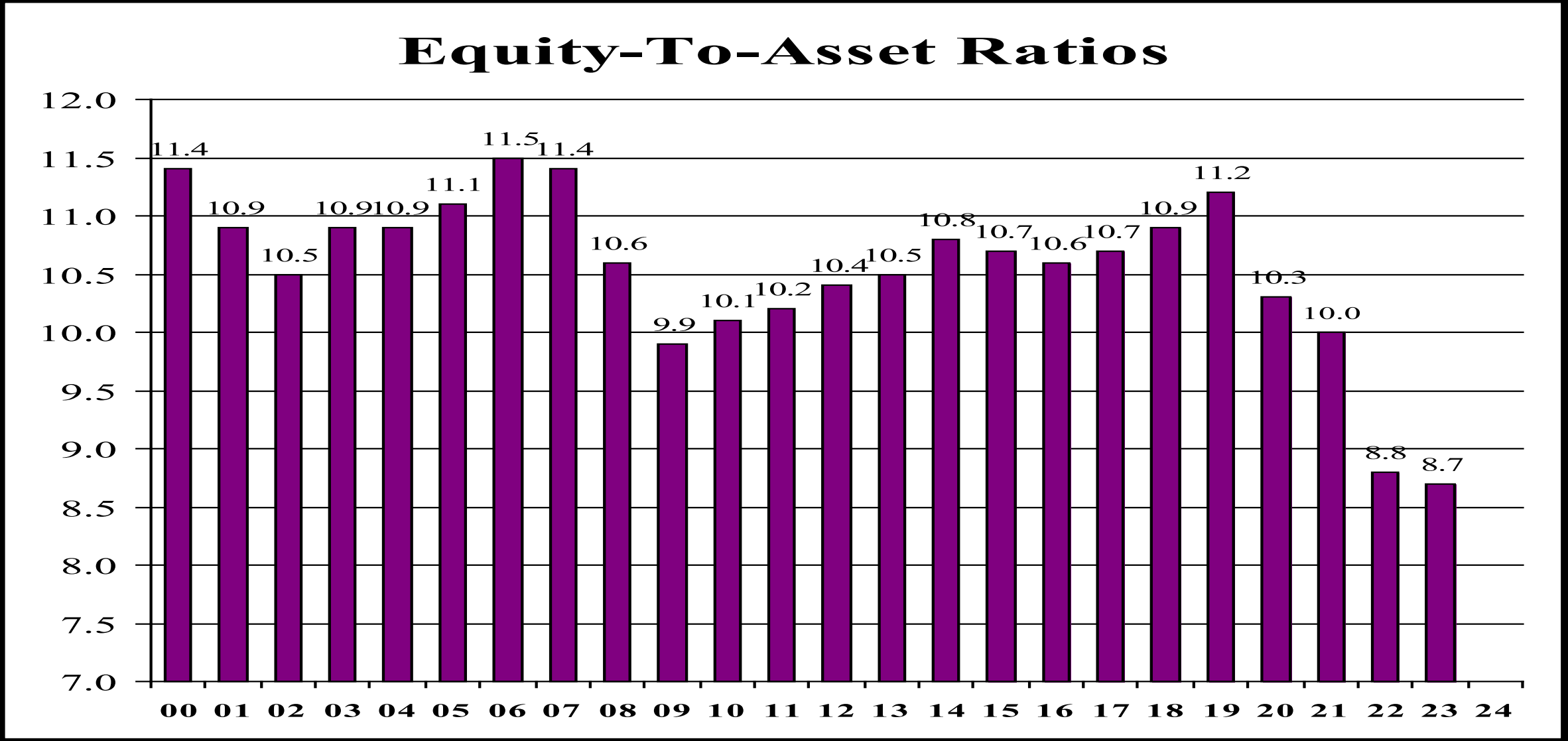
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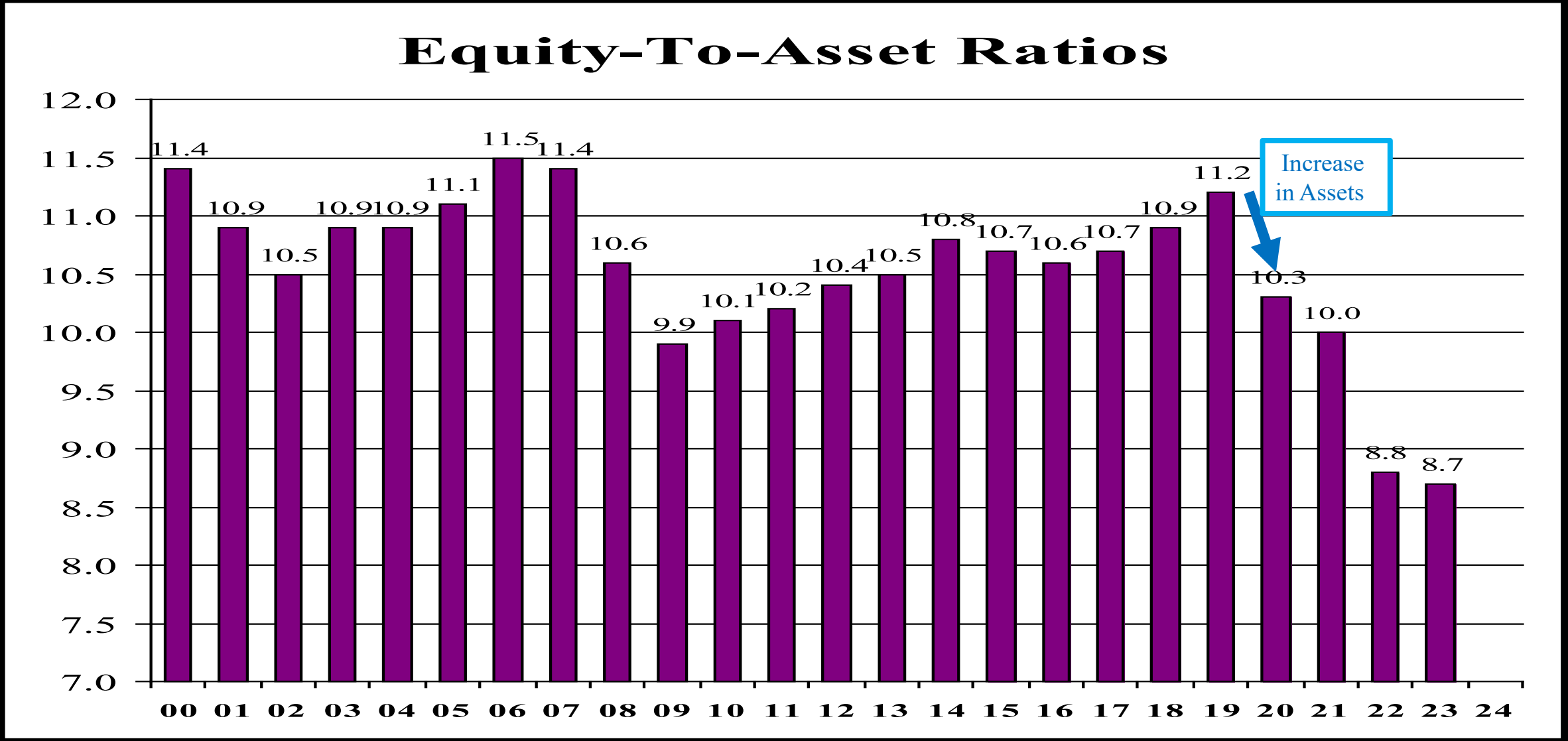
1. Below par market value of investments

