On The Verge of Change

September 14, 2023

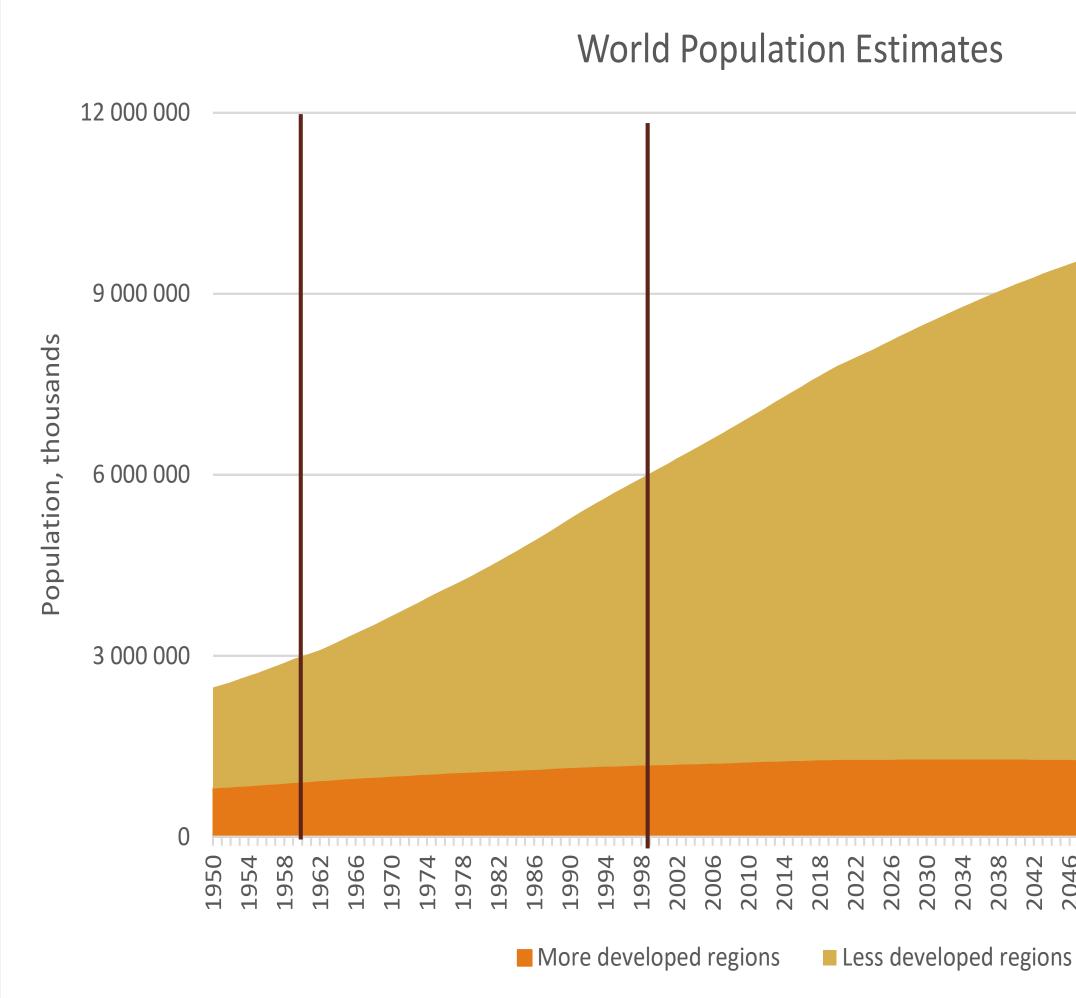
chantico global

On the Verge of Change The Demographic Dividend Deglobalization >Productivity Current Trends SBCER Portfolio Review Survey Results >Model Results Model Prediction

Big Trends: Demographic Dividend



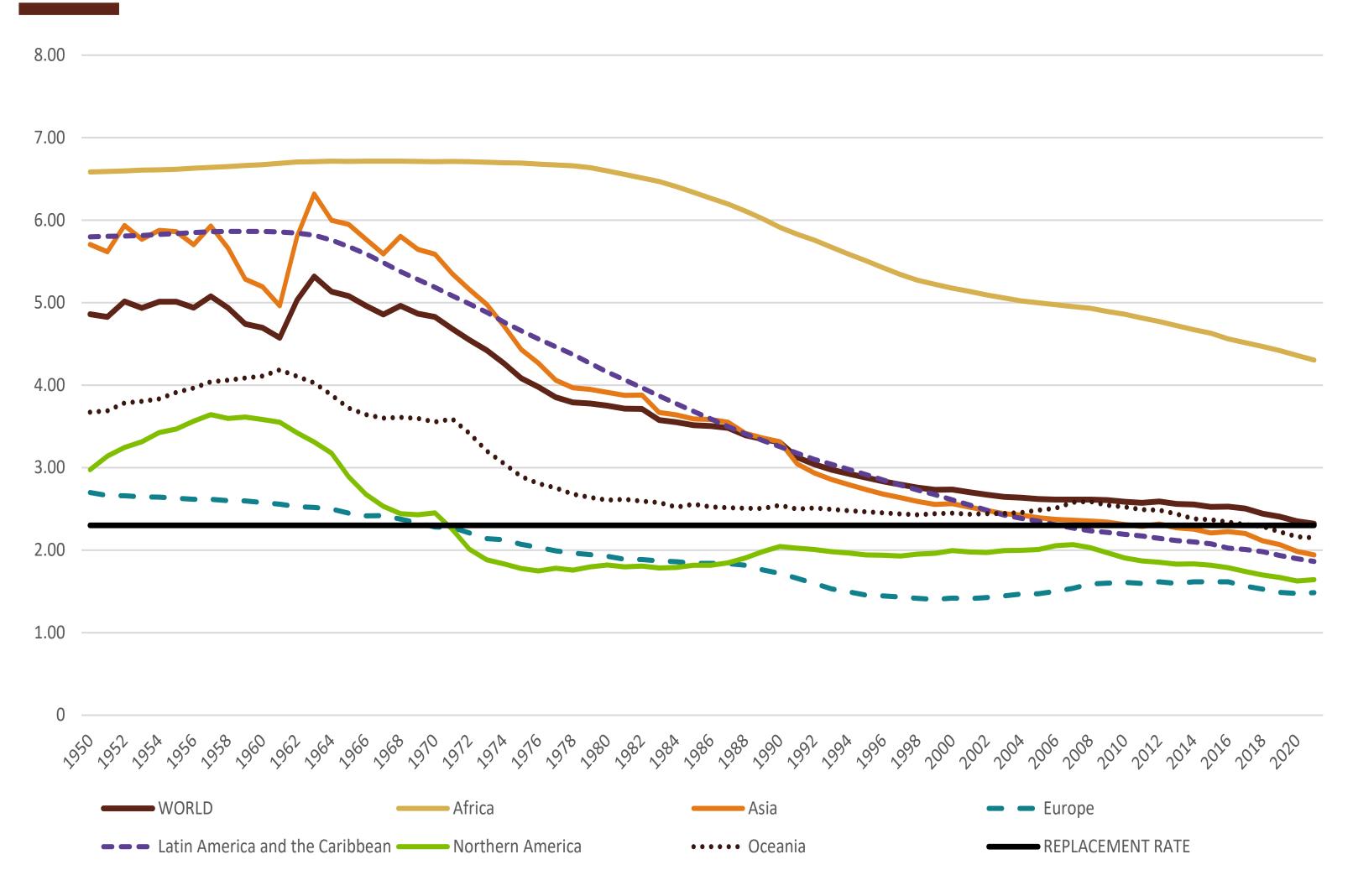
Population Growth is Slowing



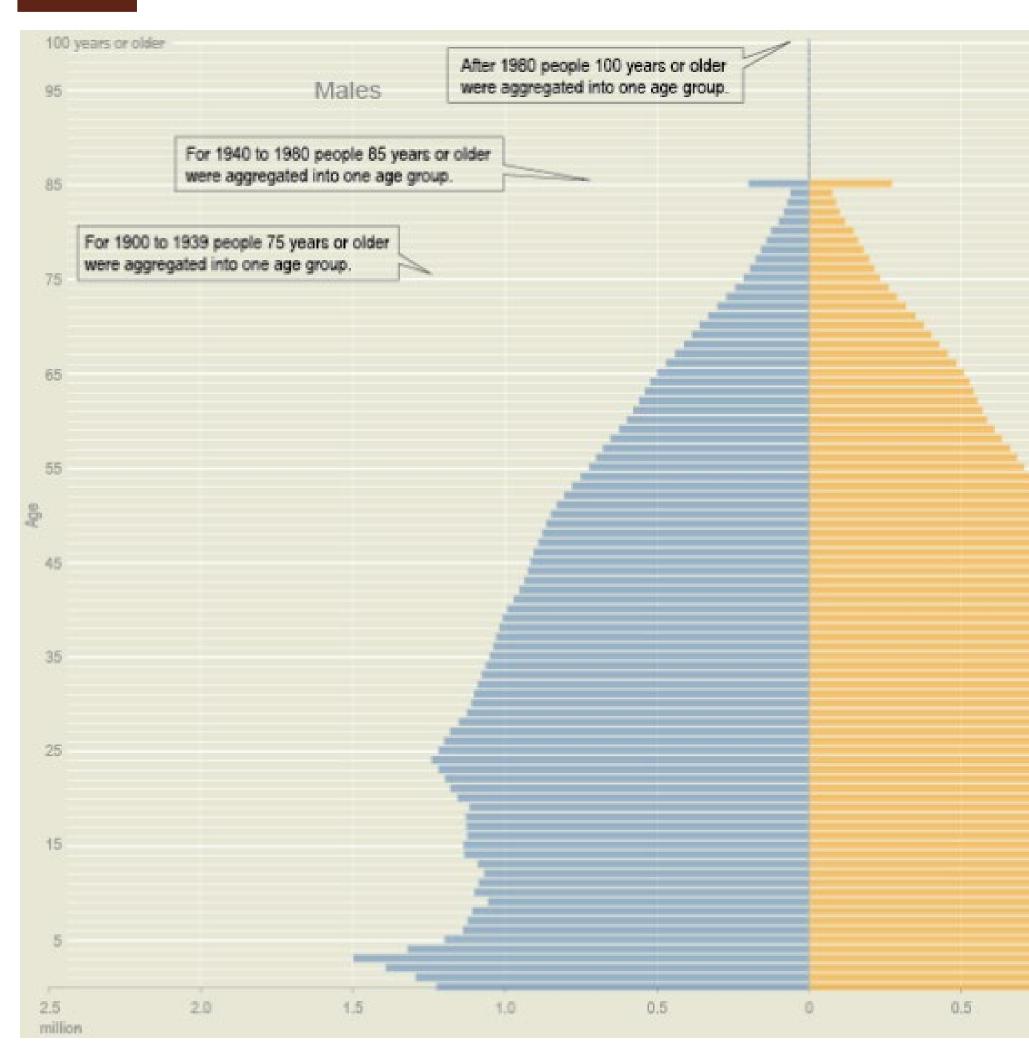
Source: UN World Population Growth Prospects 2022

| 2042 2046 2050 2054 2054 2058 2058 2066 2070 2076 2076 2076 2076 2078 2076 2078 2078 2096 2096 2098 2098 2098 2098 | |
|--|--|
| egions | |