2. Falling equity-to-asset ratios

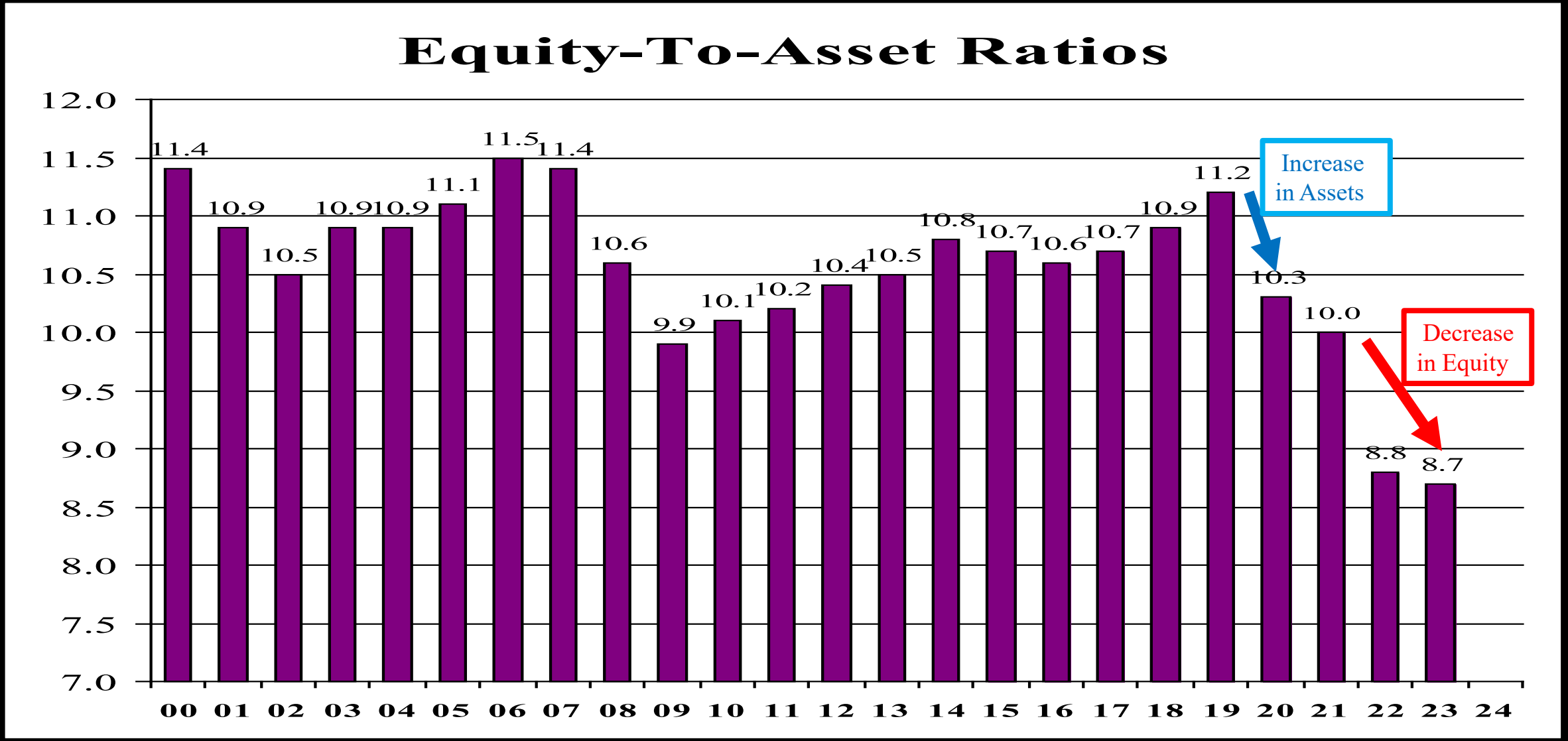
Falling Equity Ratios



Falling Equity Ratios



Falling Equity Ratios



Credit Union Balance Sheet

Assets

Liabilities + Capital

3. Sufficient liquidity to hold Treasuries to maturity

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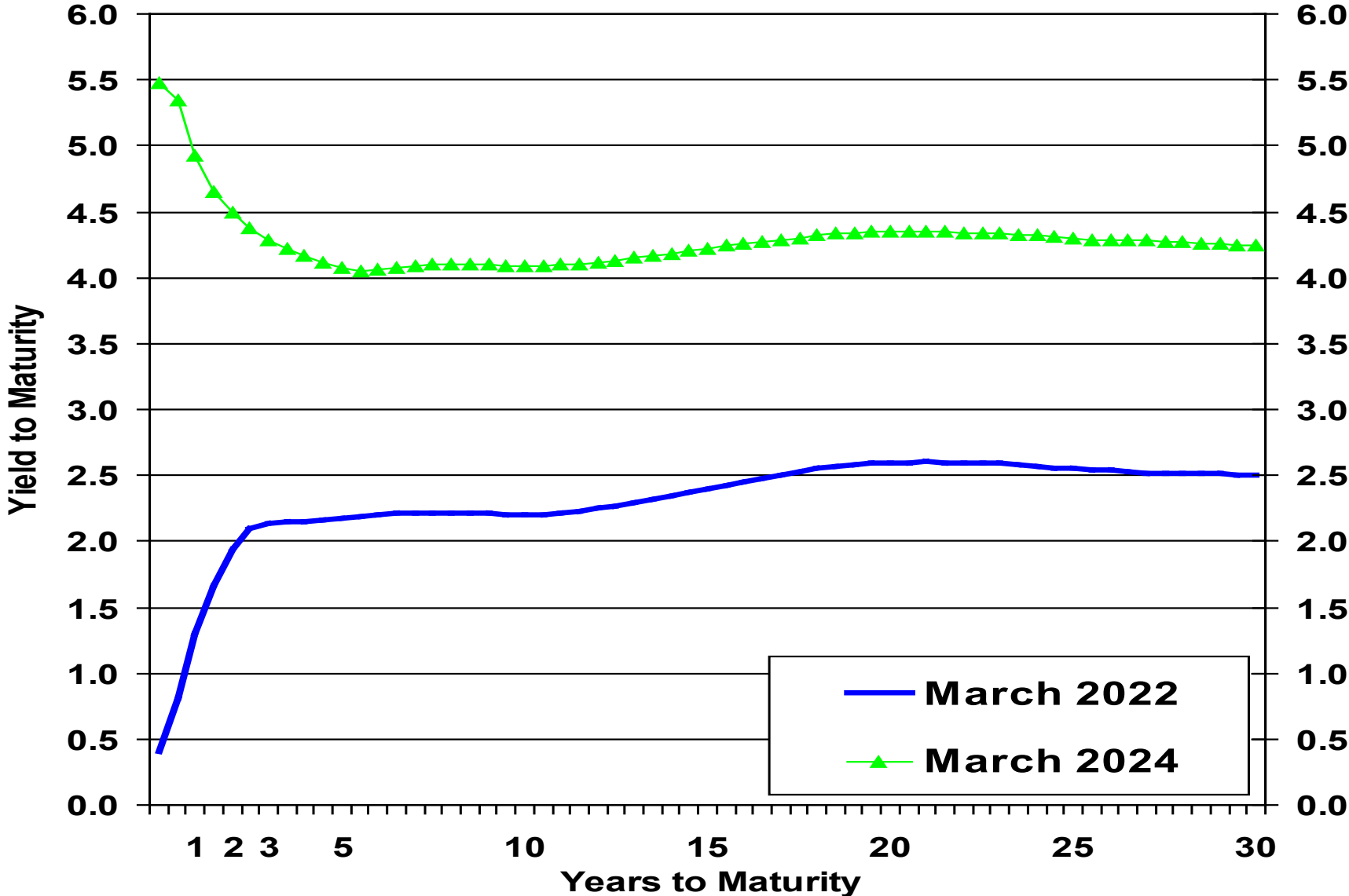
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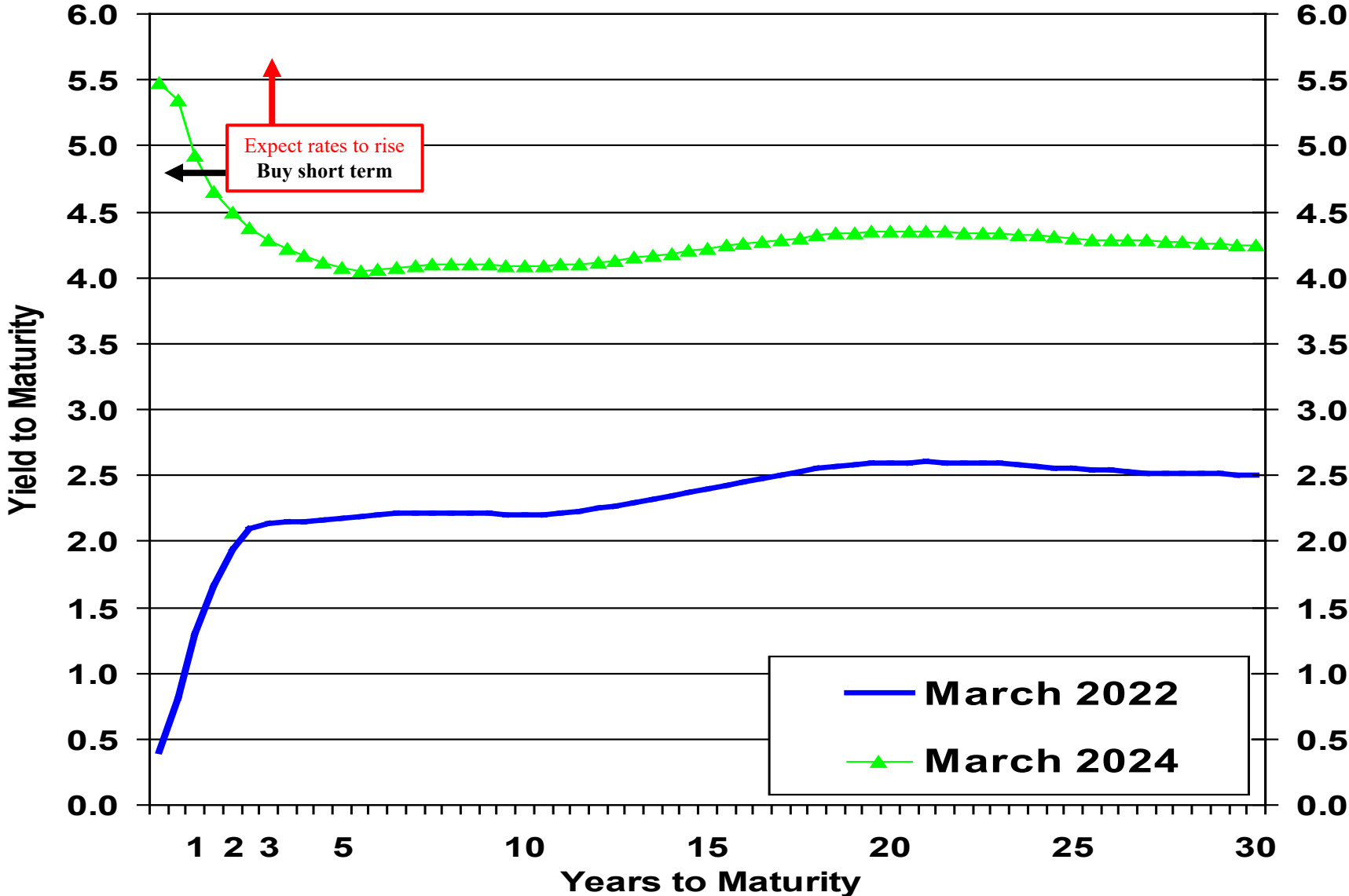
4. New investment maturities in 2024

2. Falling equity-to-asset ratios

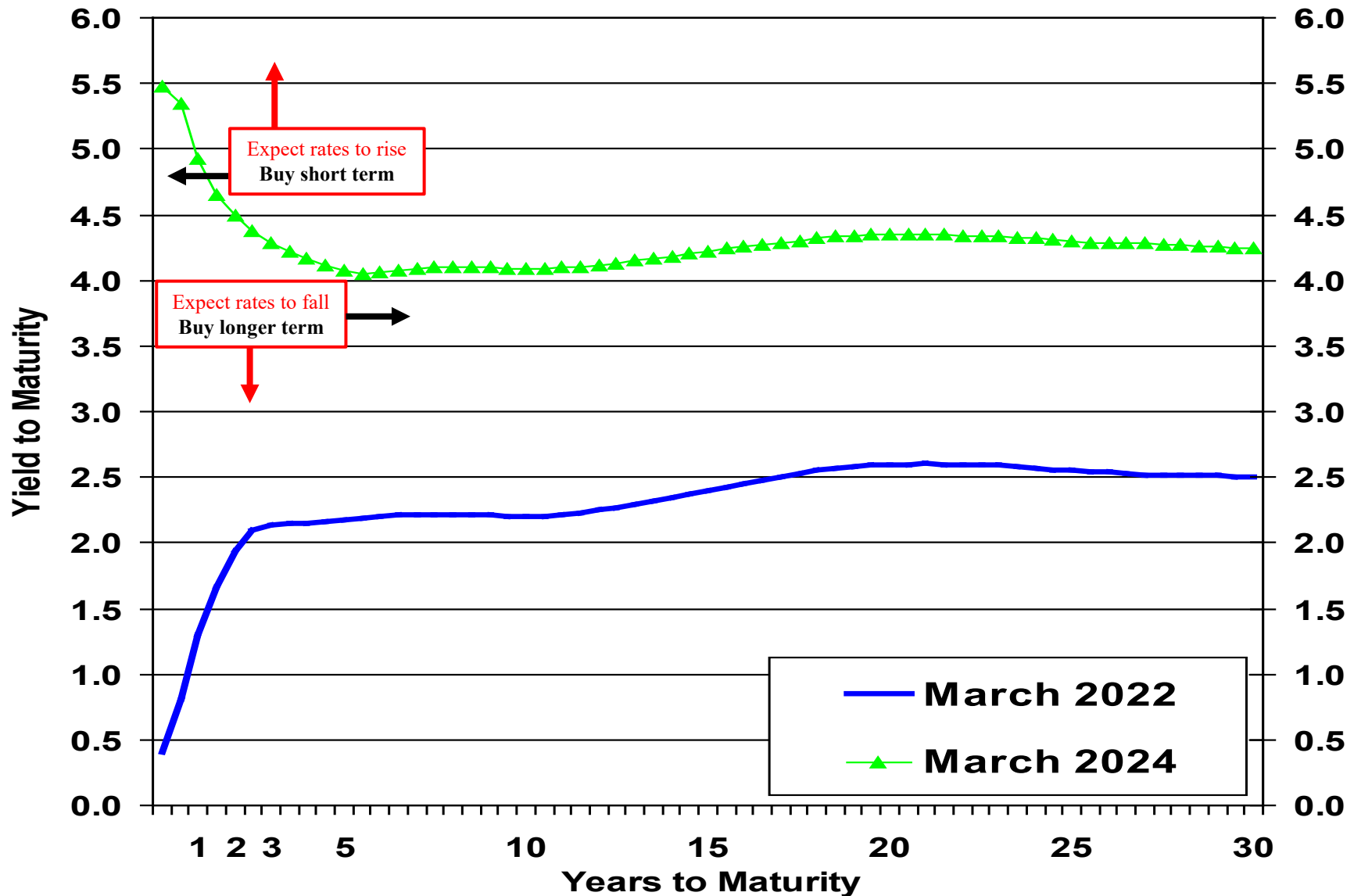
Treasury Yield Curves



Treasury Yield Curves



Treasury Yield Curves



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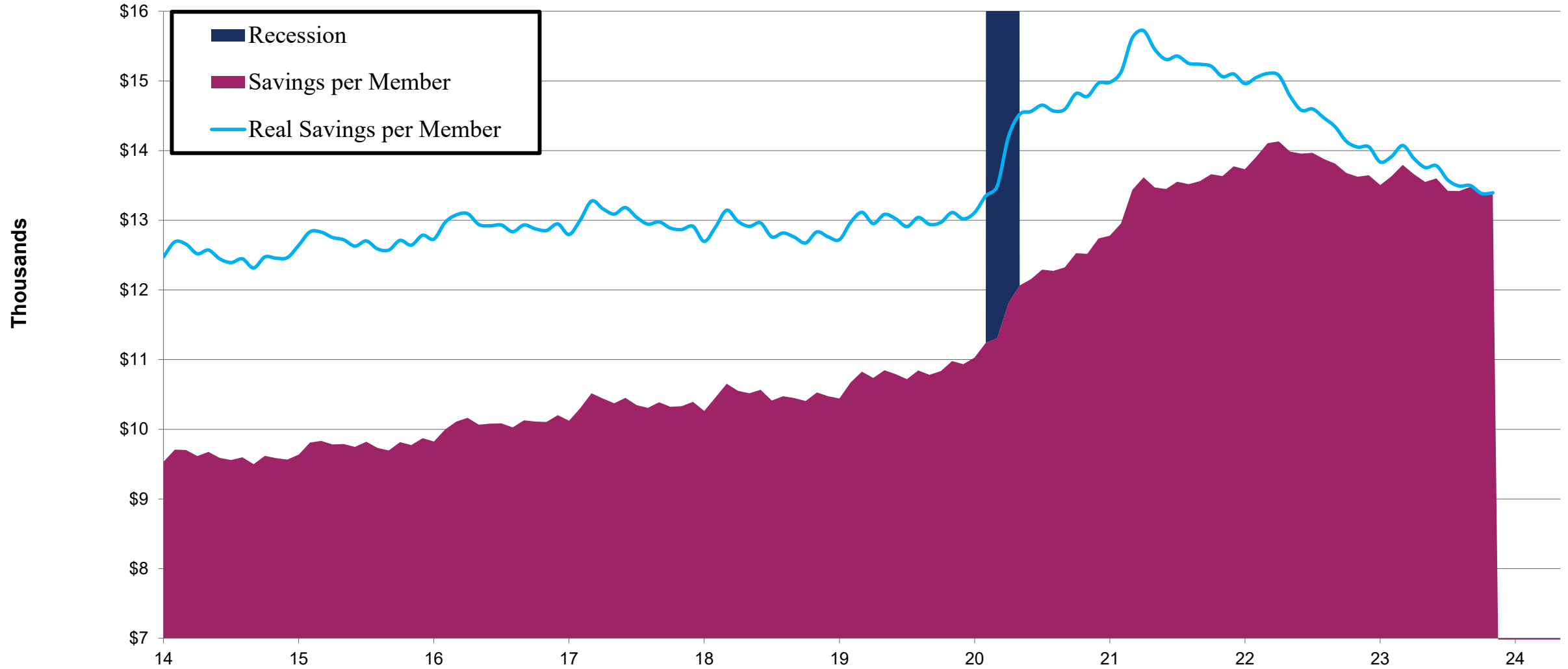
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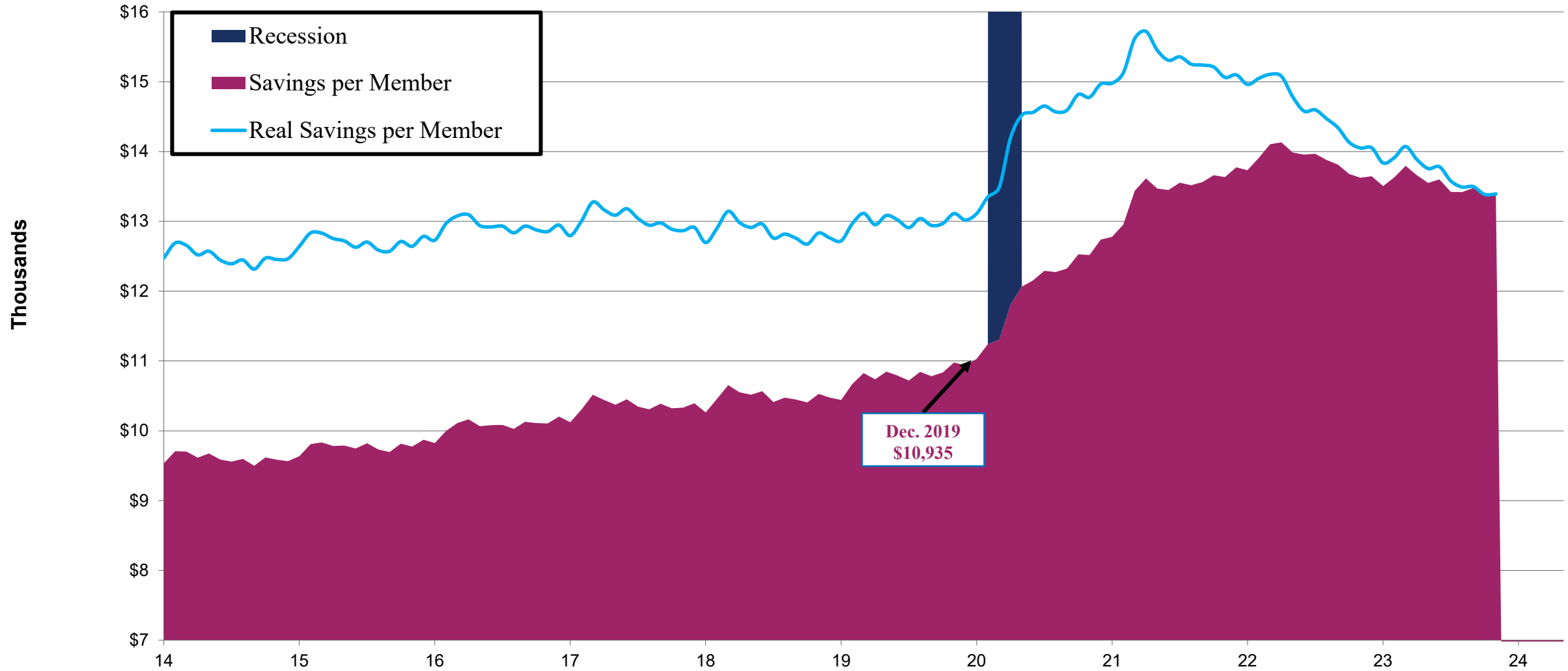
5. Members' deposit runoff/disintermediation

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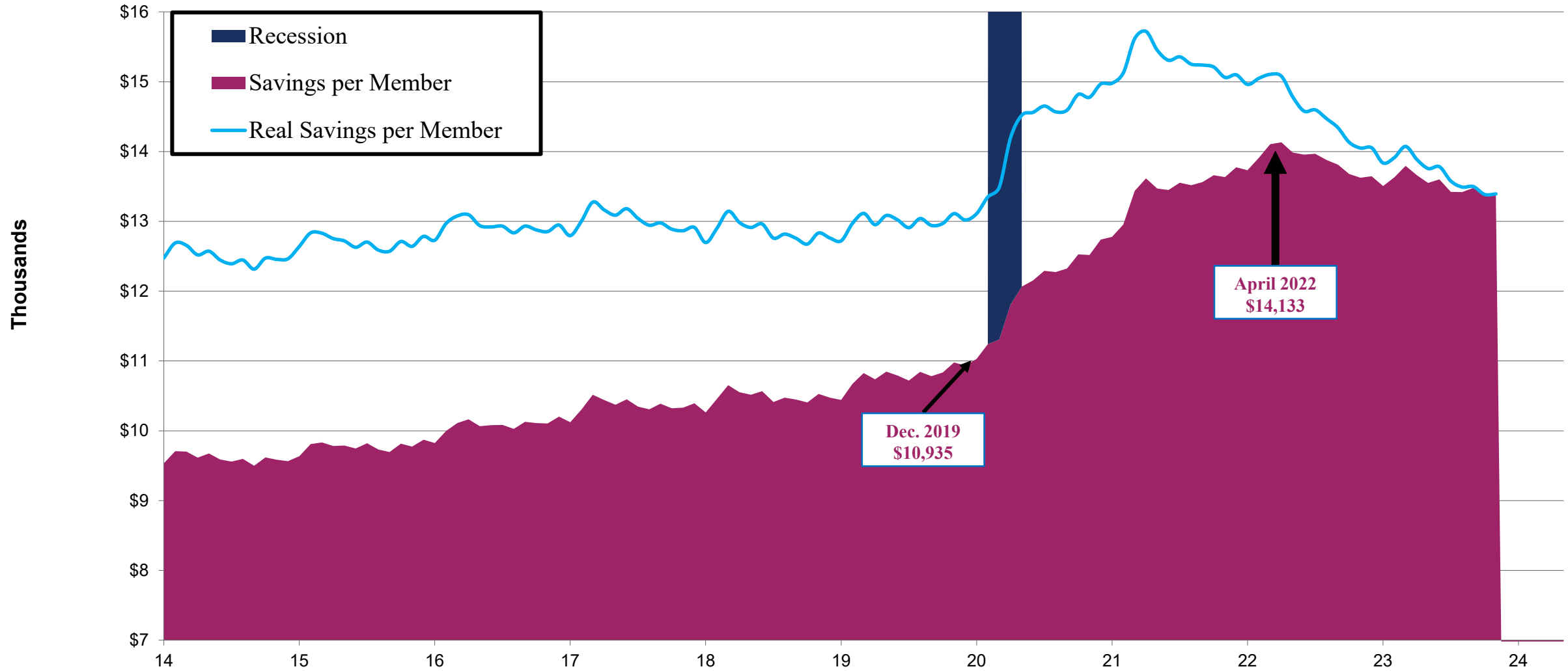
Credit Union Savings per Member