Fertility Plummeting

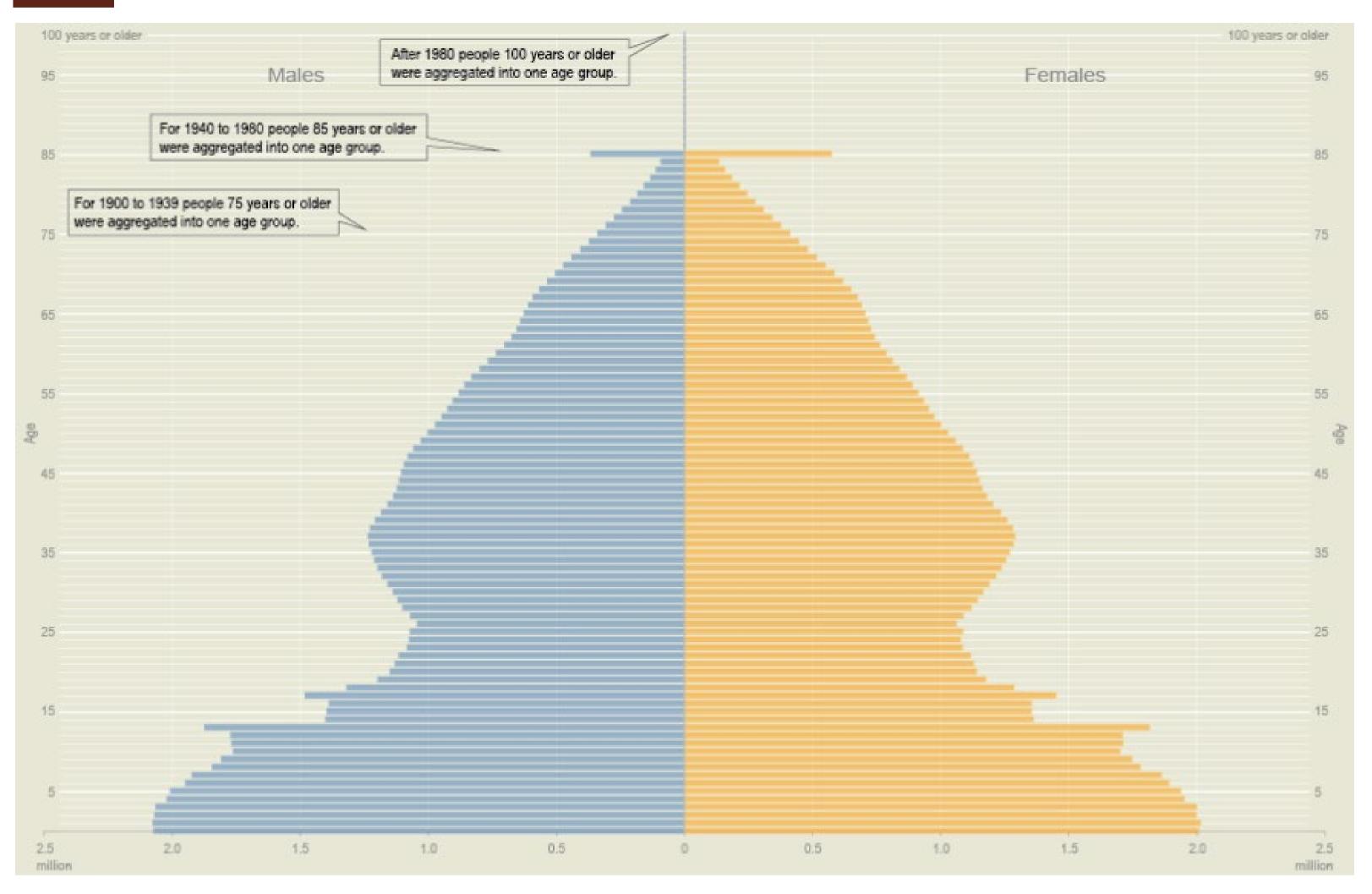


Source: UN World Population Growth Prospects 2022

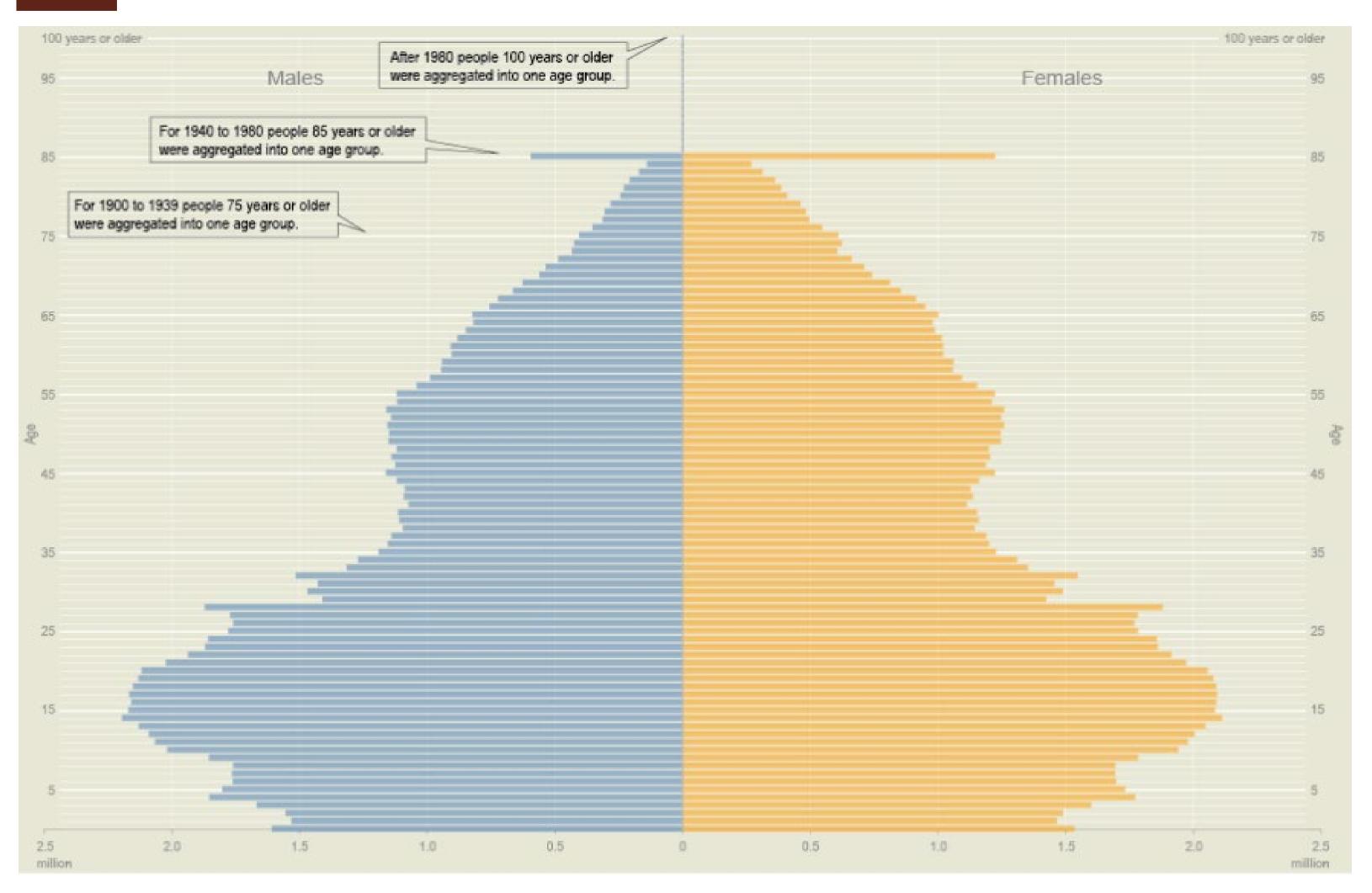


Source: US Census Bureau

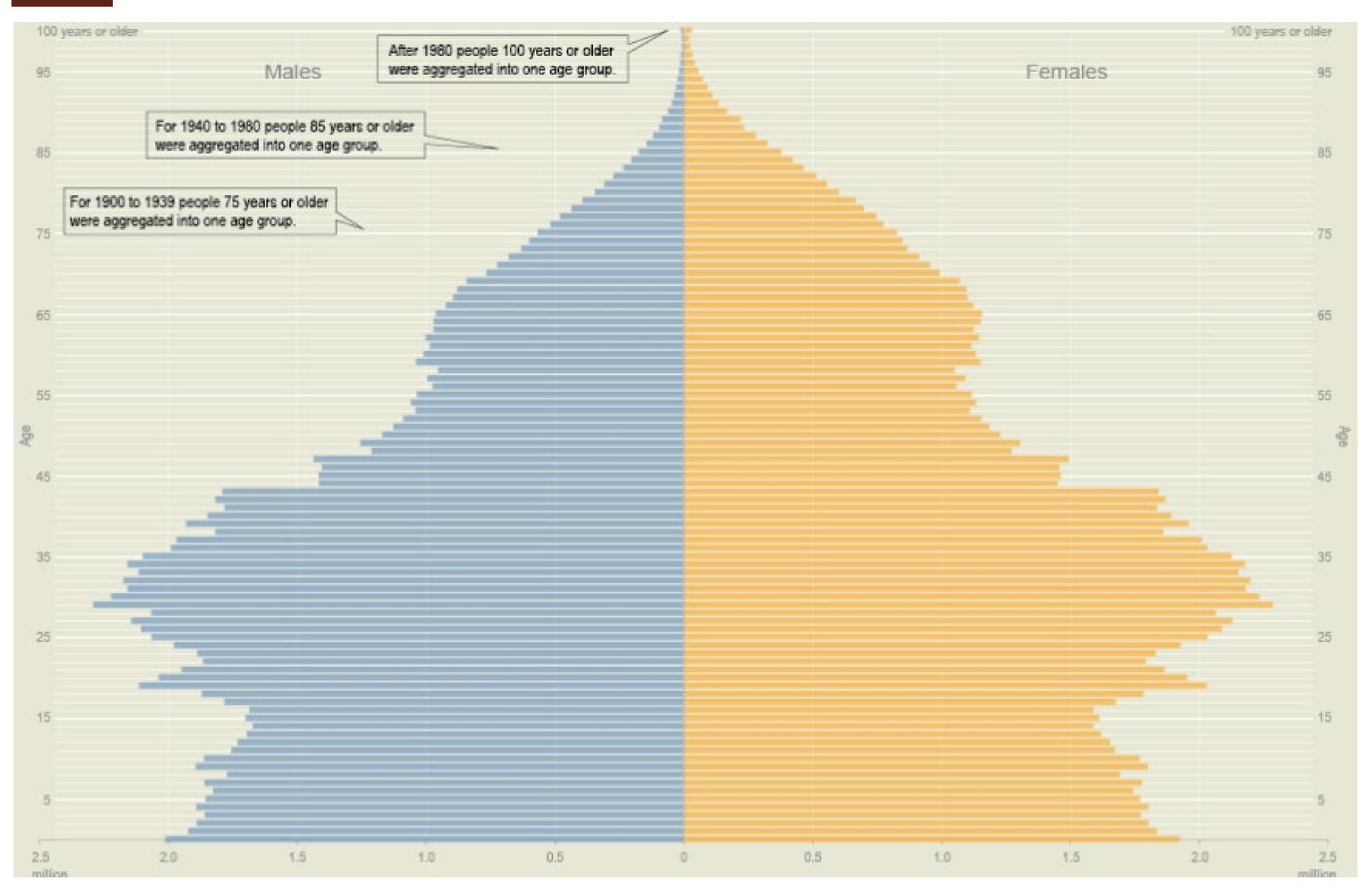
| 100 years or older | | | |
|--------------------|-----|---------|-----|
| 95 | | Females | |
| 05 | | | |
| 85 | | | |
| 75 | | | |
| 65 | | | |
| 55 | | | |
| 50 | | | |
| 45 | | | |
| 35 | | | |
| 25 | | | |
| 15 | | | |
| 5 | | | |
| | | | |
| 2.5 million | 2.0 | 1.5 | 1.0 |