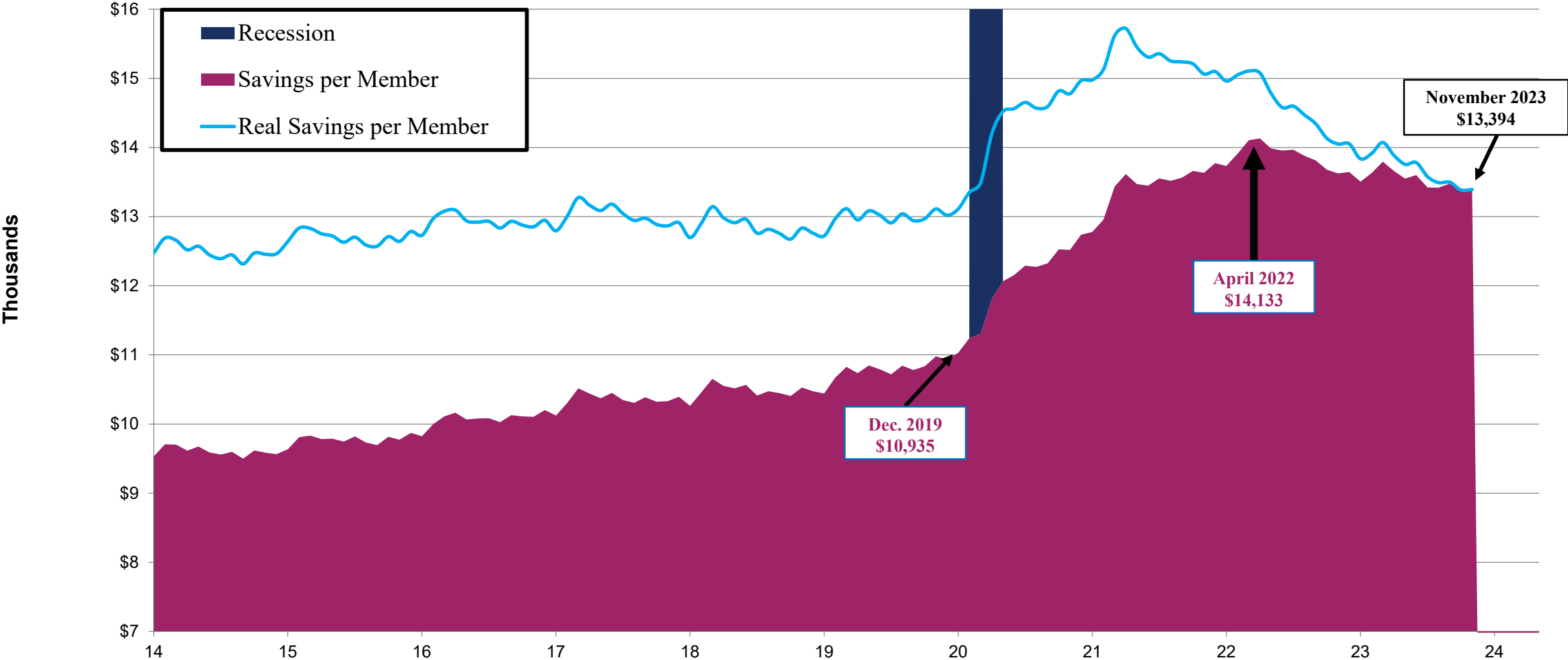
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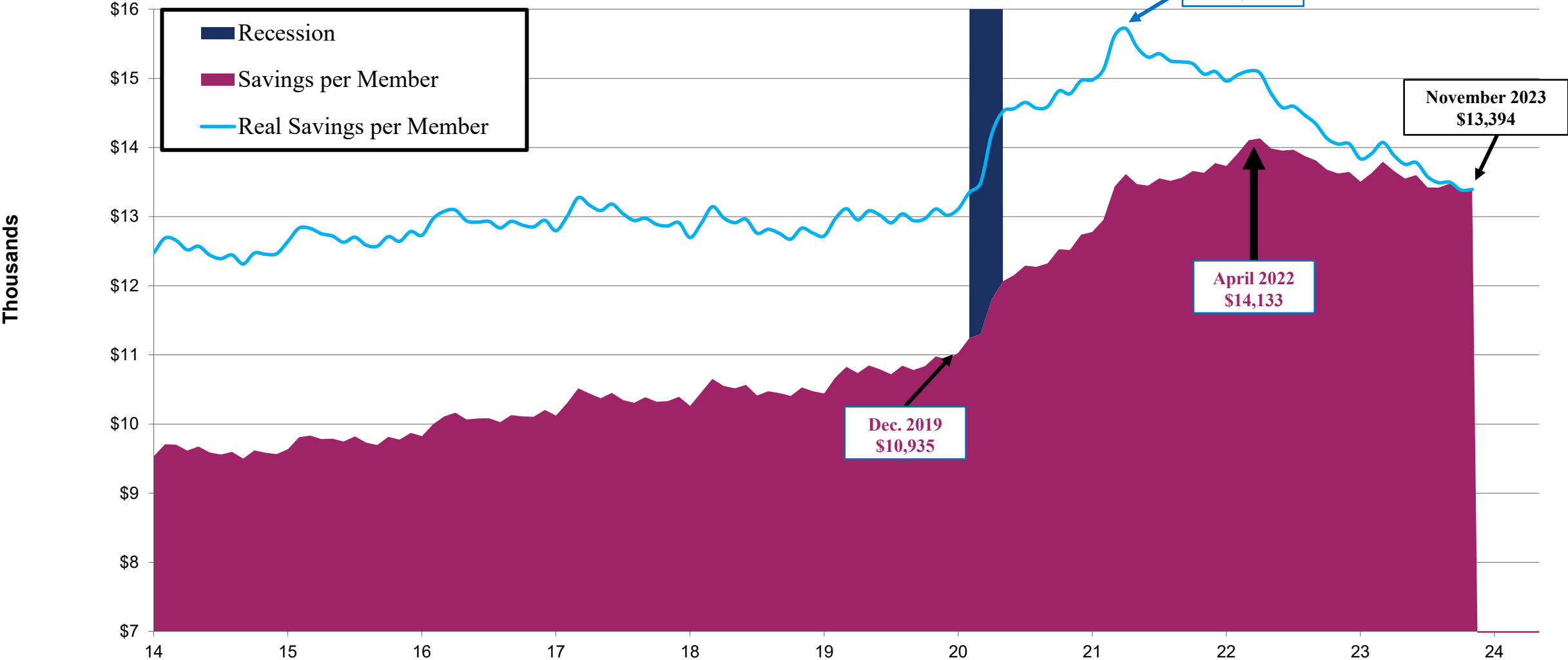
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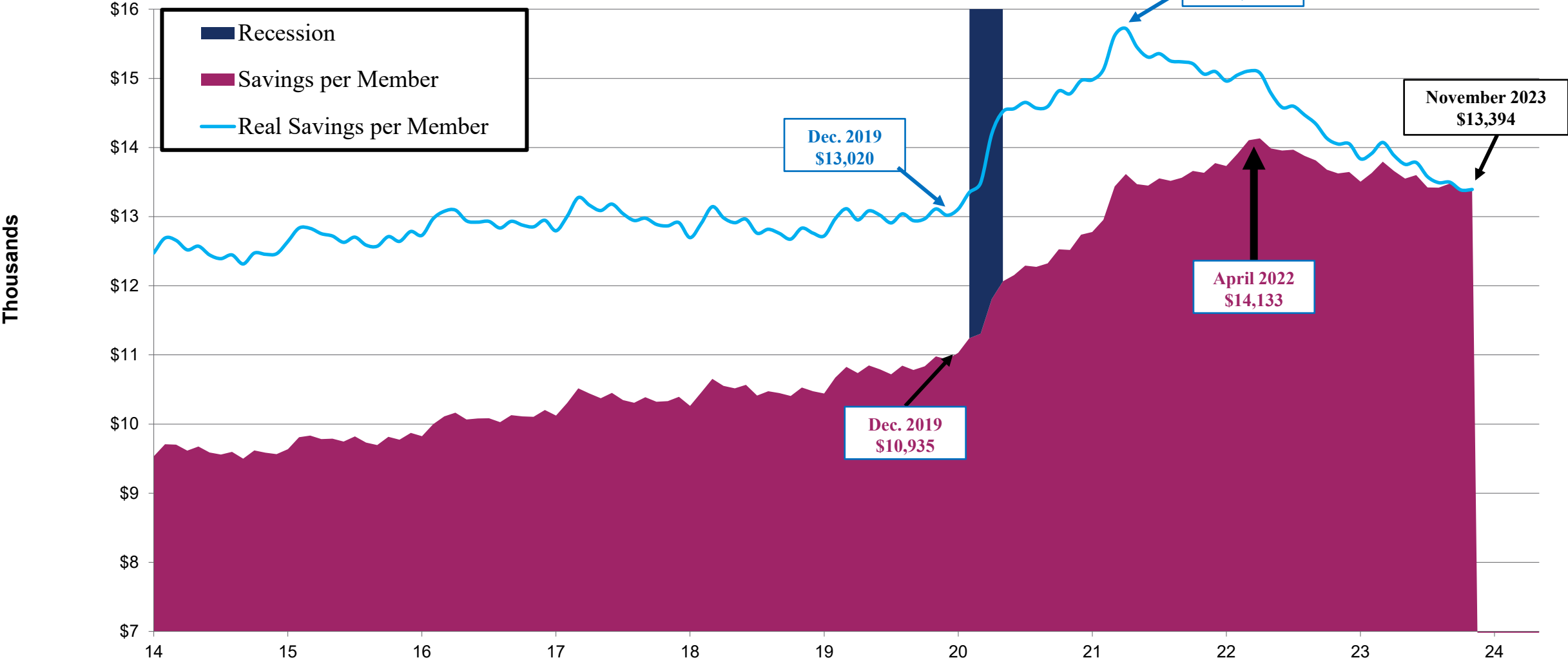
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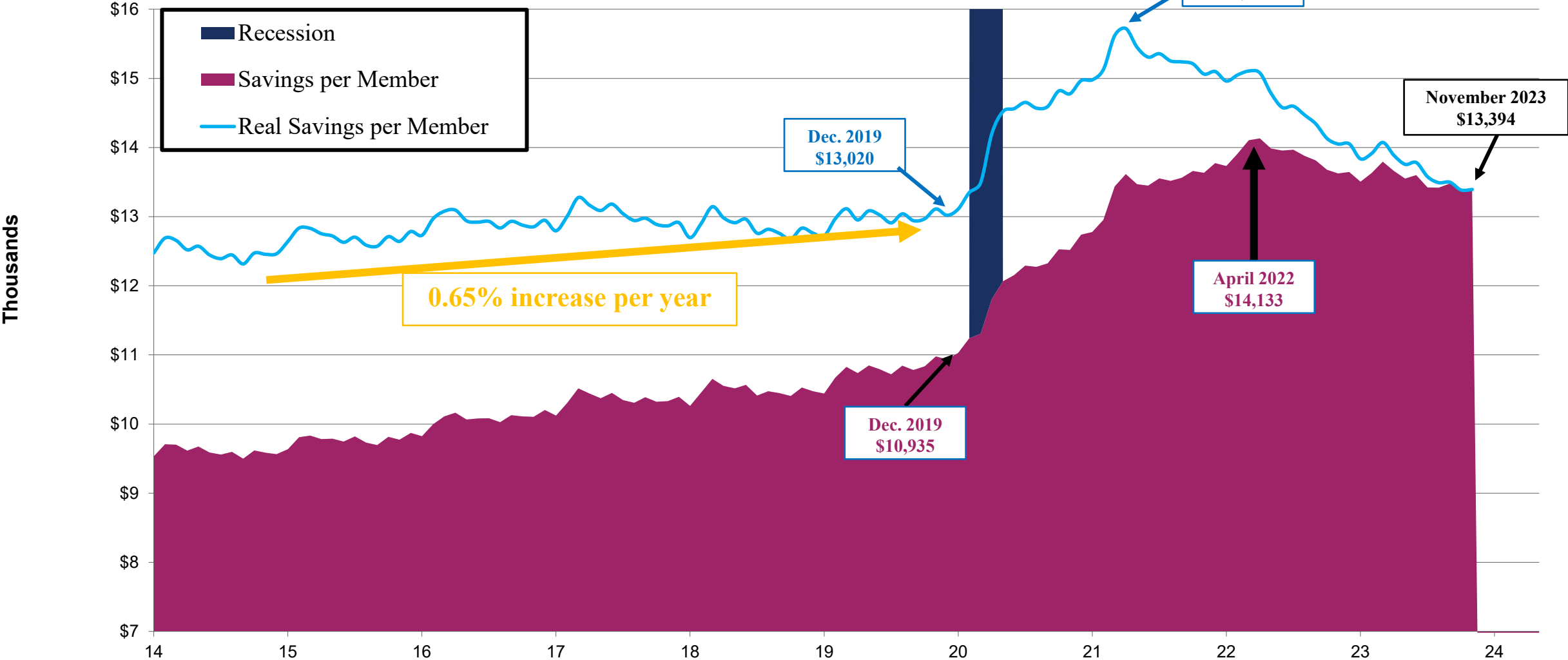
Credit Union Savings per Member



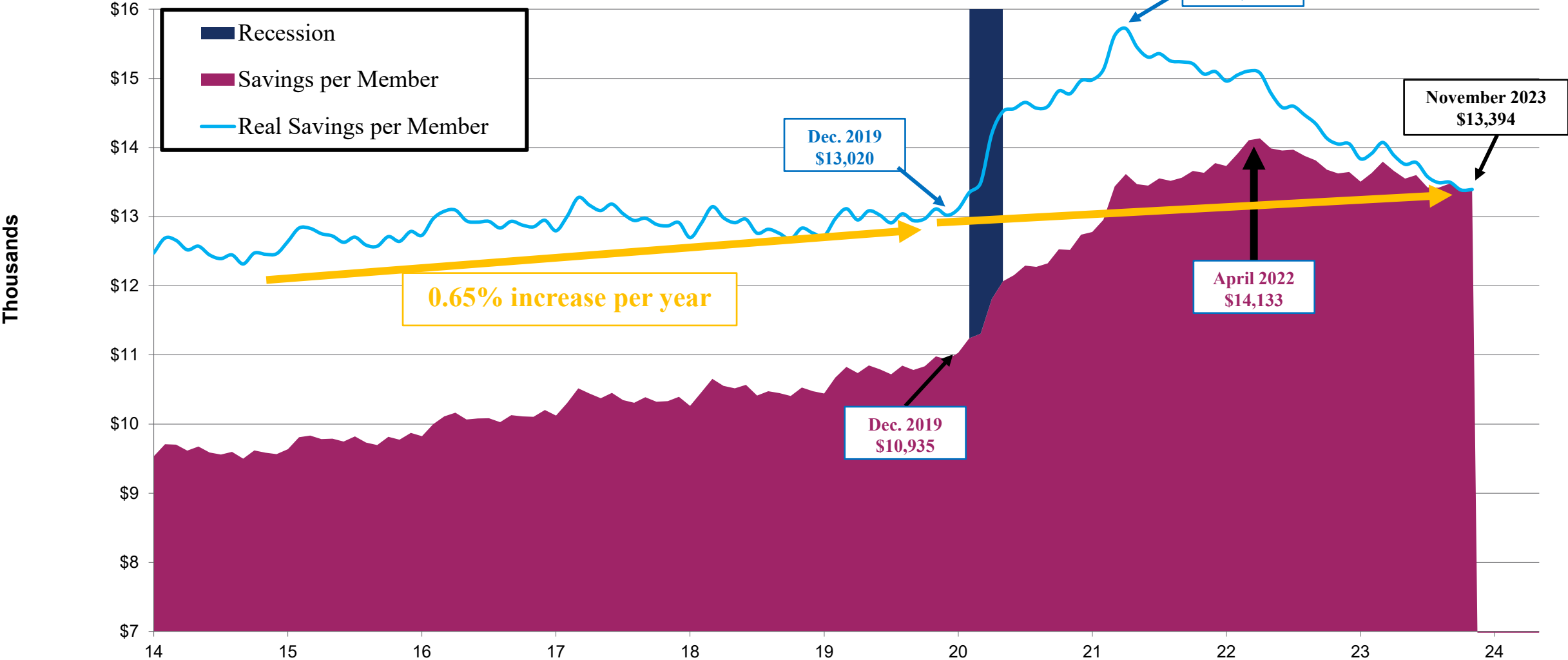
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Credit Union Savings per Member



Credit Union Savings per Member



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Time (the 4th dimension)

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Time
(the 4th dimension)
Short Run vs Long Run

2. Falling equity-to-asset ratios

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Time
(the 4th dimension)
Short Run vs Long Run

How long it takes for financial instrument interest rates to reprice to current market rates

2. Falling equity-to-asset ratios

8. Out of compliance with ALM policy risk tolerances of *Net Interest Income* and *Net Economic Equity*

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9. Investigate market pricing for potential asset sales

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10. Deposit pricing in a rapidly rising interest rate environment

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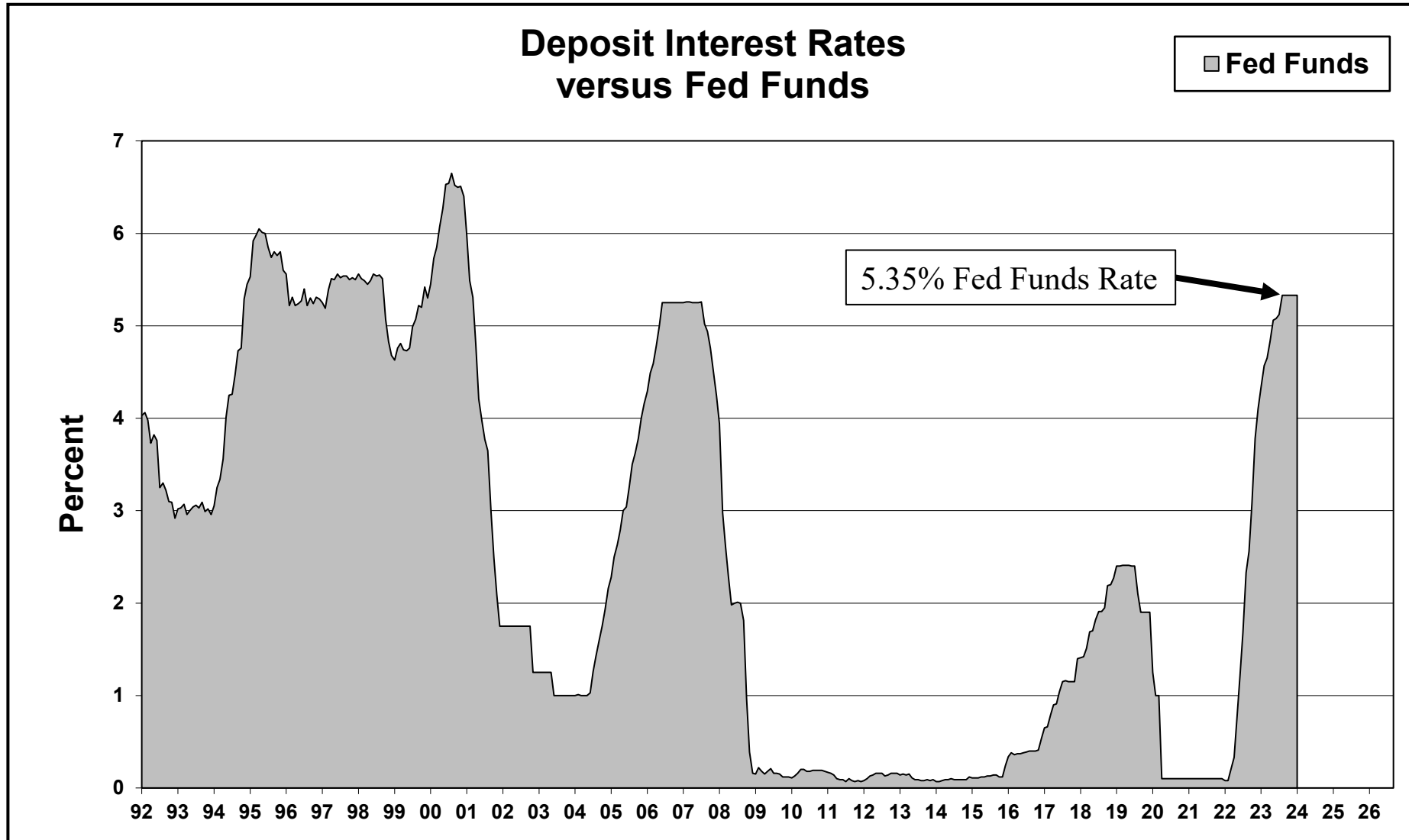
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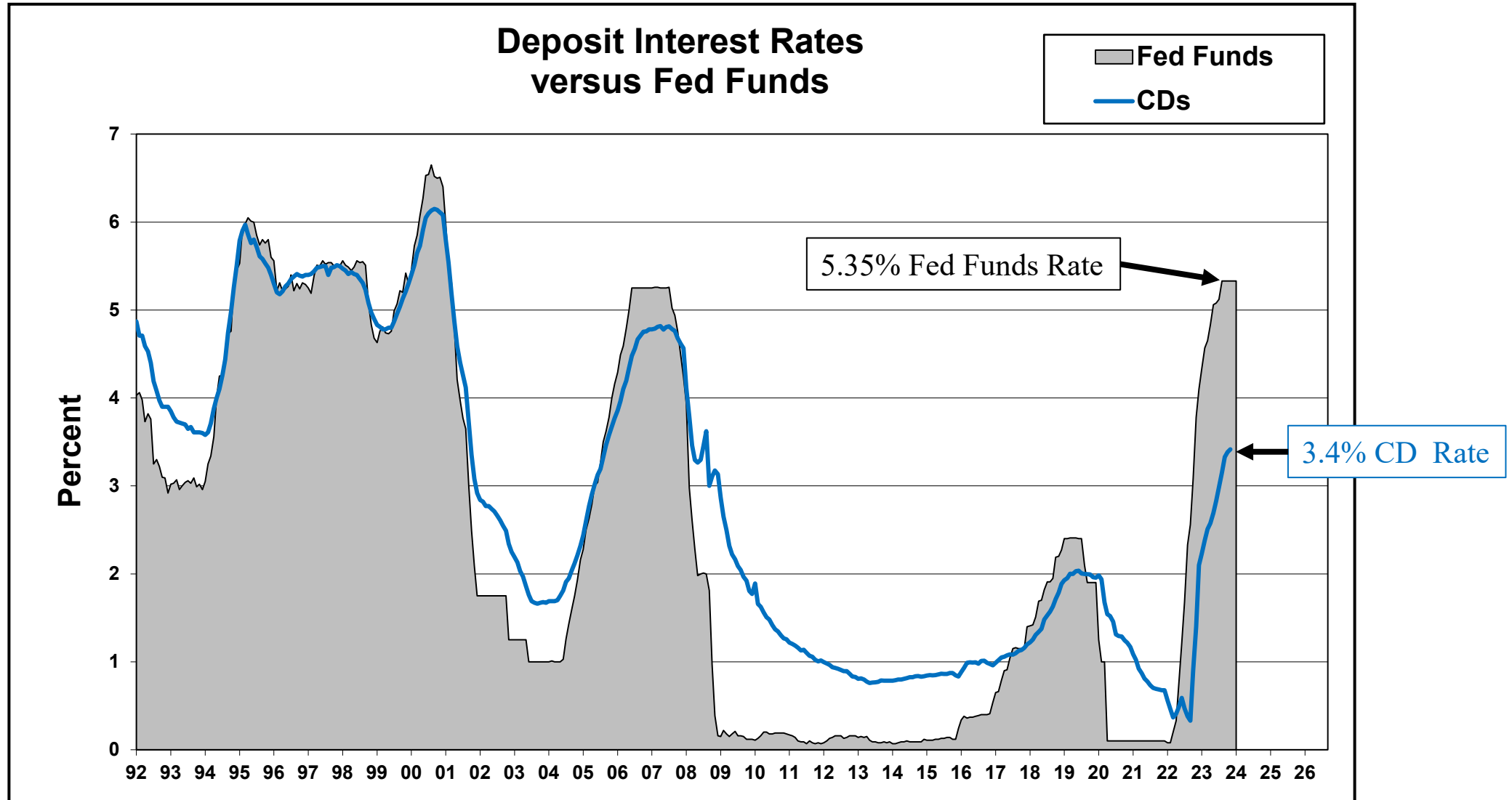
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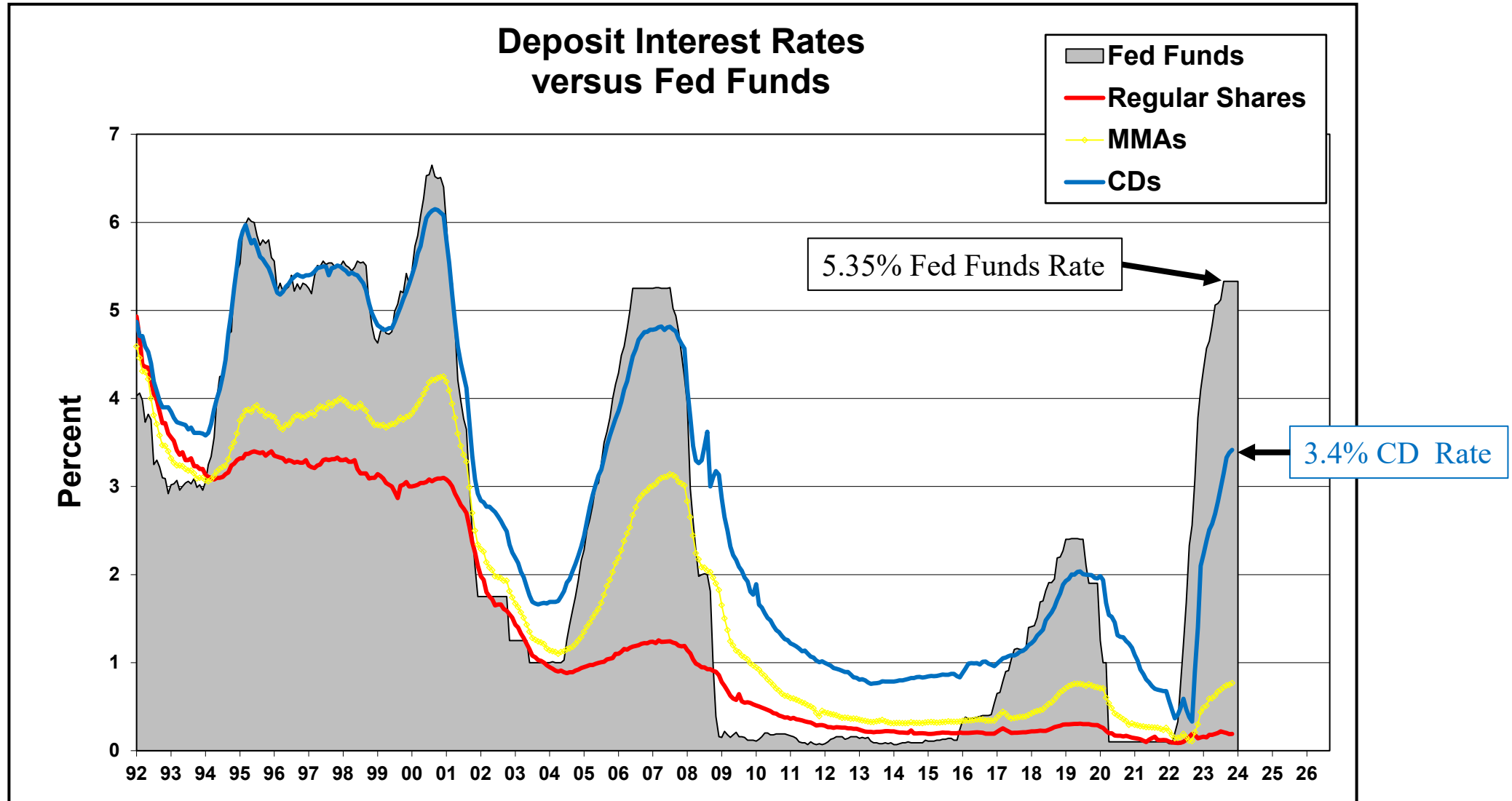
Rising Fed Funds Interest Rate and Deposit Pricing