Source: US Census Bureau

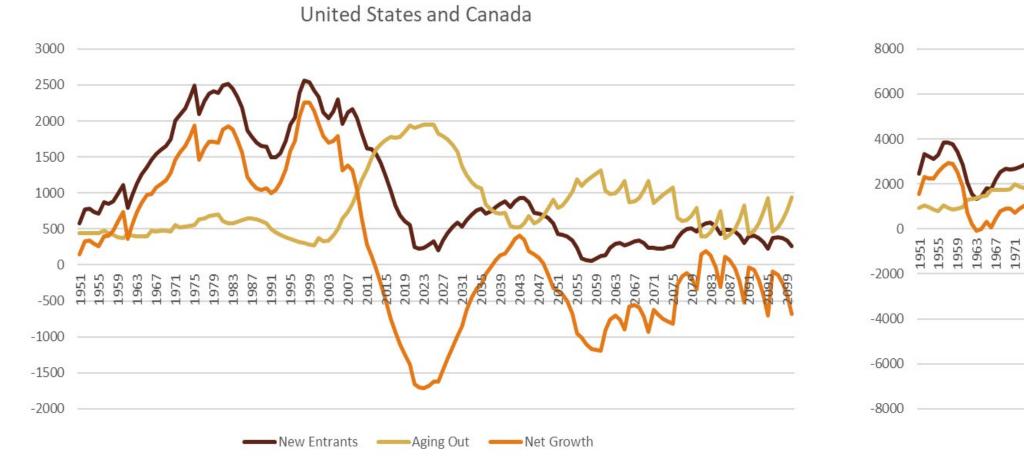


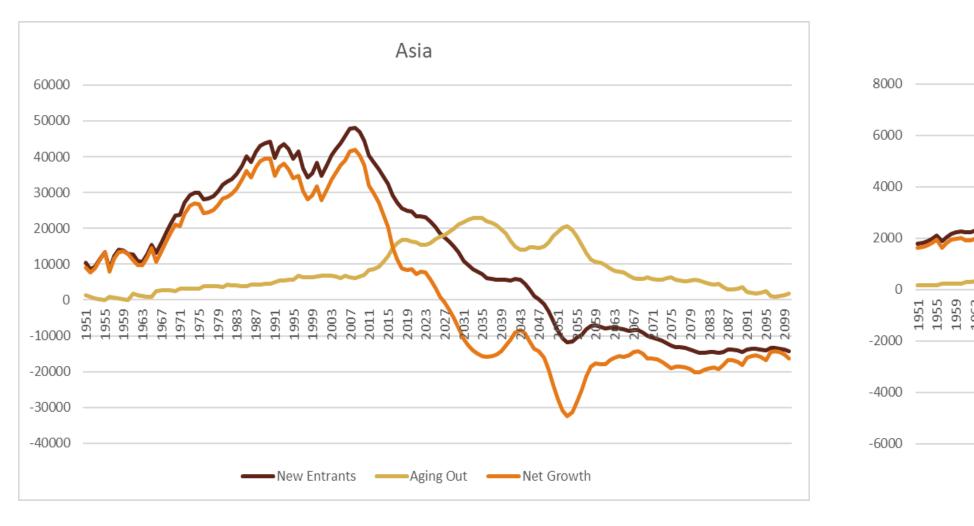
Source: US Census Bureau



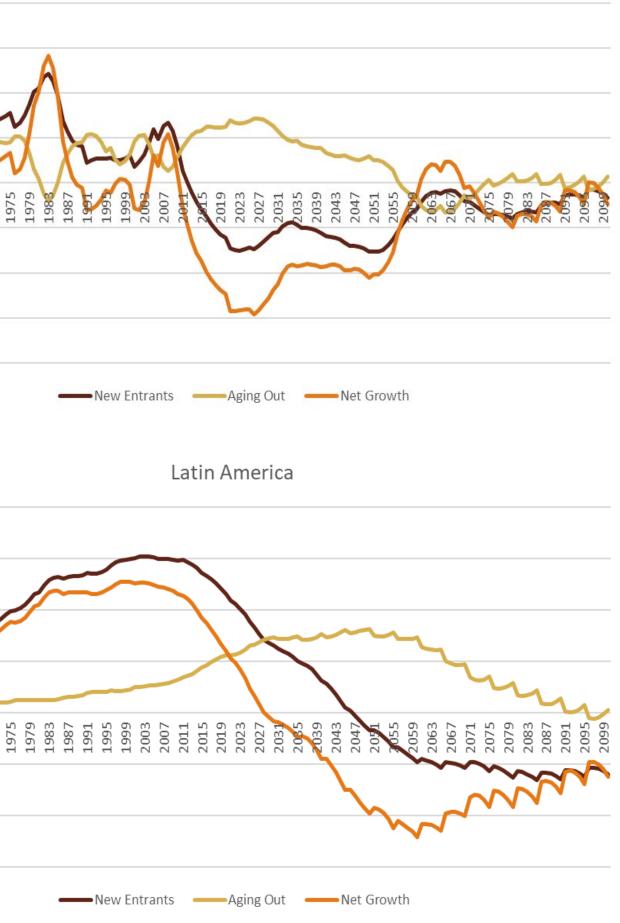
Source: US Census Bureau

Peaking Labor Markets



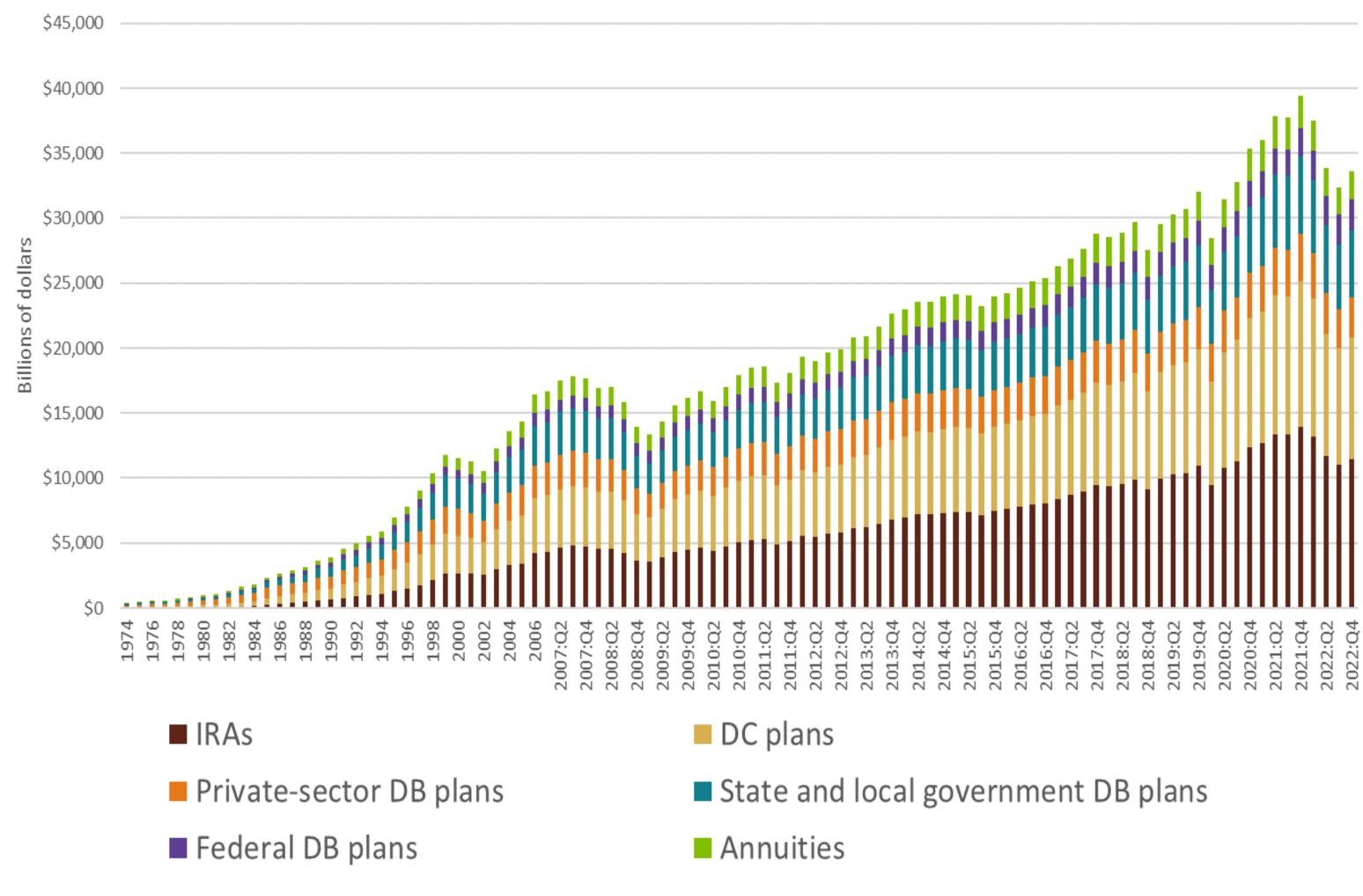


Source: UN Population Prospects 2019



Europe

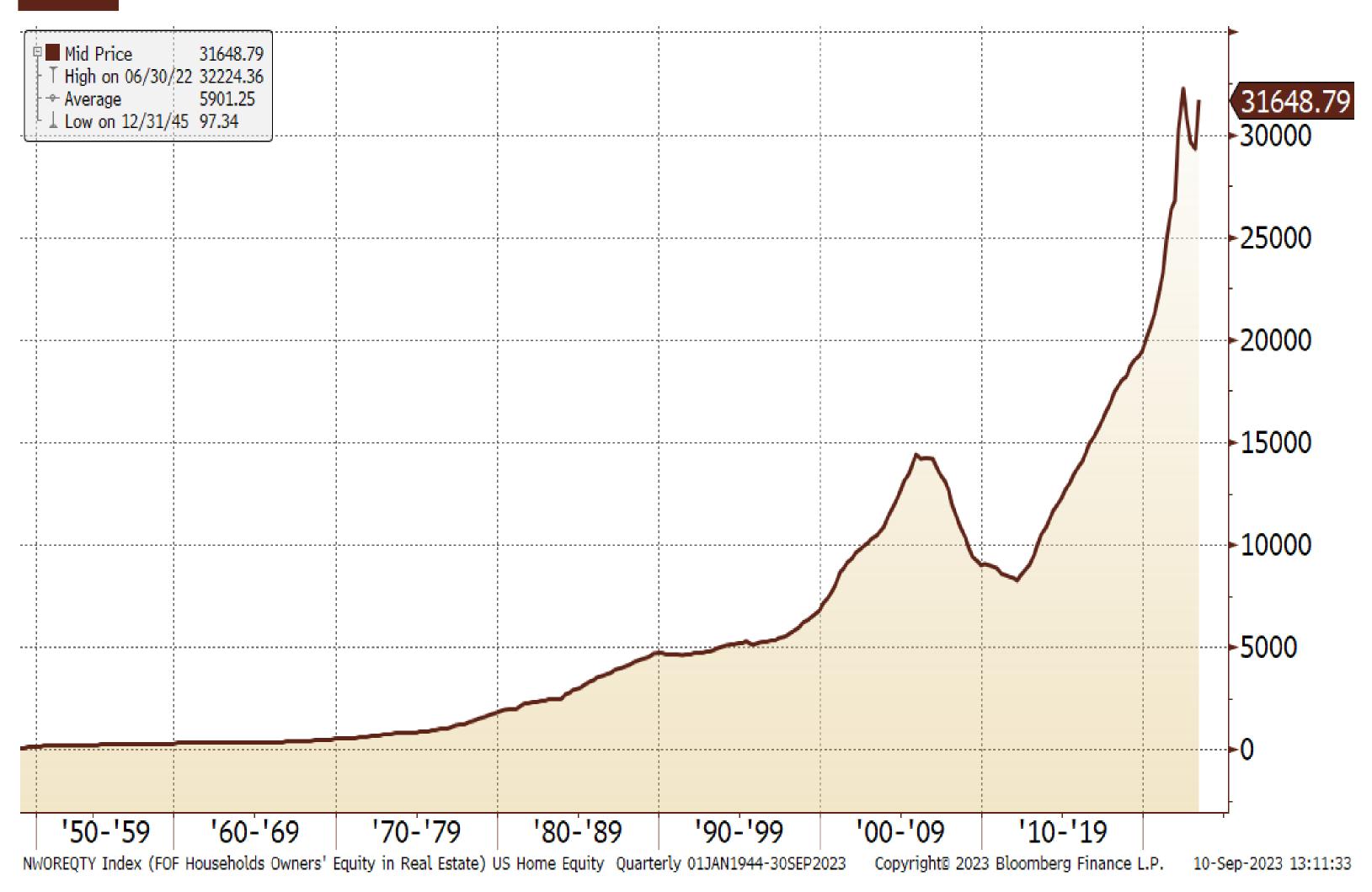
Retirement Assets Have Peaked



Source: Investment Company Institute

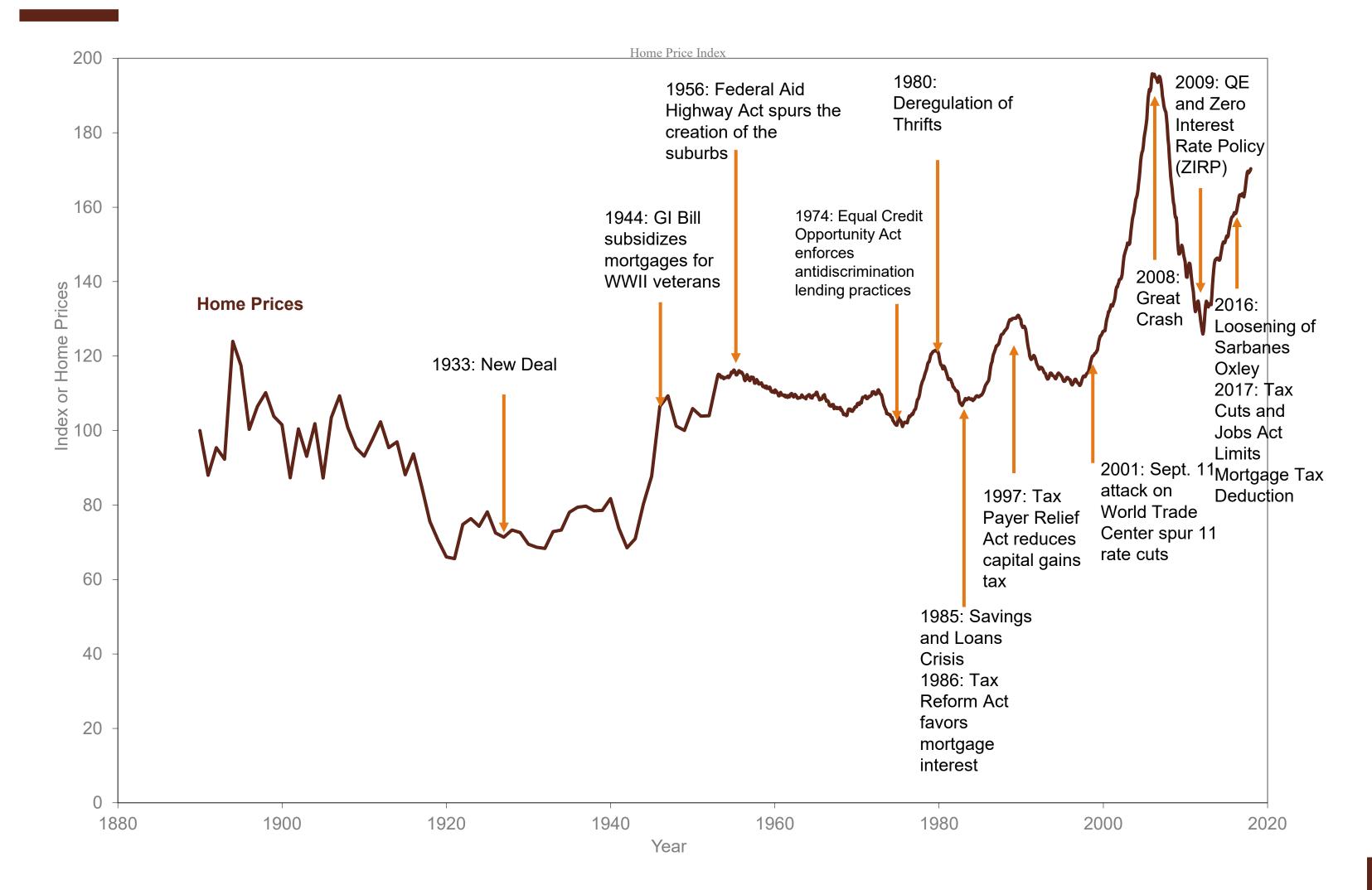


Home Equity (US\$, billions)