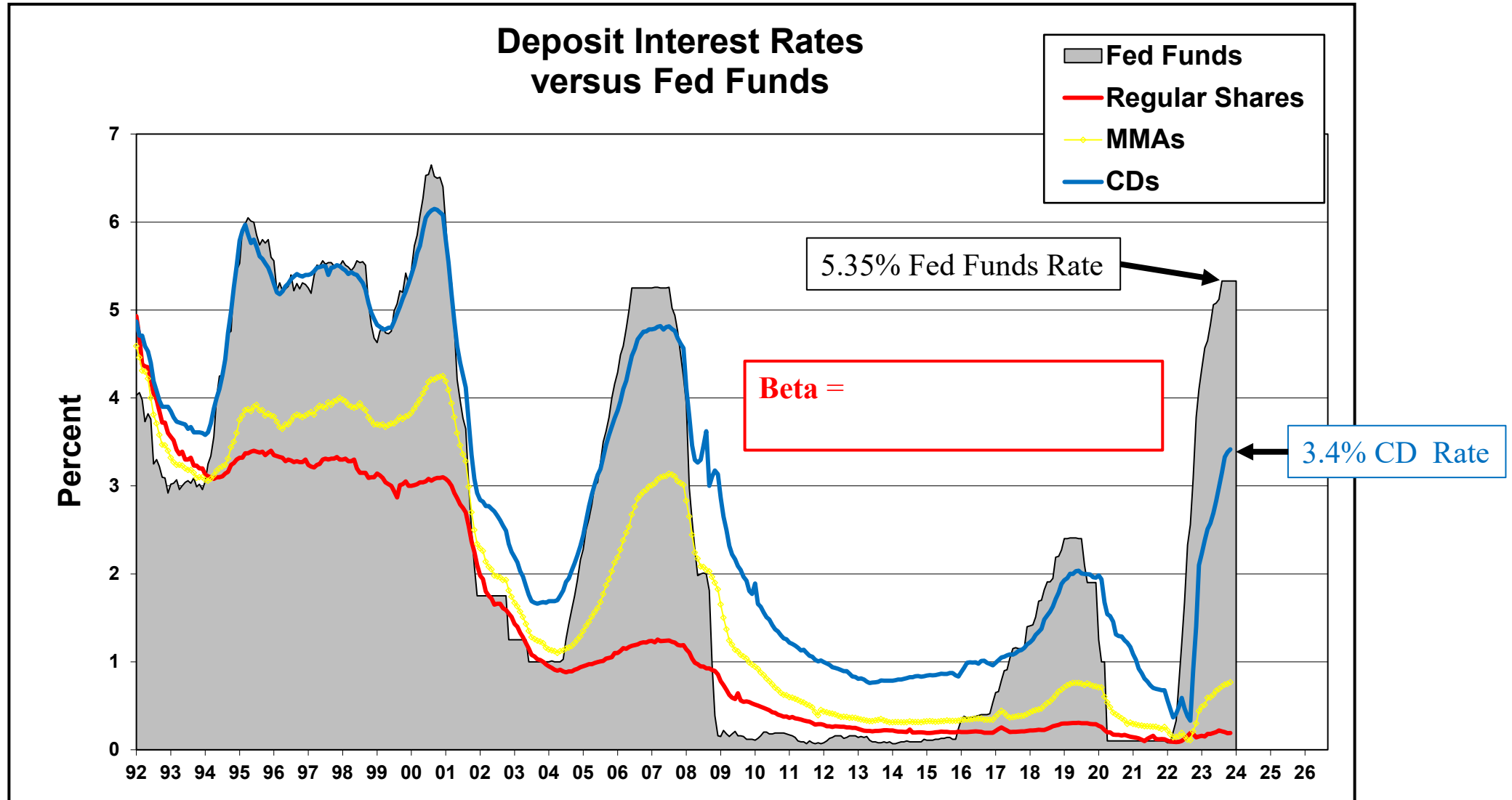
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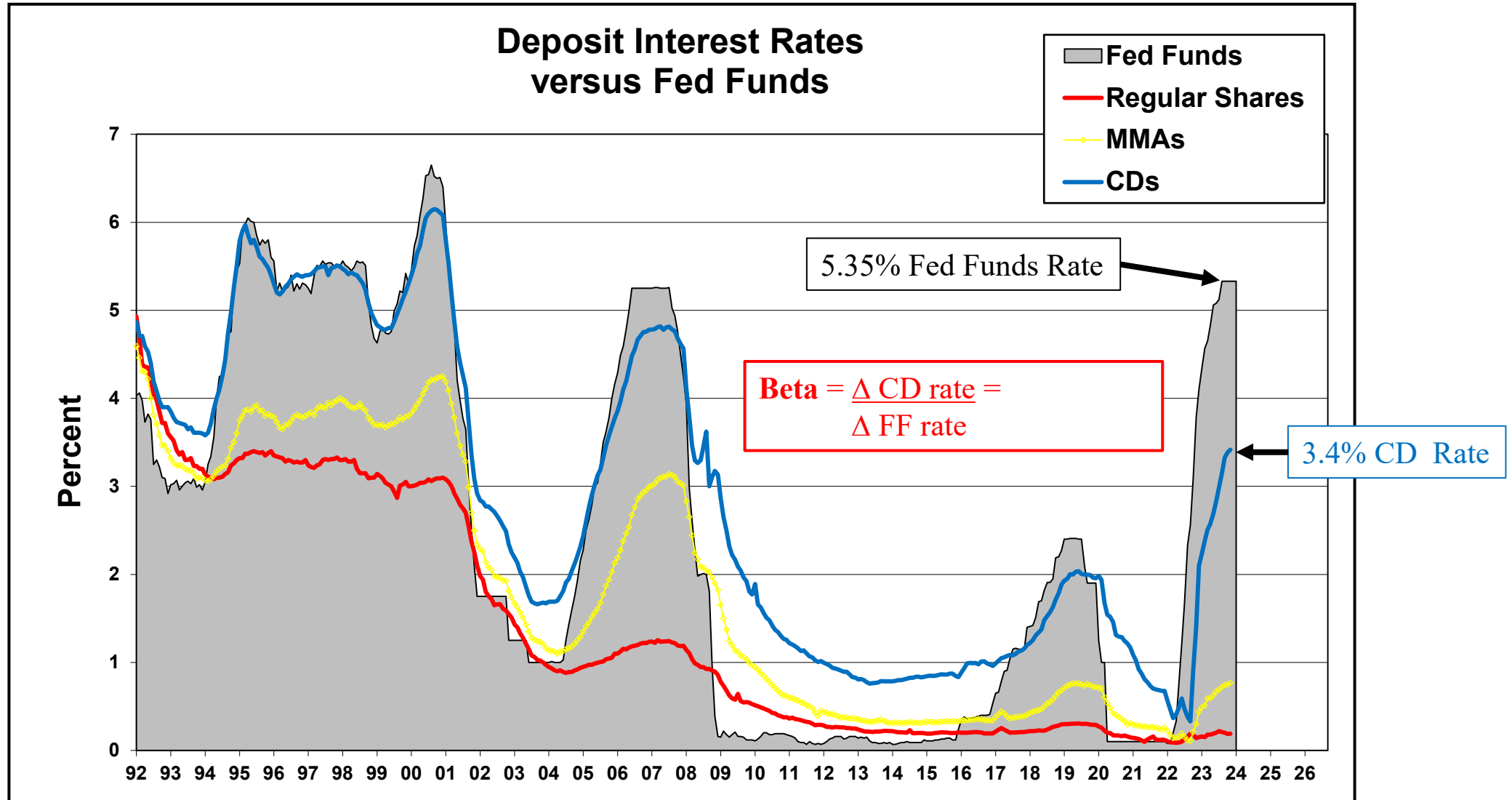
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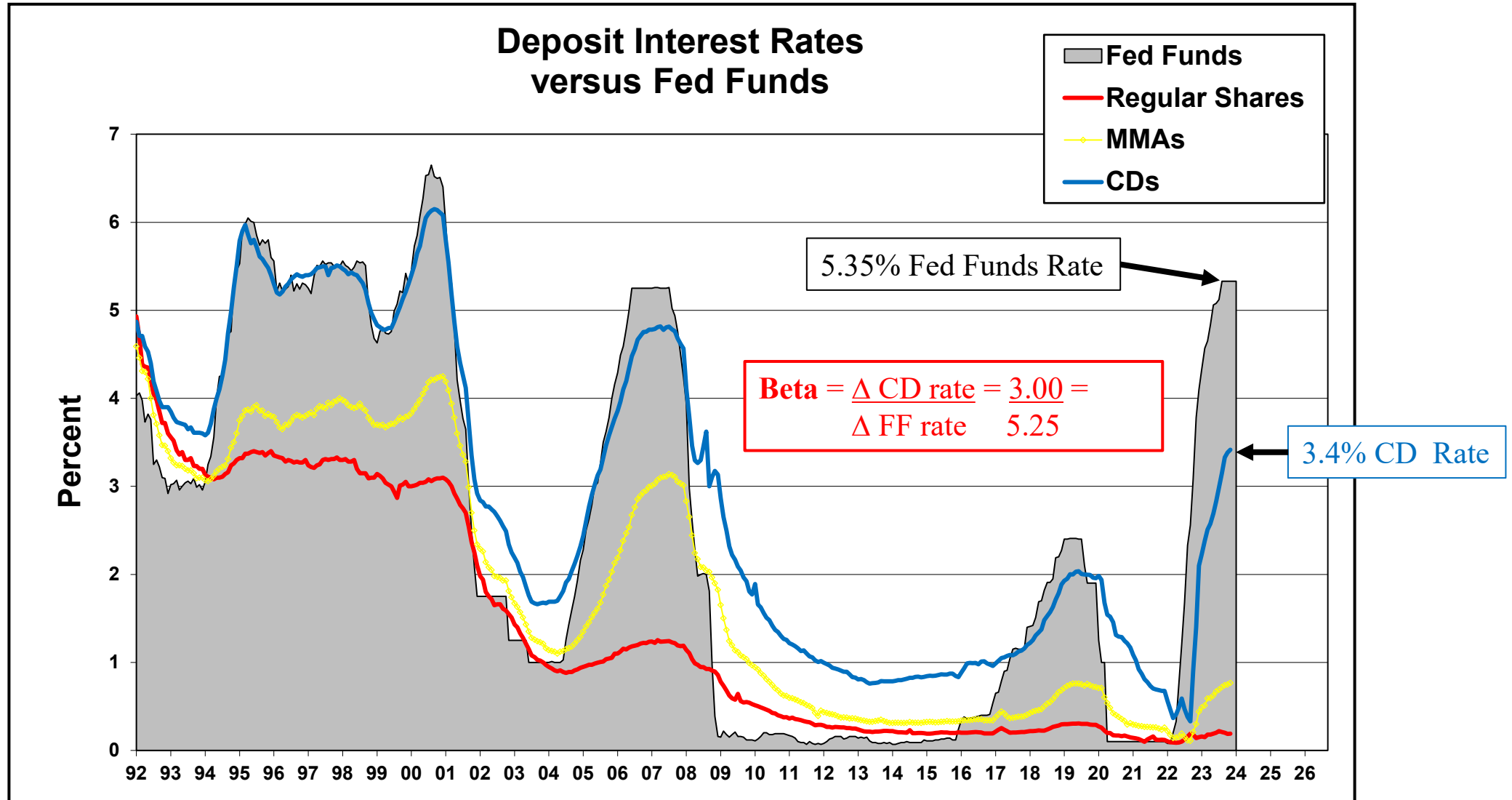
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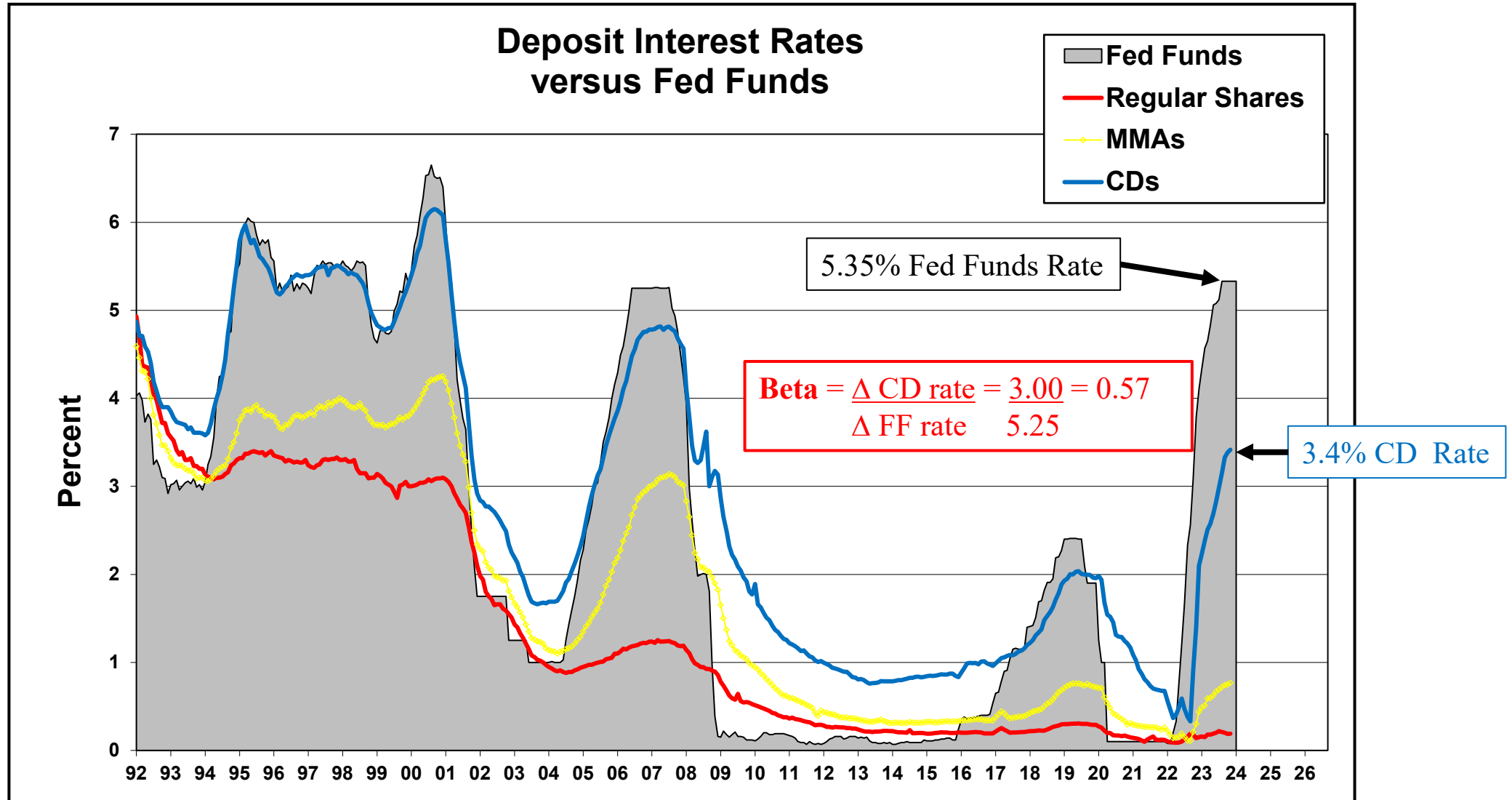
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Balance Sheet