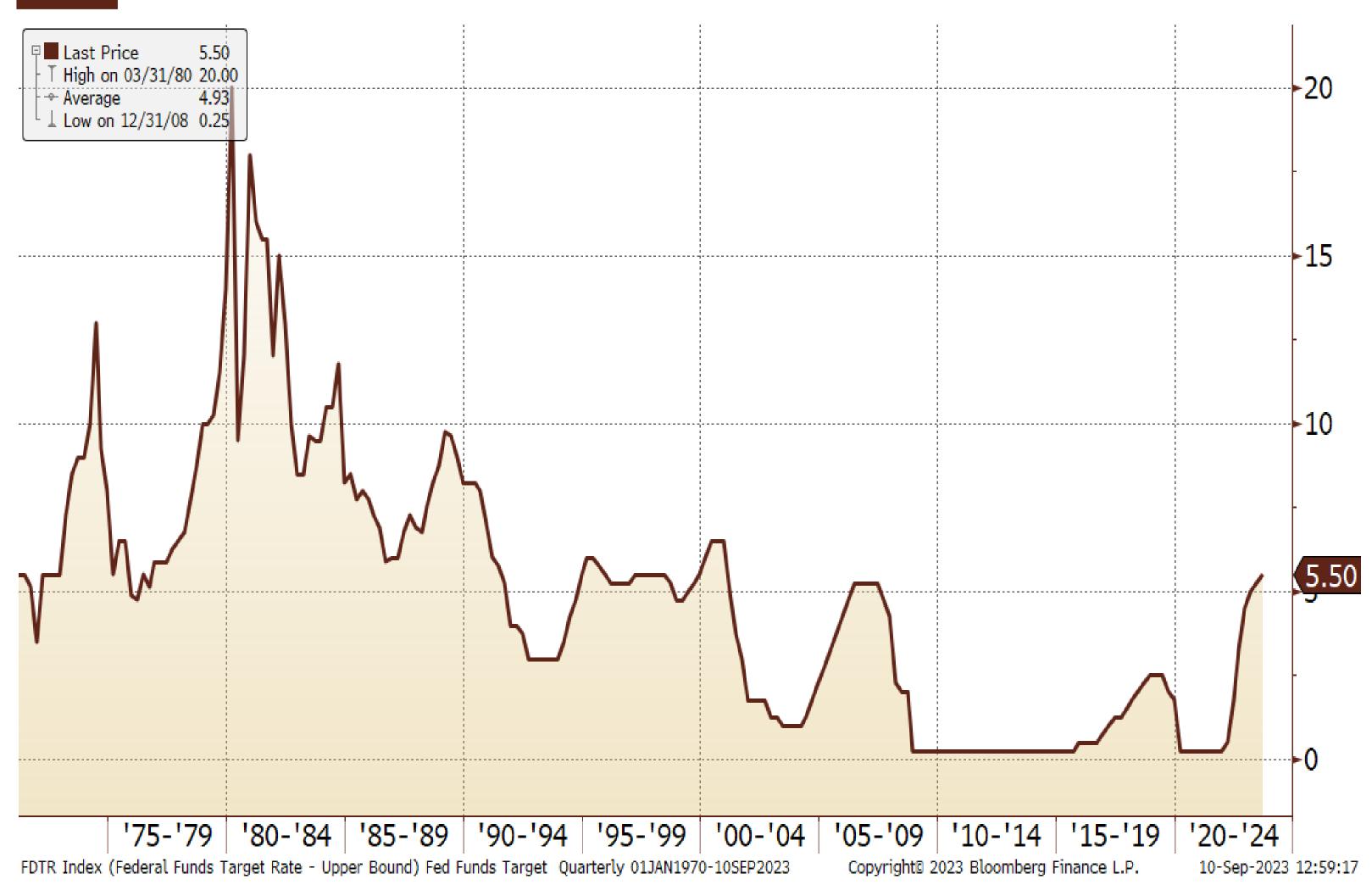
Source: Bloomberg

A Brief History of Housing Prices



Source: Robert Shiller, Yale University

Fed Funds Target Rate



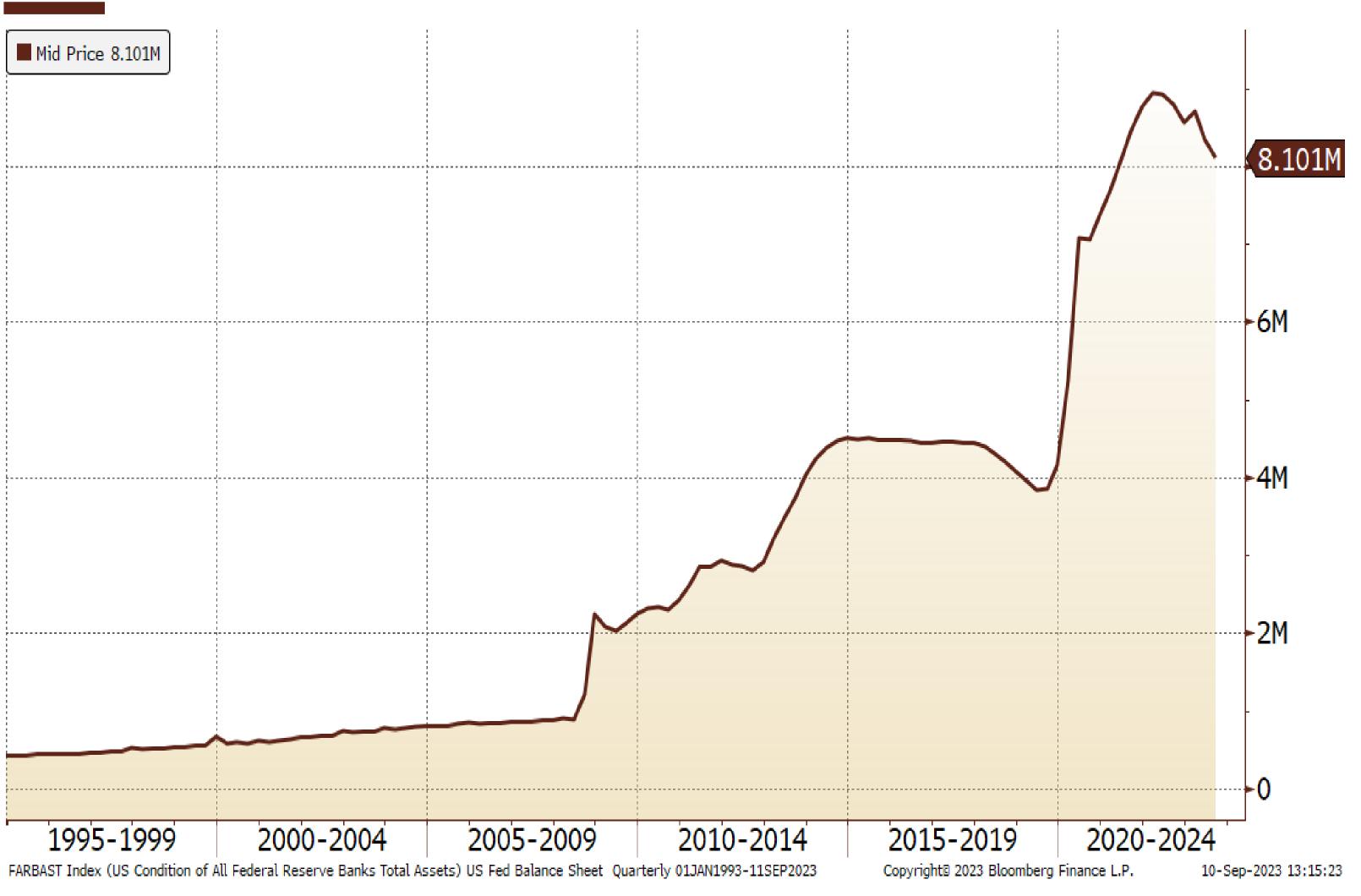
Source: Bloomberg

Interest Rate Normalization



Source: Bloomberg

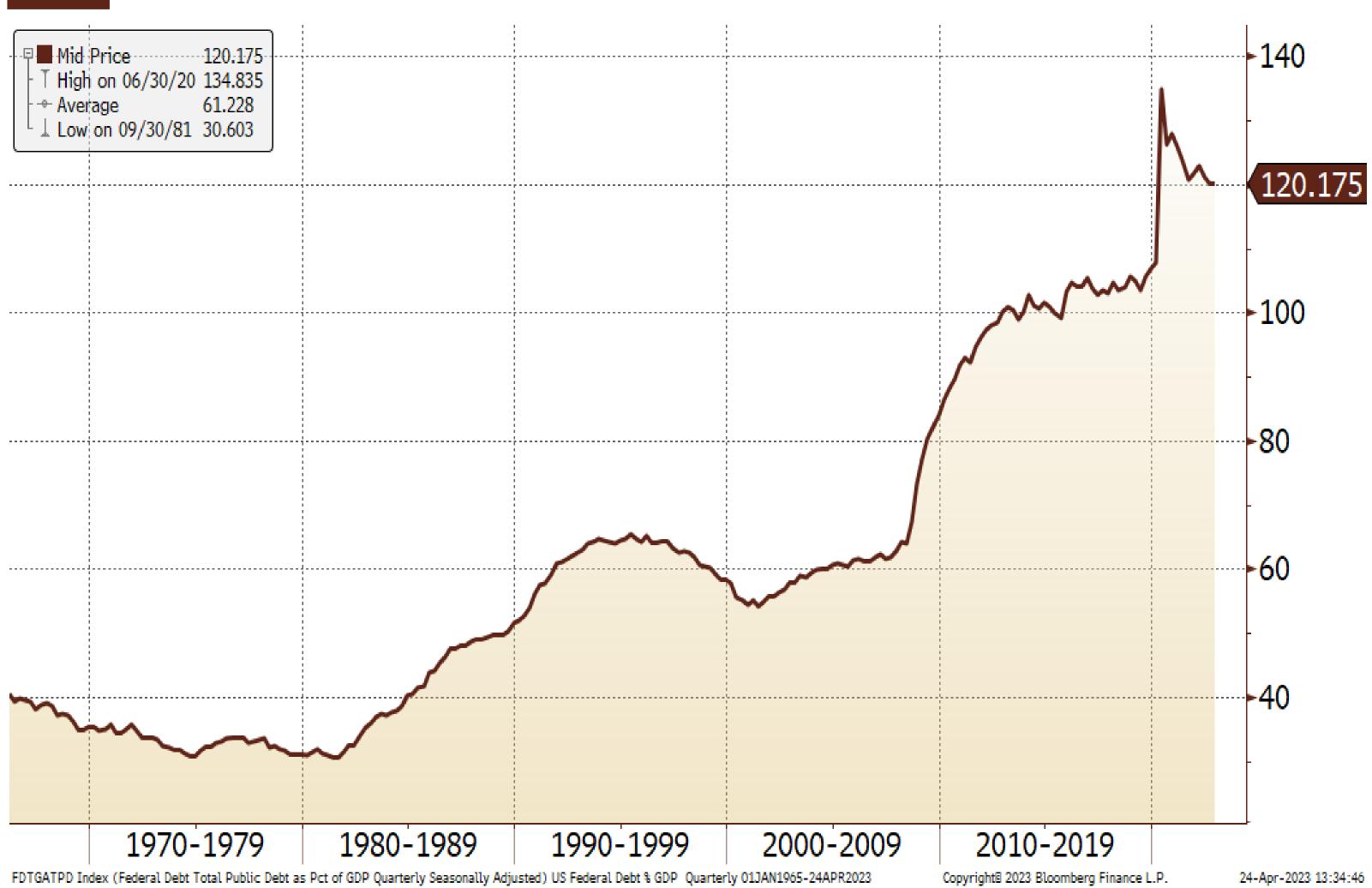
Federal Reserve Bank Balance Sheet



Source: Bloomberg

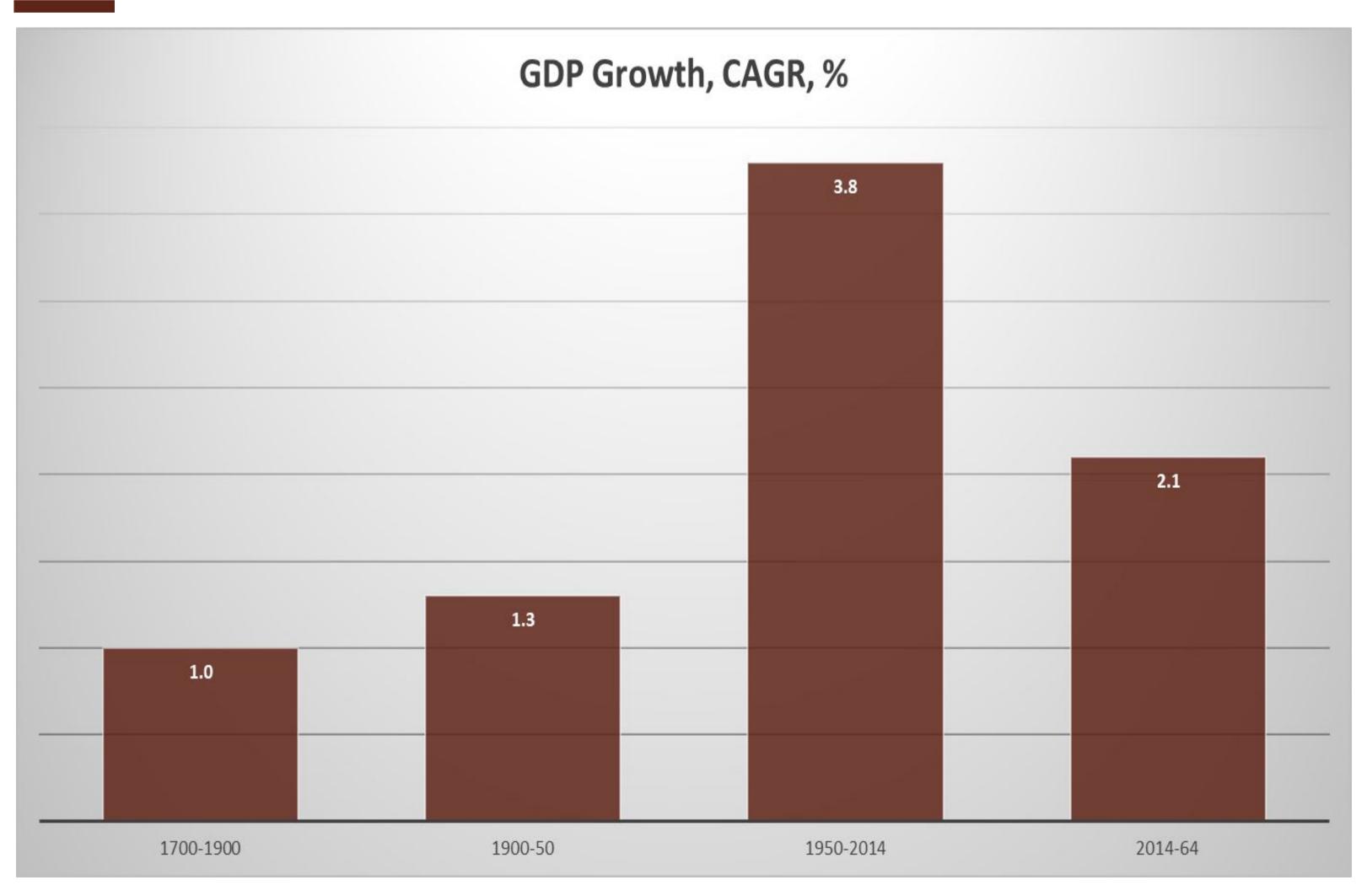


Federal Debt as a % GDP



Source: Bloomberg

Growth Outlook



Source: McKinsey Global Institute

Big Trends: Deglobalization



Globalization and Wage Growth



Source: Bloomberg

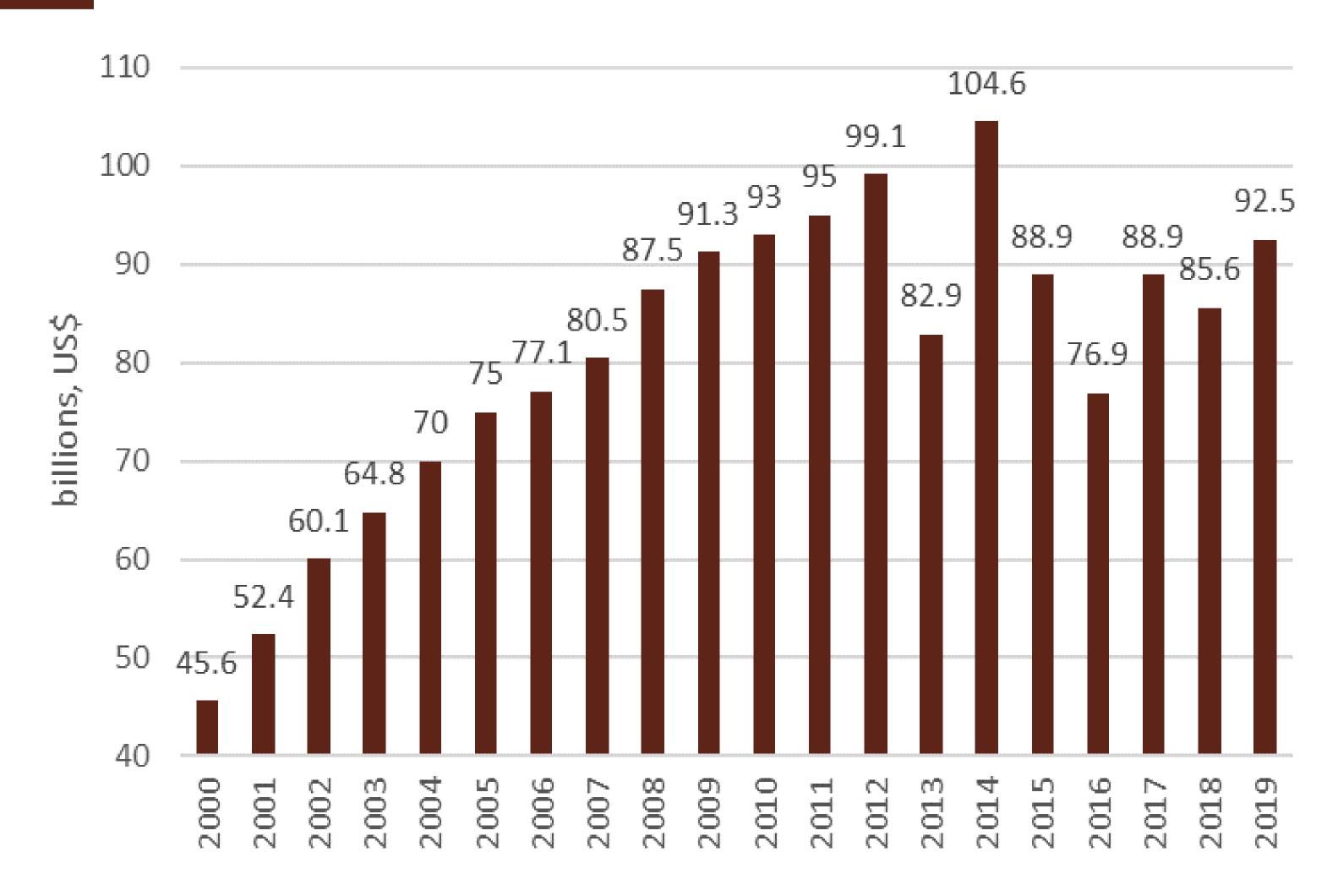
Globalization and Manufacturing Jobs



Source: Bloomberg



Global Market Size of Outsourced Services



Source: Zippia.com

Globalization's Disinflationary Effect

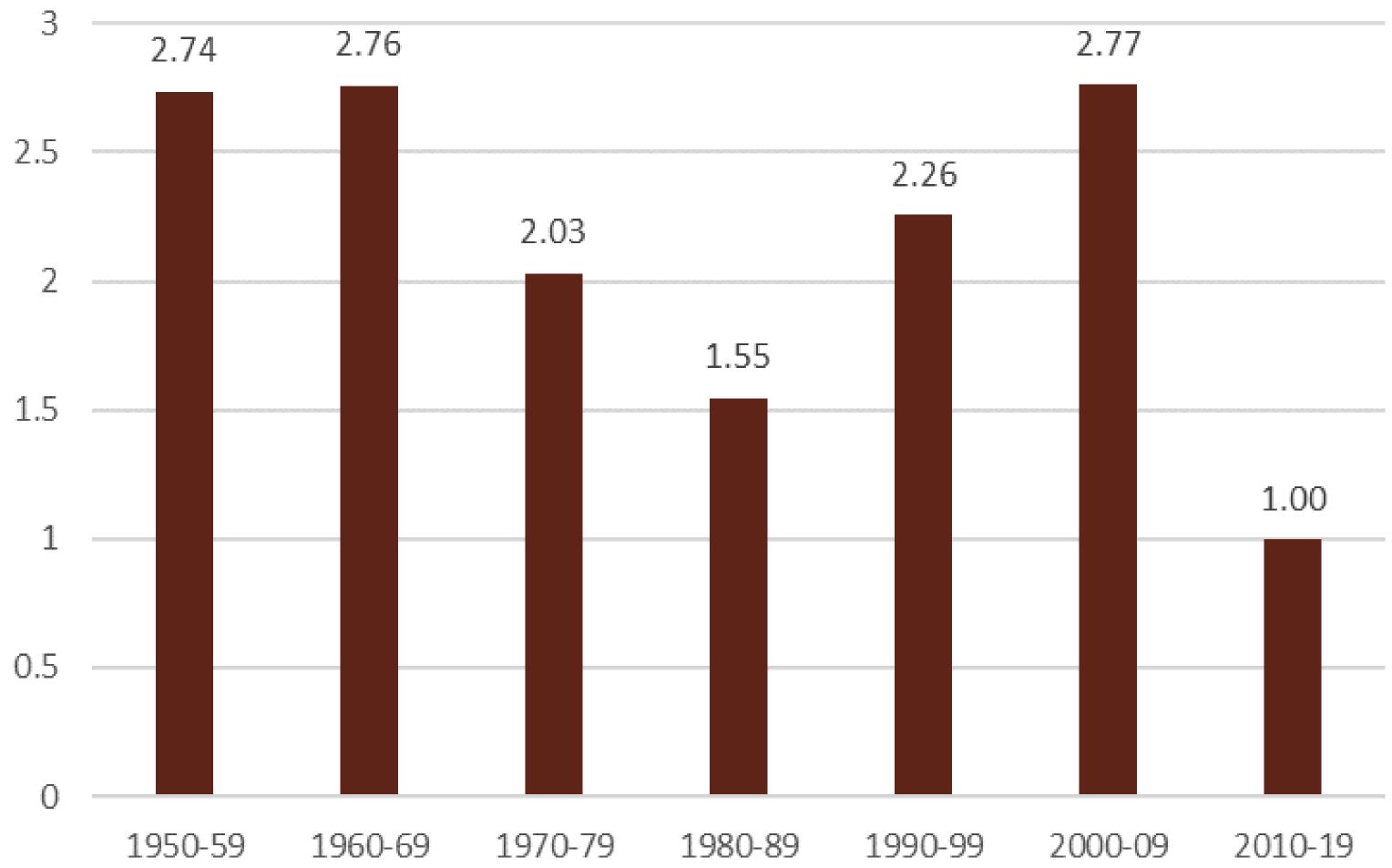


Source: Zippia.com

Big Trends: Productivity

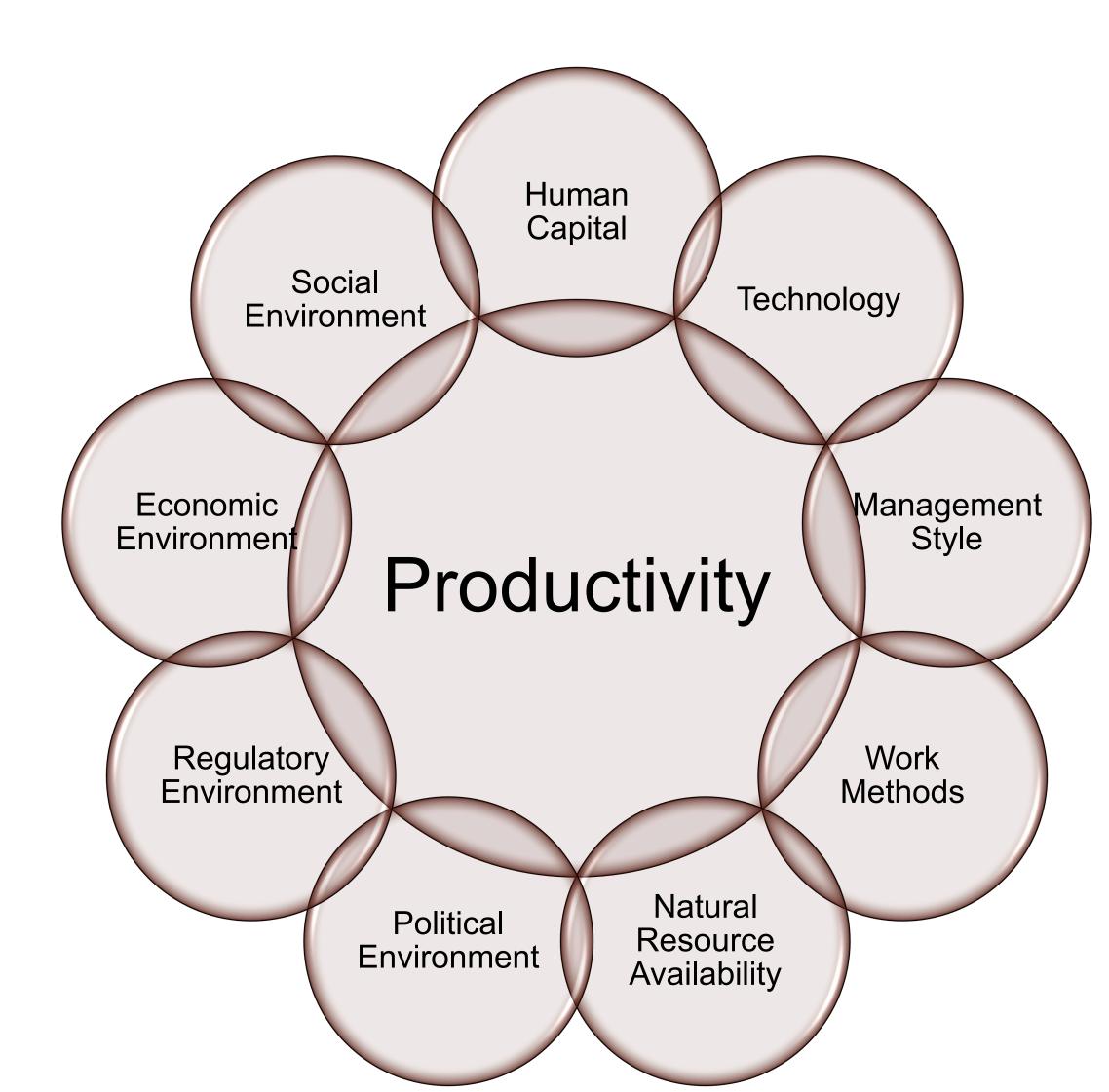


Troubling Trend in Productivity



Source: Bloomberg

Factors Influencing Productivity



Productivity Trends – Human Capital

Health and Aging Regenerative medicine Personalized medicine Training and Education >Mental Health >Workplace Productivity

Productivity Trends – Information Economy

- Digital Economy
 - Digital adoption and access
 - >Automation of simple/repetitive tasks
 - Generation of complex tasks
- >Technology Everywhere
 - Education
 - ≻Healthcare
 - Recreation
 - ≻Travel

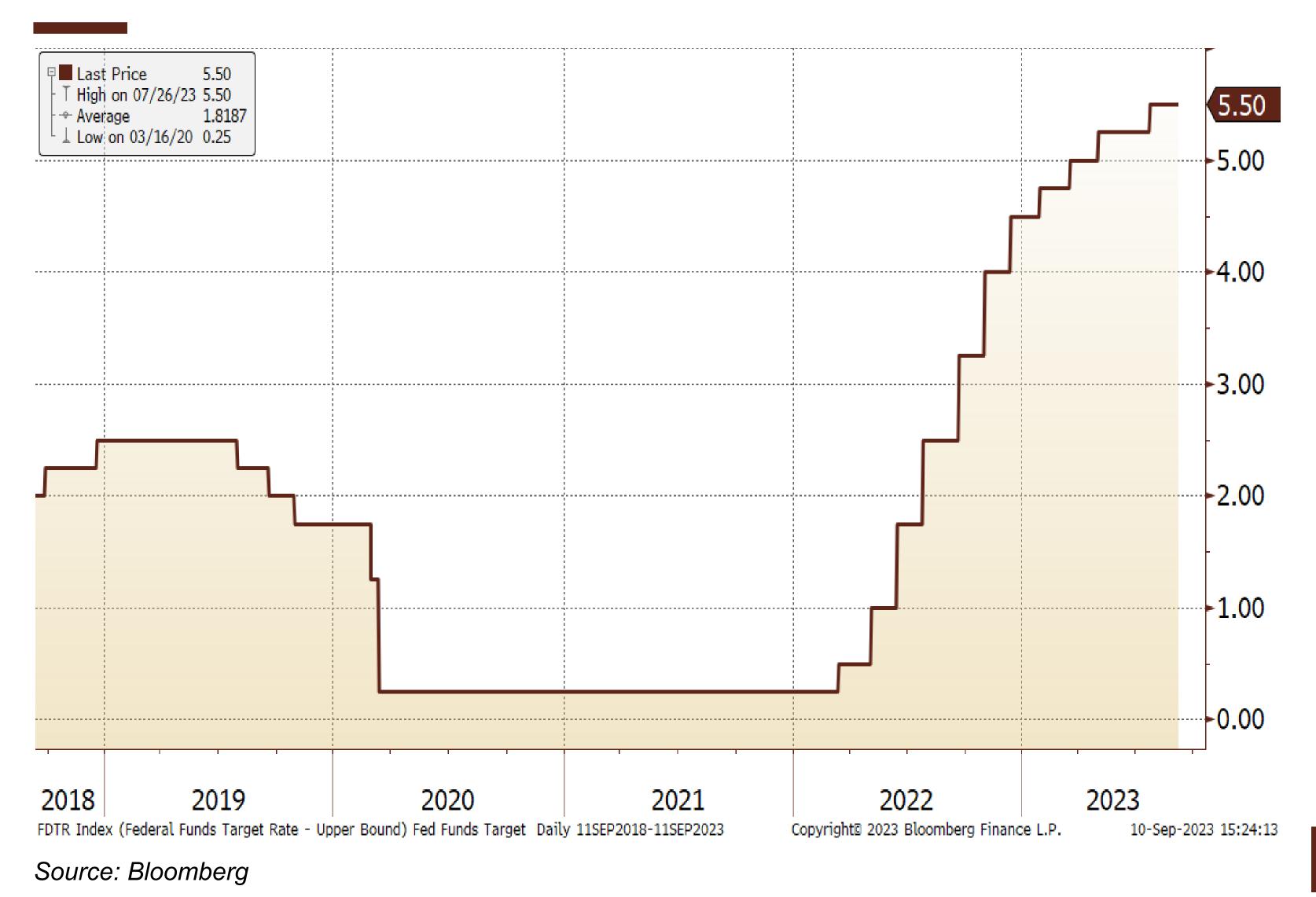
Productivity Trends

Energy Transition
 Electrification
 Sequestration
 Smart Infrastructure
 Internet of Things
 Smart Cities