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11. Rely on wholesale borrowings to maintain sufficient liquidity

6. Deposit withdraws > Loan repayments (Liquidity Risk)

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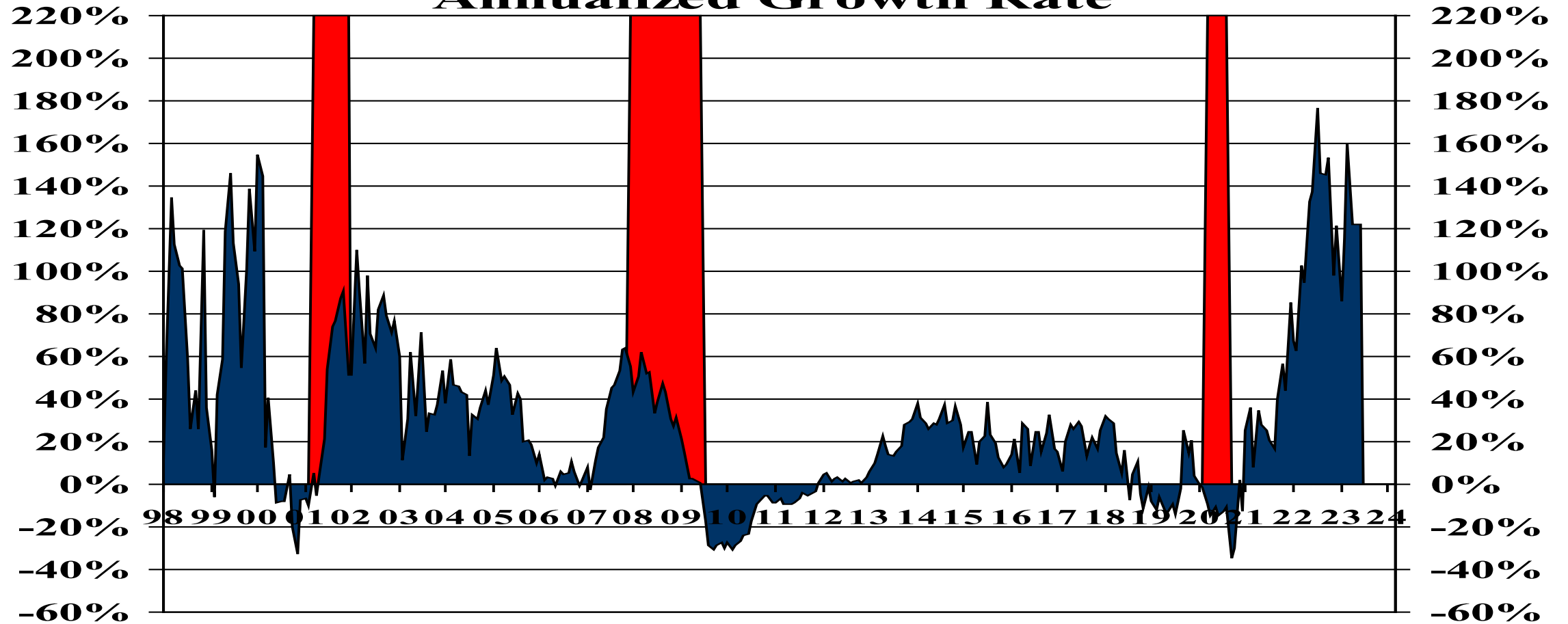
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Resurgent Borrowings

CU Borrowings Growth Seasonally Adjusted Annualized Growth Rate



Limerick of the Day

There once was a credit union that had quite a scare

Limerick of the Day

There once was a credit union that had quite a scare
For their liquidity seemed quite rare

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There once was a credit union that had quite a scare
For their liquidity seemed quite rare
But with some quick loans

Limerick of the Day

There once was a credit union that had quite a scare
For their liquidity seemed quite rare
But with some quick loans
And more cash in their bones

Limerick of the Day

There once was a credit union that had quite a scare
For their liquidity seemed quite rare
But with some quick loans
And more cash in their bones
They managed to keep their head above the despair.

Economic Update Summary For 2024

1. Slow economic growth for the next year

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2. Falling inflation rate during the next 2 years

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5. Credit union loan growth slowing in 2024

Economic Update Summary For 2024

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2. Falling inflation rate during the next 2 years
3. Unemployment rate rising to natural rate in 2024
4. Short-term interest rates above long-term interest rates into 2024
5. Credit union loan growth slowing in 2024
6. Mortgage originations rising 15% as interest rates fall 1 percentage point



Economic Forecast

January 2024

	Past results		Actual/ Forecasts					
	Previous 10 Yr. Avg	2022	2023 Q1	2023 Q2	2023 Q3	2023Q4	2023	2024
Growth rates:								
Economic Growth (% chg GDP)*	2.10%	2.10%	2.0%	2.4%	4.9%	2.0%	2.5%	1.5%
Inflation (CPI, 12 mth % chg)	2.20%	6.50%	5.0%	3.1%	3.7%	3.4%	3.4%	2.5%
Unemployment Rate (BLS)	6.00%	3.50%	3.5%	3.6%	3.8%	3.7%	3.7%	4.3%
Federal Funds Rate (effective)	0.58%	4.33%	4.83%	5.08%	5.33%	5.33%	5.33%	4.50%
10-Year Treasury Rate	2.11%	3.88%	3.48%	3.81%	4.59%	3.88%	3.88%	4.25%
10-Year-Fed Funds Spread	1.53%	-0.45%	-1.35%	-1.27%	-0.77%	-1.45%	-1.45%	-0.25%

*Percent change, annual rate. All other numbers are end-of-period values.



Credit Union Forecast

January 2024

	Past Results		Actual/forecasts				Annual forecasts	
	10 Yr Average	2022	2023 Q1	2023 Q2	2023 Q4	2023 Q4	2023	2024
Growth rates:								
Savings growth	7.7%	3.3%	2.3%	-0.5%	-0.1%	-0.7%	1.0%	3.0%
Loan growth	9.2%	19.1%	1.7%	2.2%	1.8%	1.3%	7.0%	4.0%
Asset growth	7.7%	5.1%	2.0%	0.3%	0.5%	1.2%	4.0%	4.0%
Membership growth	3.55%	4.3%	1.2%	1.0%	0.8%	0.3%	3.3%	2.5%
Liquidity:								
Loan-to-share ratio**	79.5%	81.5%	80.9%	83.1%	84.9%	86.6%	86.6%	88.1%
Asset quality:								
Delinquency rate**	0.66%	0.61%	0.52%	0.63%	0.72%	0.80%	0.80%	0.90%
Net charge-off rate*	0.48%	0.34%	0.52%	0.54%	0.61%	0.55%	0.60%	0.65%
Earnings:								
Return on average assets (ROA)*	0.88%	0.88%	0.81%	0.77%	0.67%	0.65%	0.73%	0.50%
Capital adequacy:								
Net worth ratio**	10.9%	10.8%	10.8%	10.9%	11.0%	11.4%	11.1%	11.1%

*Quarterly data, annualized. **End of period ratio.

Questions?

Credit unions are so robust that,.....

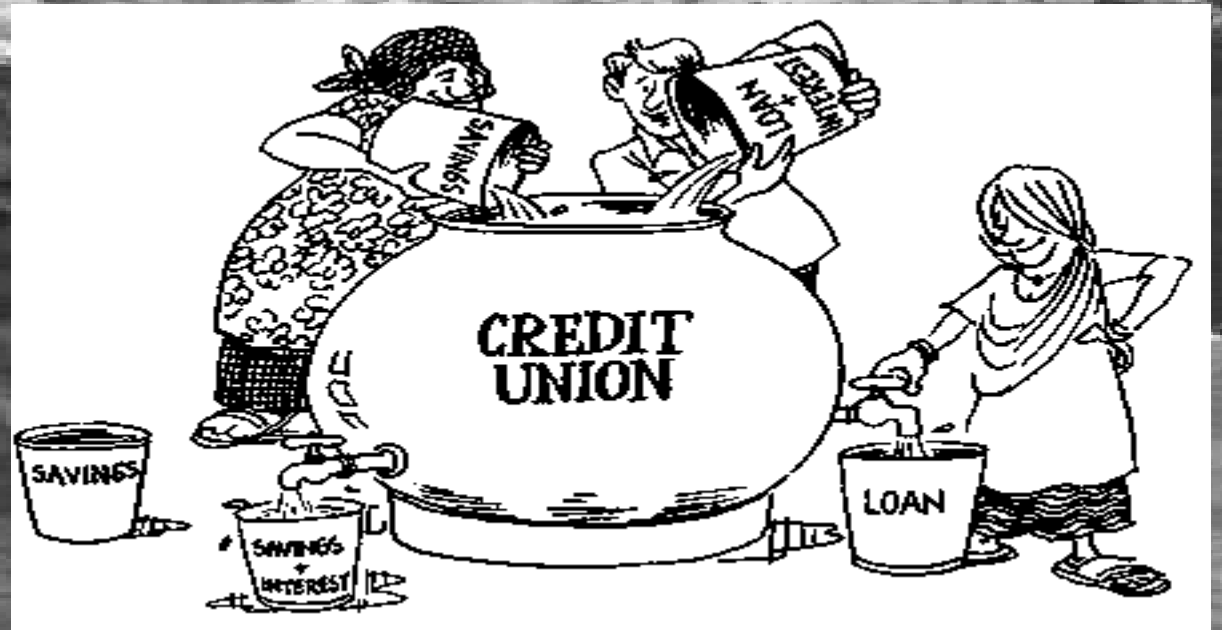


Credit unions are so robust that,.....