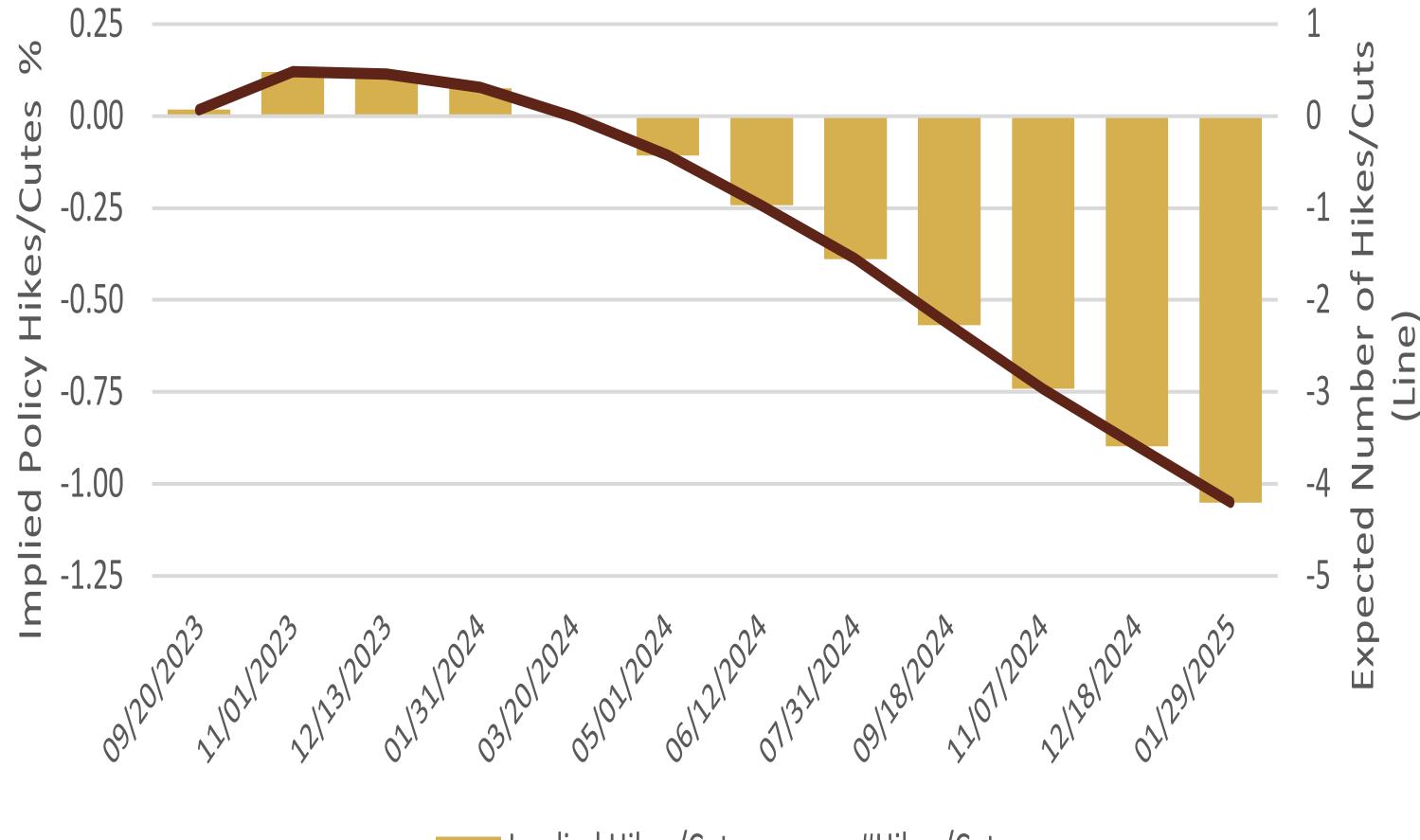
Current Trends: Muddy Water



Fed Funds Target Rate

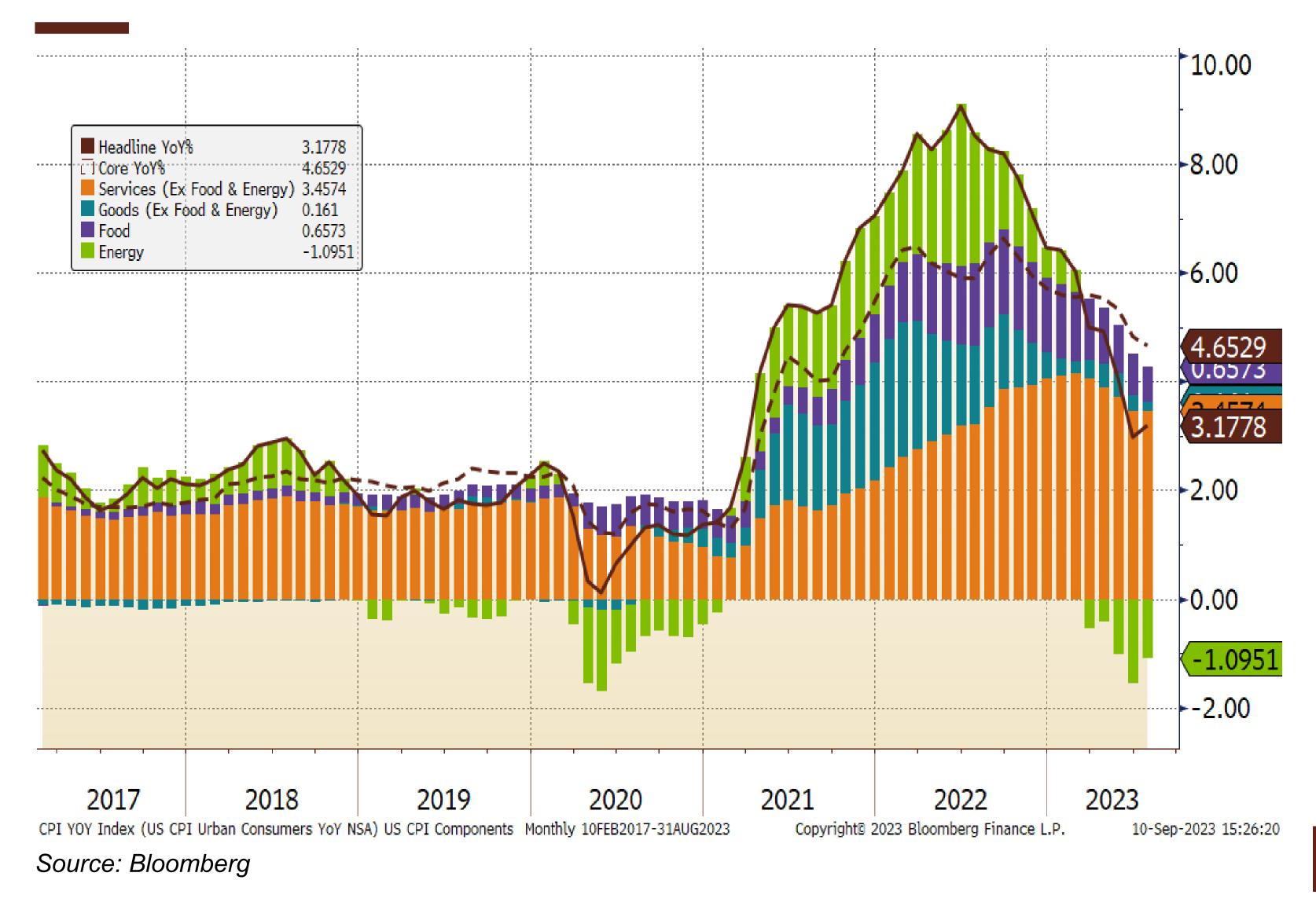


Expected Fed Path

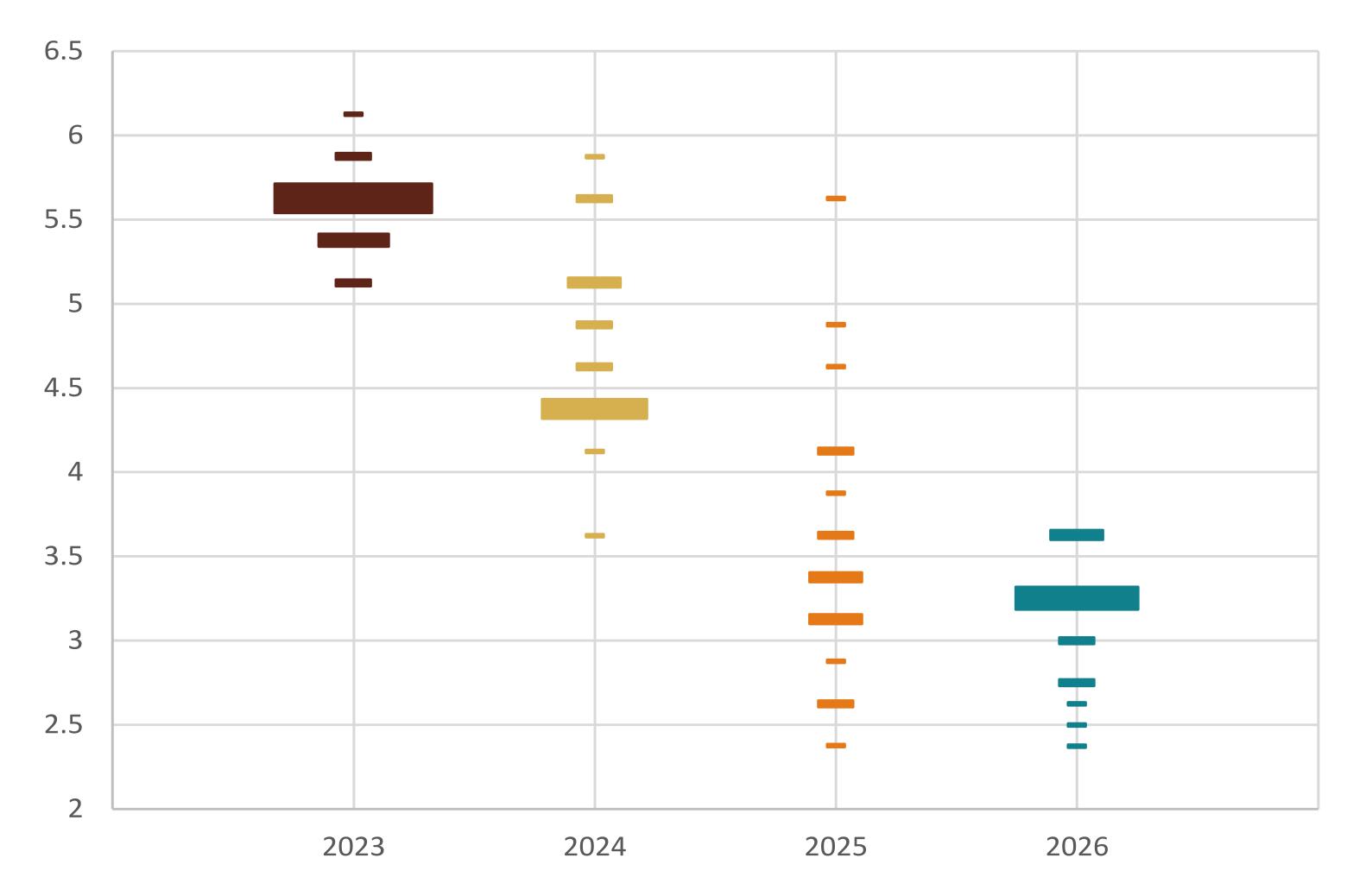


Implied Hikes/Cuts ——#Hikes/Cuts

Components of Inflation



No Victory Lap Just Yet



Source: Bloomberg

Supply Chain Pressure No Longer the Problem



Source: Bloomberg

Brent Crude Creeping Back Up



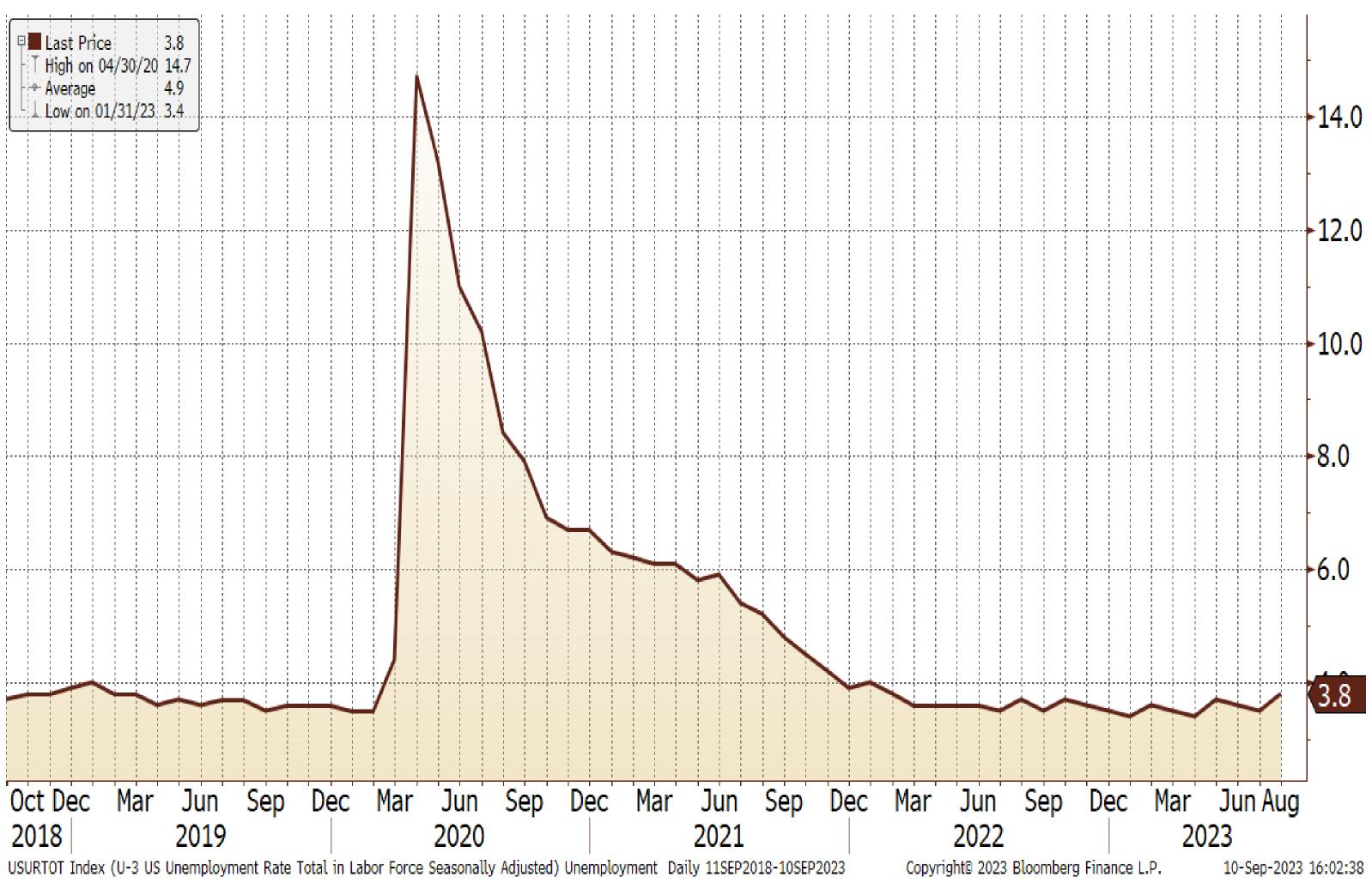
Source: Bloomberg

Wages – The Last Frontier of the Inflation Battle



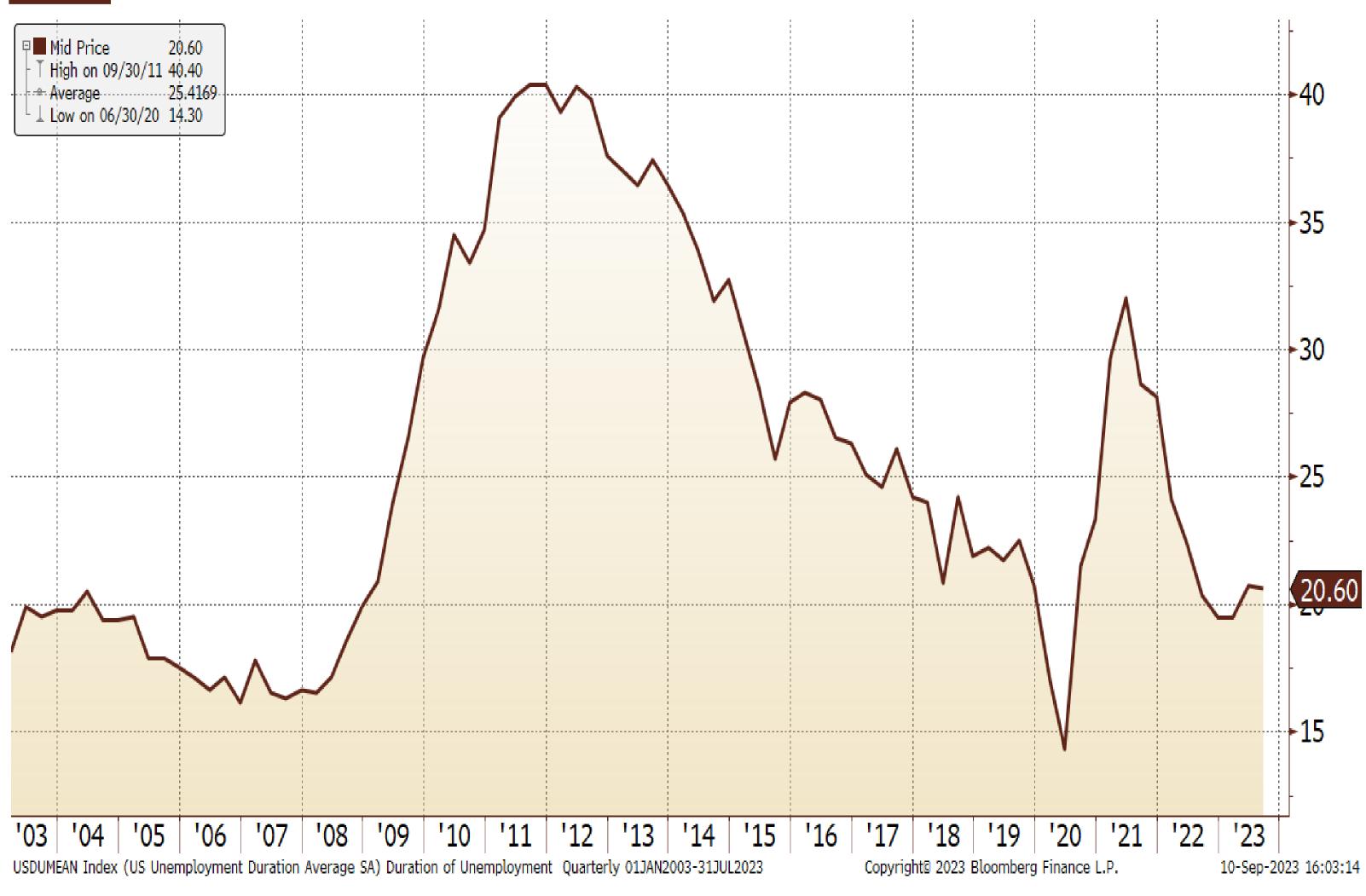
Source: Bloomberg

Unemployment Windmills



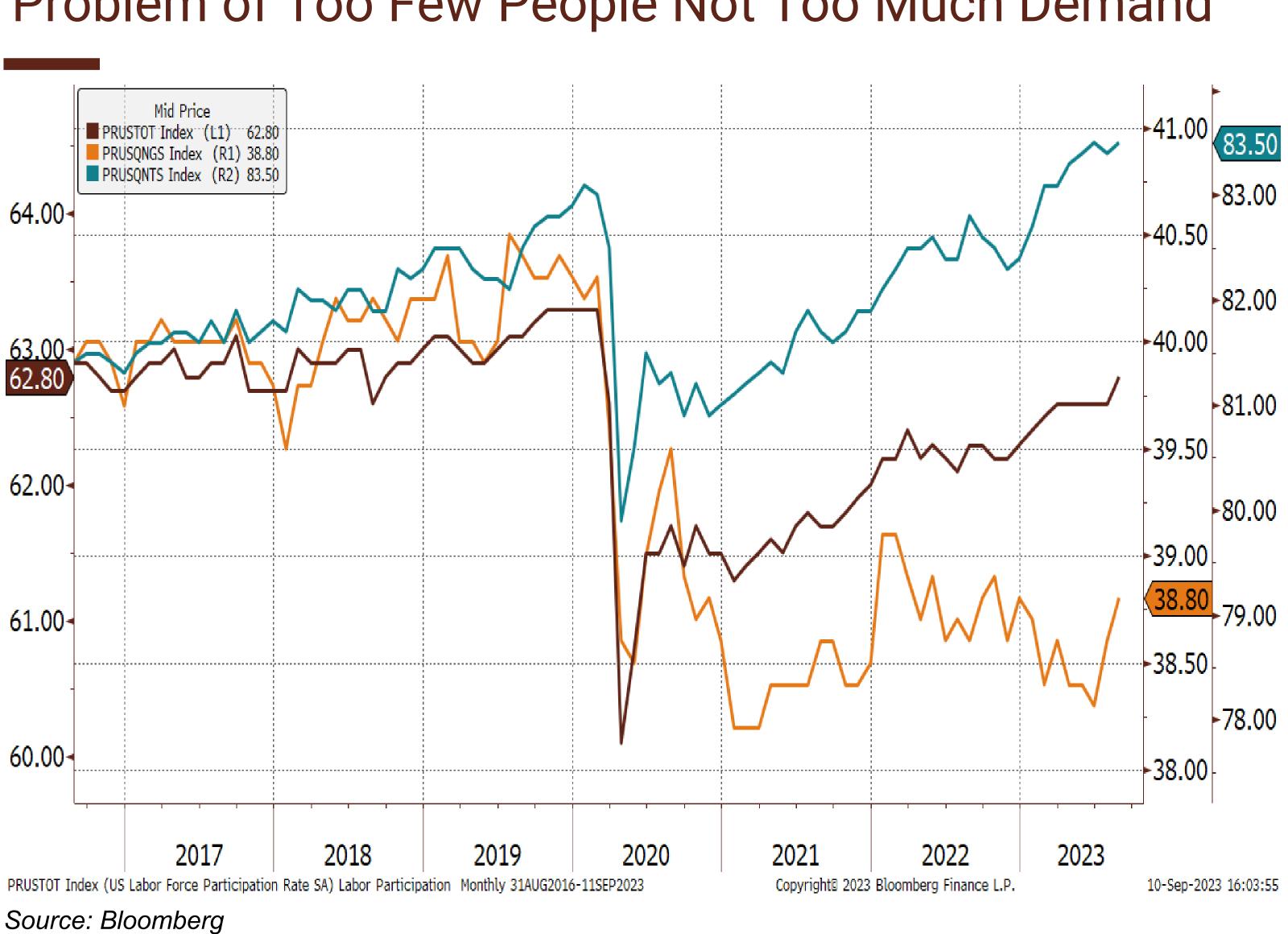
Source: Bloomberg

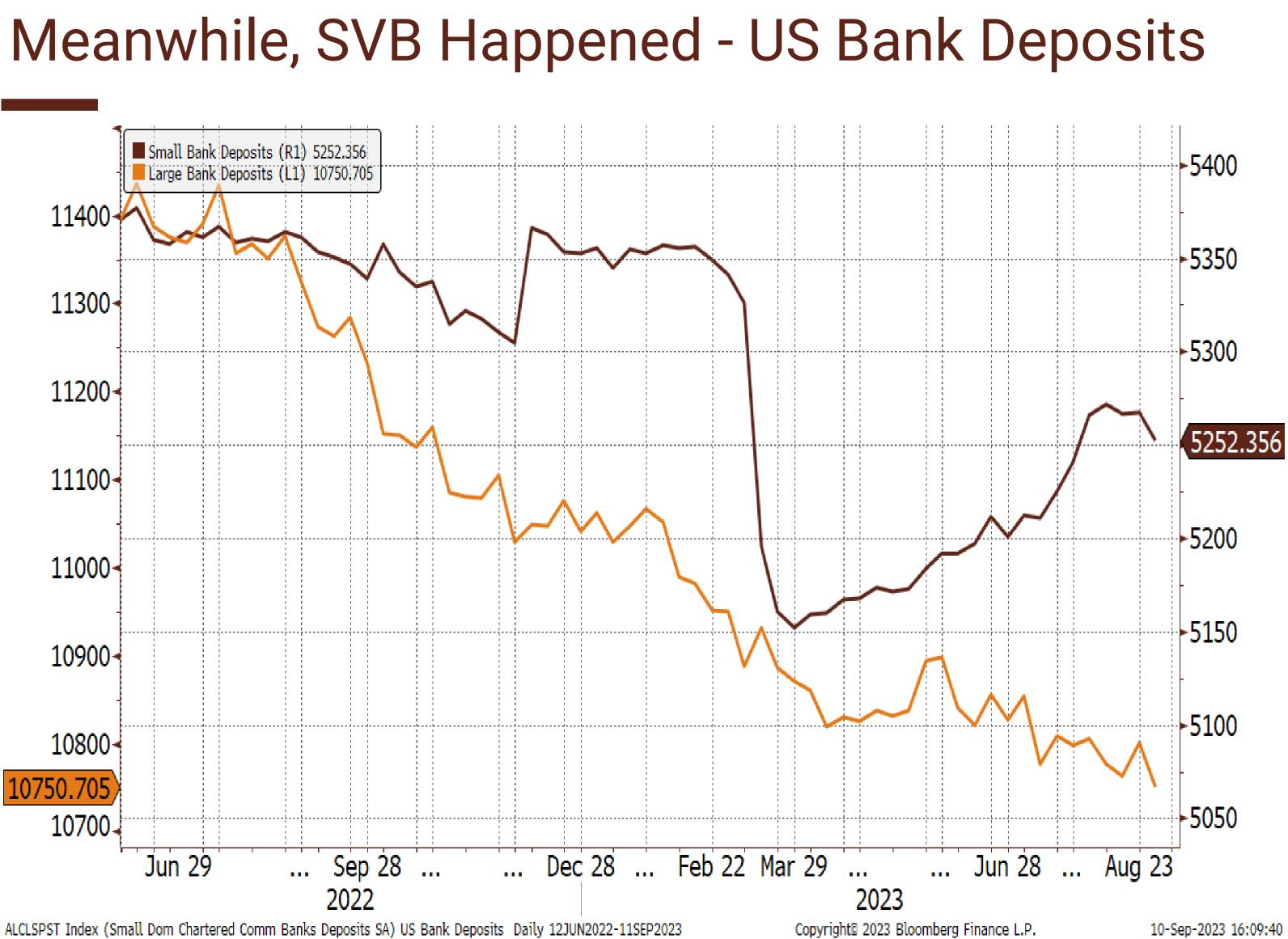
Perplexing Duration of Unemployment



Source: Bloomberg

Problem of Too Few People Not Too Much Demand

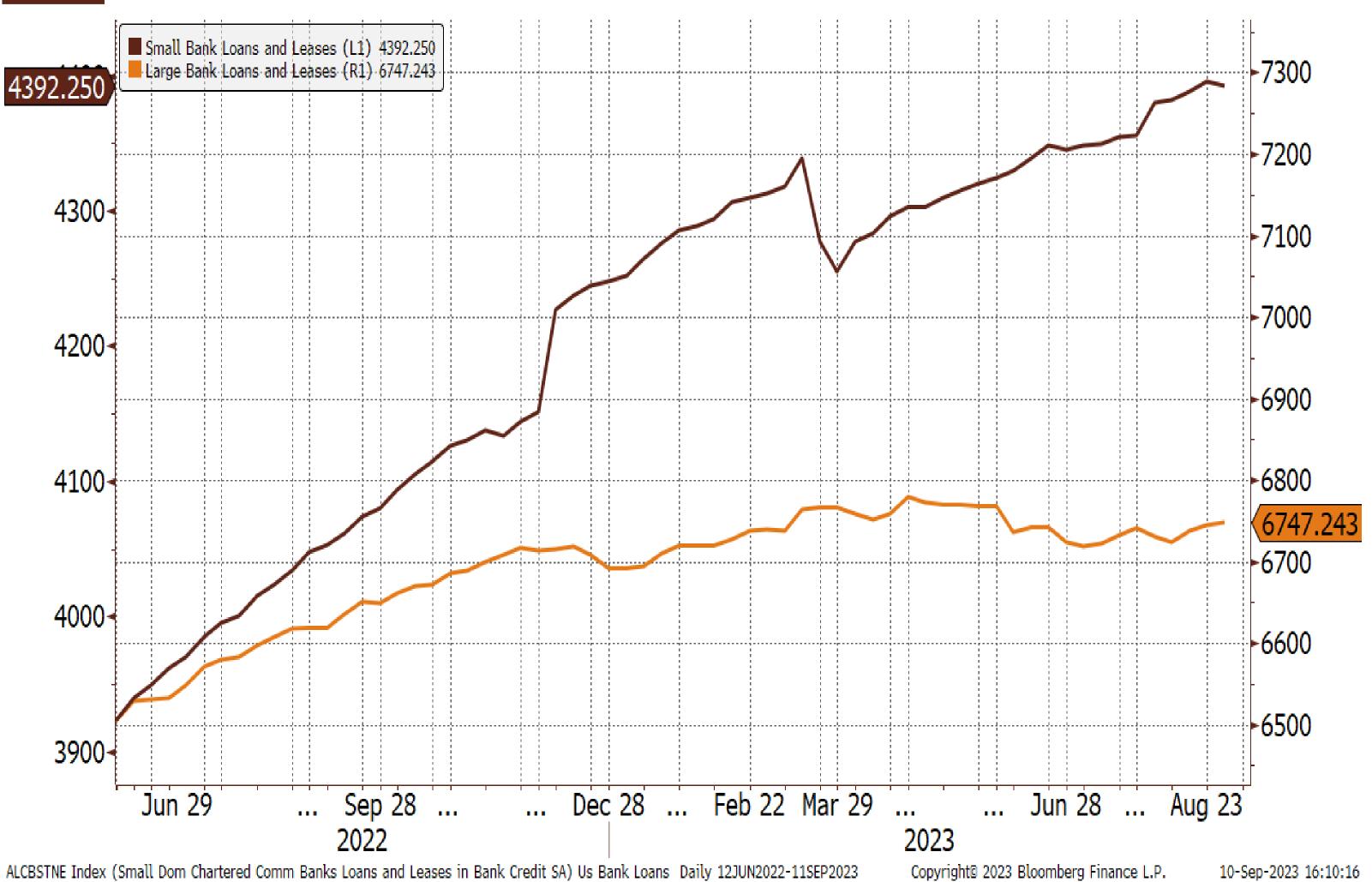




Source: Bloomberg

40

US Bank Loans and Leases



ALCBSTNE Index (Small Dom Chartered Comm Banks Loans and Leases in Bank Credit SA) Us Bank Loans Daily 12JUN2022-11SEP2023