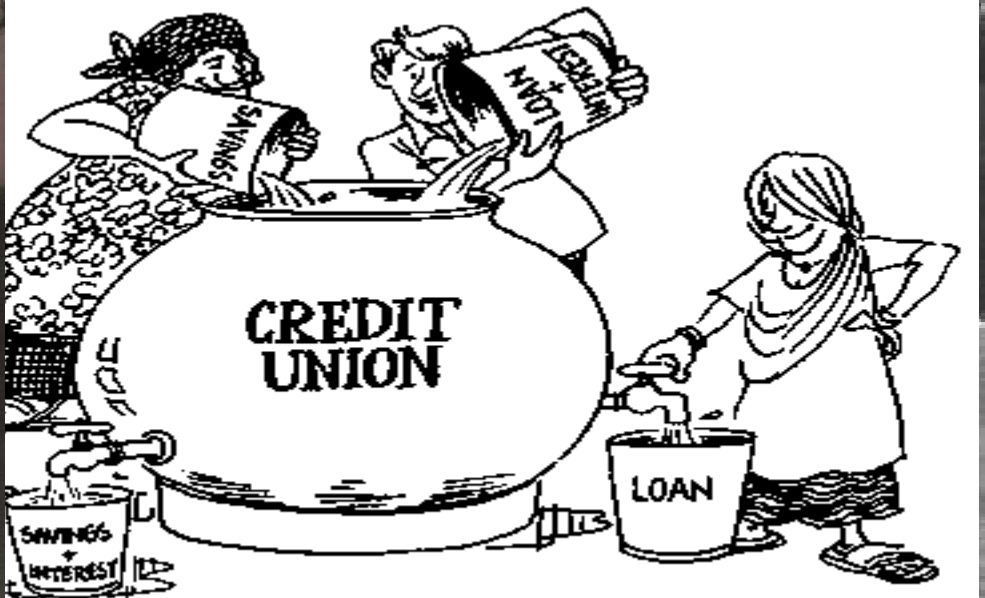
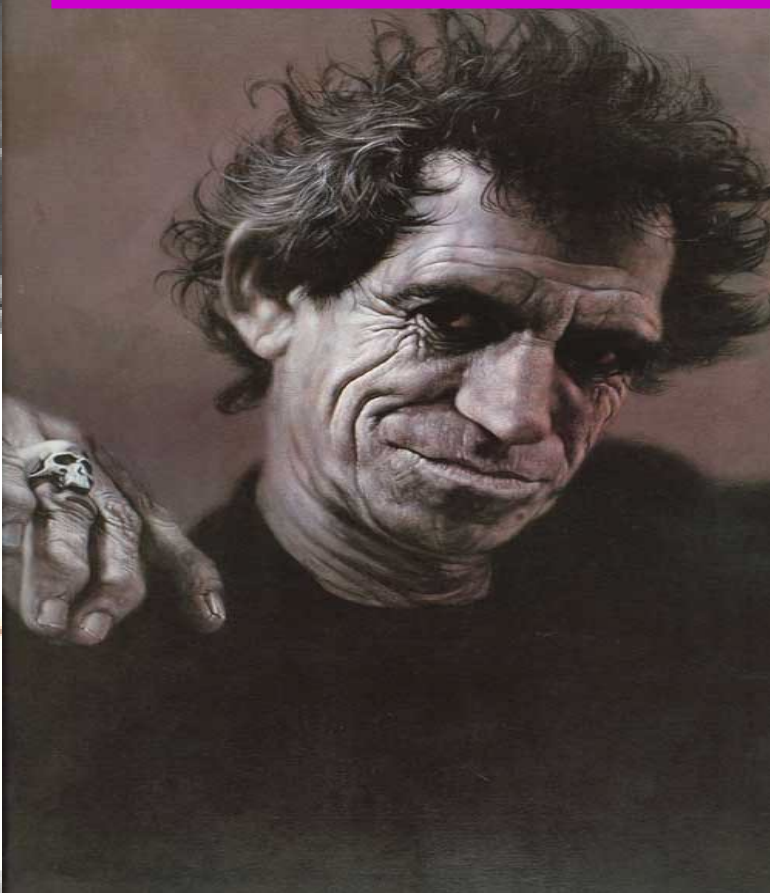
Credit unions are so robust that,.....

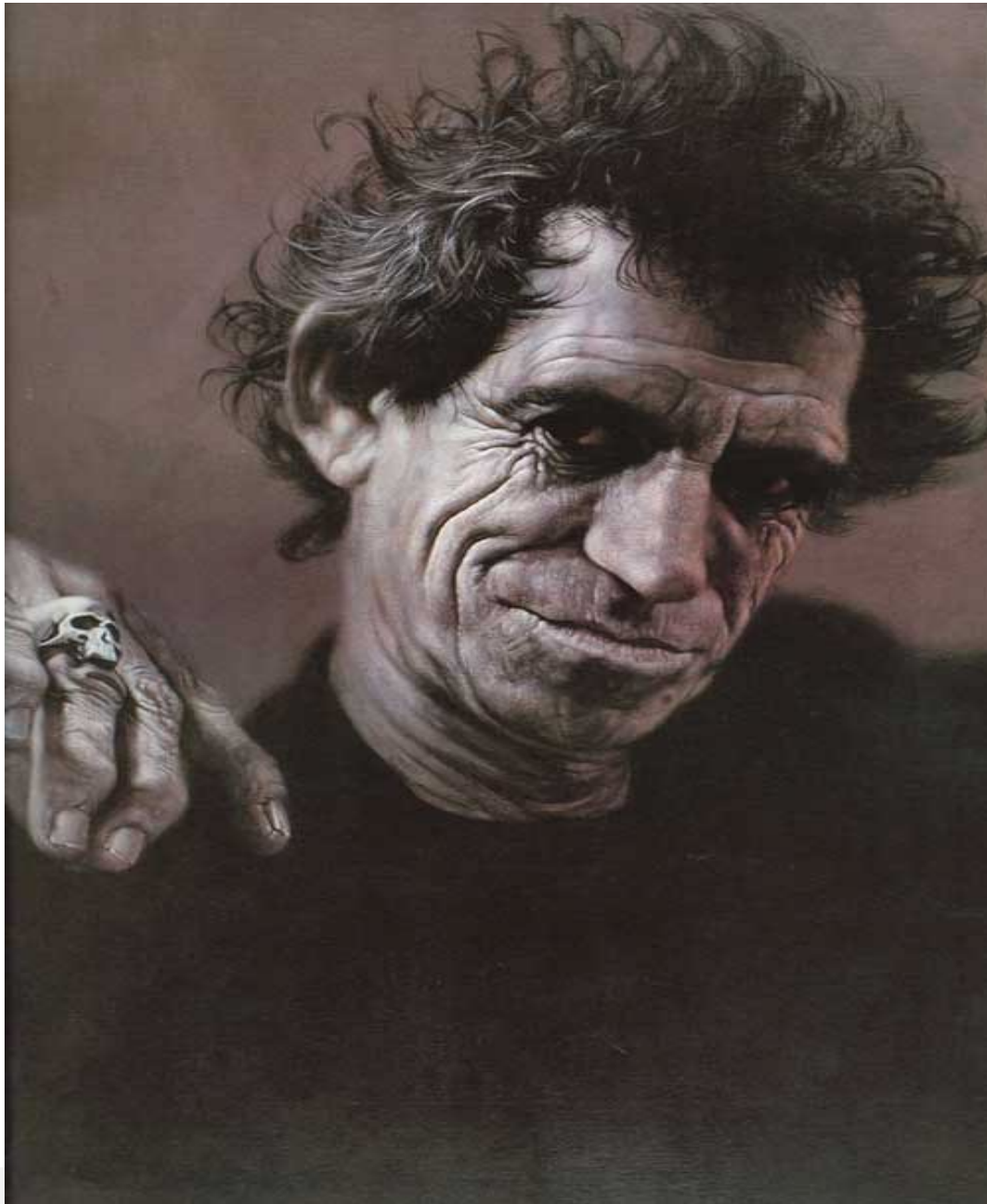


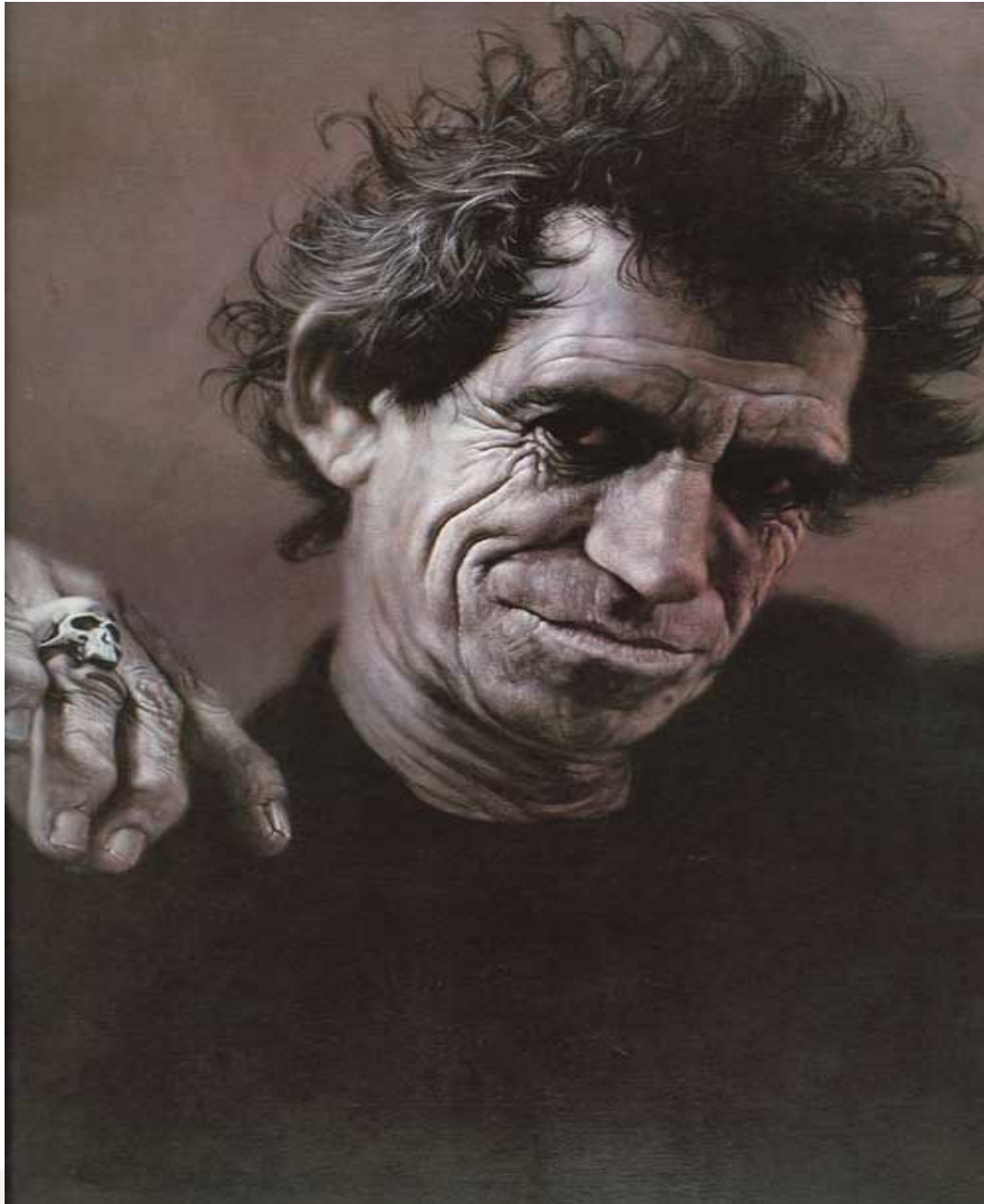
Credit unions are so robust that,.....



Credit unions are so robust that,.....







Carpe Diem
“Seize the day”

Questions?