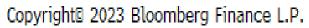
Source: Bloomberg

US Financial Conditions

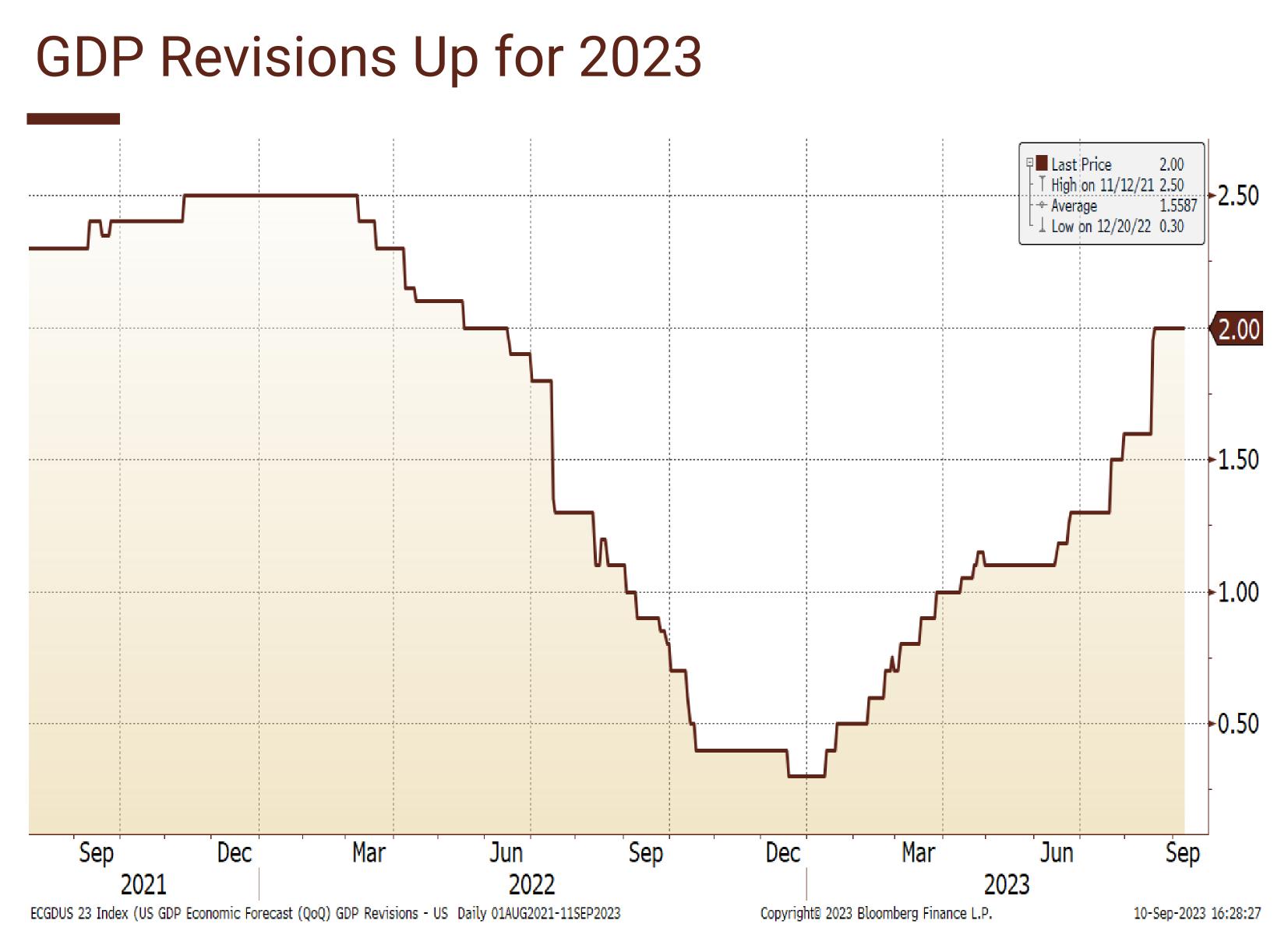


BFCIUS Index (Bloomberg United States Financial Conditions Index) Bloomberg Financial Cond Daily 10SEP2022-11SEP2023

Source: Bloomberg

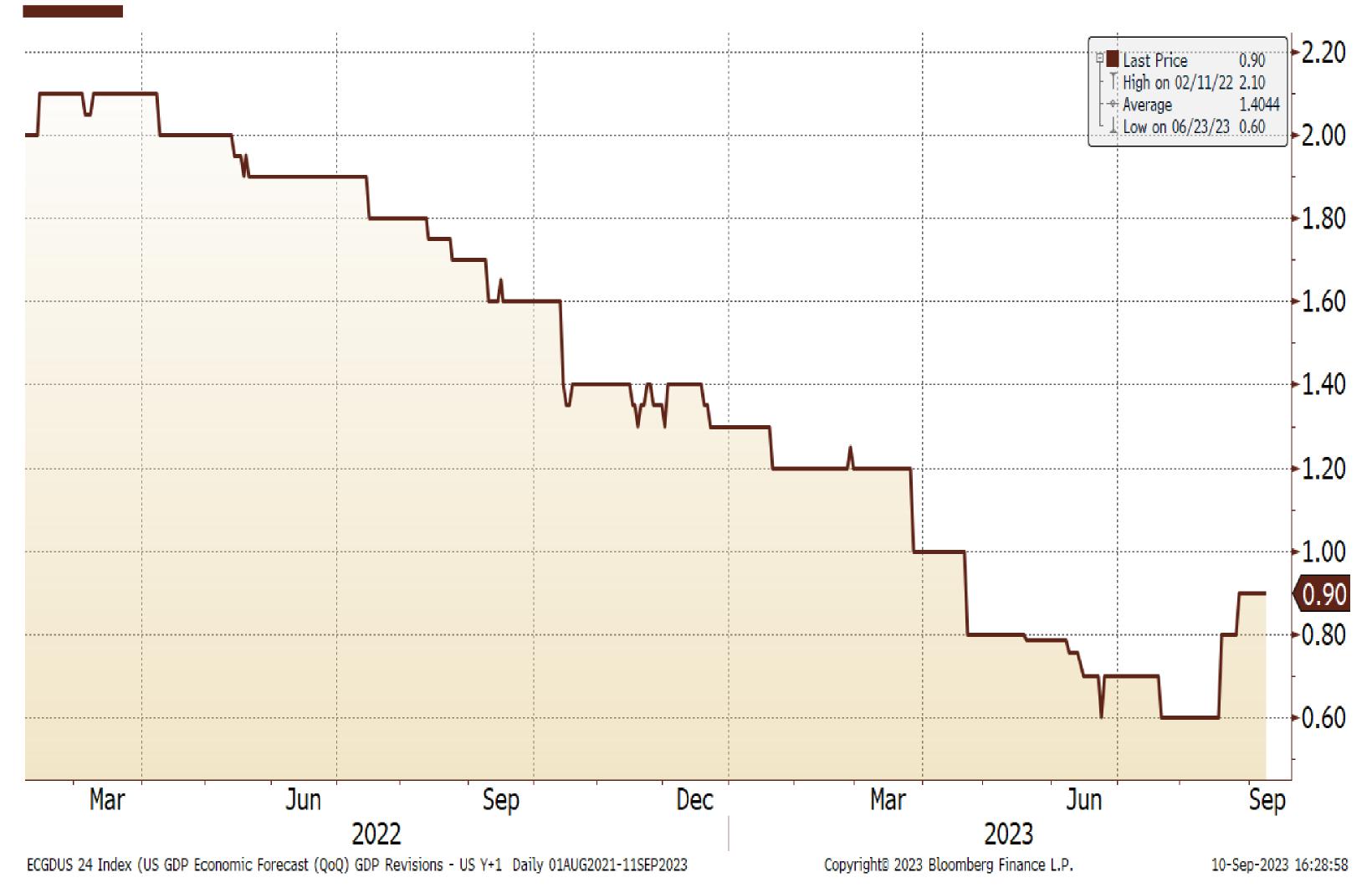


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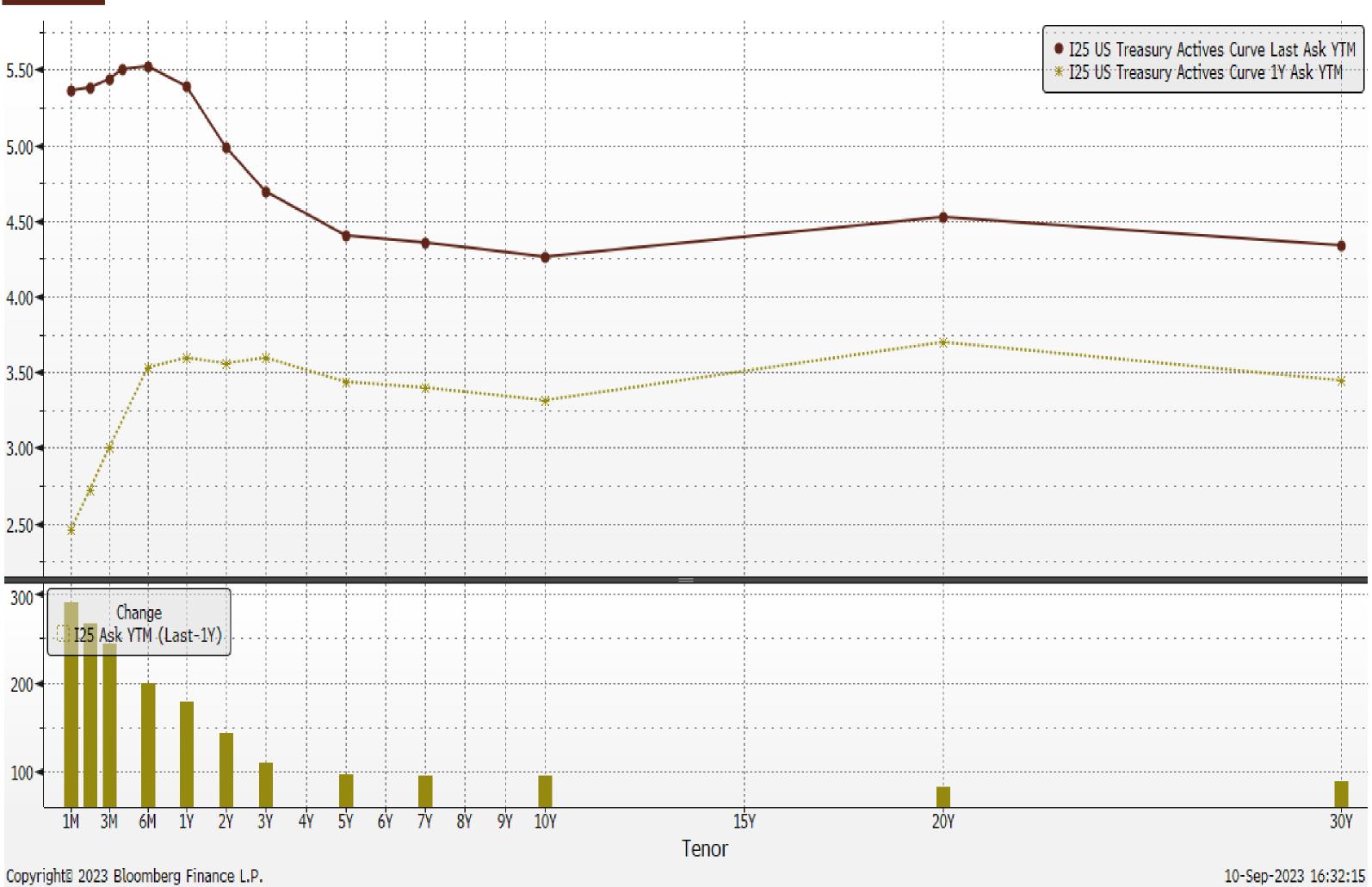
Source: Bloomberg

GDP Revisions Moderating for 2024



Source: Bloomberg

Inverted Yield Curve Persists



Source: Bloomberg

10-Sep-2023 16:32:15

SBCERA Portfolio Review



2022 Manager Survey

Inflation pressures **Higher inflation** supply chain economic growth Fed rate hike recession inflation rates year-end higher rates prices markets peak inflation elevated inflation

Source: Chantico Global SBCERA 2022 Manager Survey

interest rates year global slow down in inflation

2023 Manager Survey



Source: Chantico Global SBCERA 2023 Manager Survey

GDP growth

inflation and higher

2022 Manager Survey Scorecard

Do you believe GDP growth in the United States will be positive Do you believe that GDP growth will be increasing or decreasing from the year prior (2023 should refer to 2022 expectation)?

Do you believe that Inflation (Consumer Price Index) growth v be increasing or decreasing from the prior year (2023 should re to 2022 expectation)?

Do you believe the yield on the U.S.10 Year Treasury will rise c relative to the yield at year-end of the prior year (2023 should refer to 2022 expectation)?

Will the U.S. Treasury Yield Curve steepen or flatten compared the prior year (2023 should refer to 2022 expectation)? Will the Fed Balance Sheet increase or decrease relative to the year prior (2023 should refer to 2022 expectation)? Will Money Velocity (Change in GDP/Change in M2 Money Sup rise or fall relative to the prior year (2023 should refer to 2022 expectation)?

Source: Chantico Global SBCERA 2022 Manager Survey

| | 2022 | 2023 |
|---------|--------------|--------------|
| ve? | \checkmark | \checkmark |
| ng | V | * |
| will | | |
| efer | | |
| | × | V |
| or fall | | |
| | | |
| | \checkmark | × |
| d to | | |
| | \checkmark | \checkmark |
| е | _ | _ |
| | \checkmark | \checkmark |
| pply) | | |
| | × | × |
| | | |

2022 Manager Survey Scorecard

Will asset price inflation (money supply growth in excess of inflation growth) be positive or negative? Will Earnings growth be positive or negative compared to the year prior (2023 should refer to 2022 expectation)? Will Earnings growth increase or decrease compared to the year prior (2023 should refer to 2022 expectation)? Will wage growth increase or decrease relative to the prior year (2023 should refer to 2022 expectation)?

Will a basket of commodity prices increase or decrease from the prior year (2023 should refer to 2022 expectation)? Will the West Texas Intermediate Crude Oil spot price be above the previous three-year average or below the previous three-year average at year end?

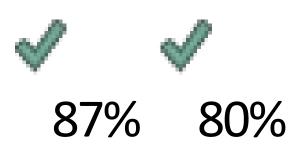
Will the growth global trade volume increase or decrease relative to the prior year (2023 should refer to 2022 expectation)? Will the U.S. dollar strengthen or weaken against a basket of global currencies relative to the prior year-end (2023 should refer to 2022 expectation)?

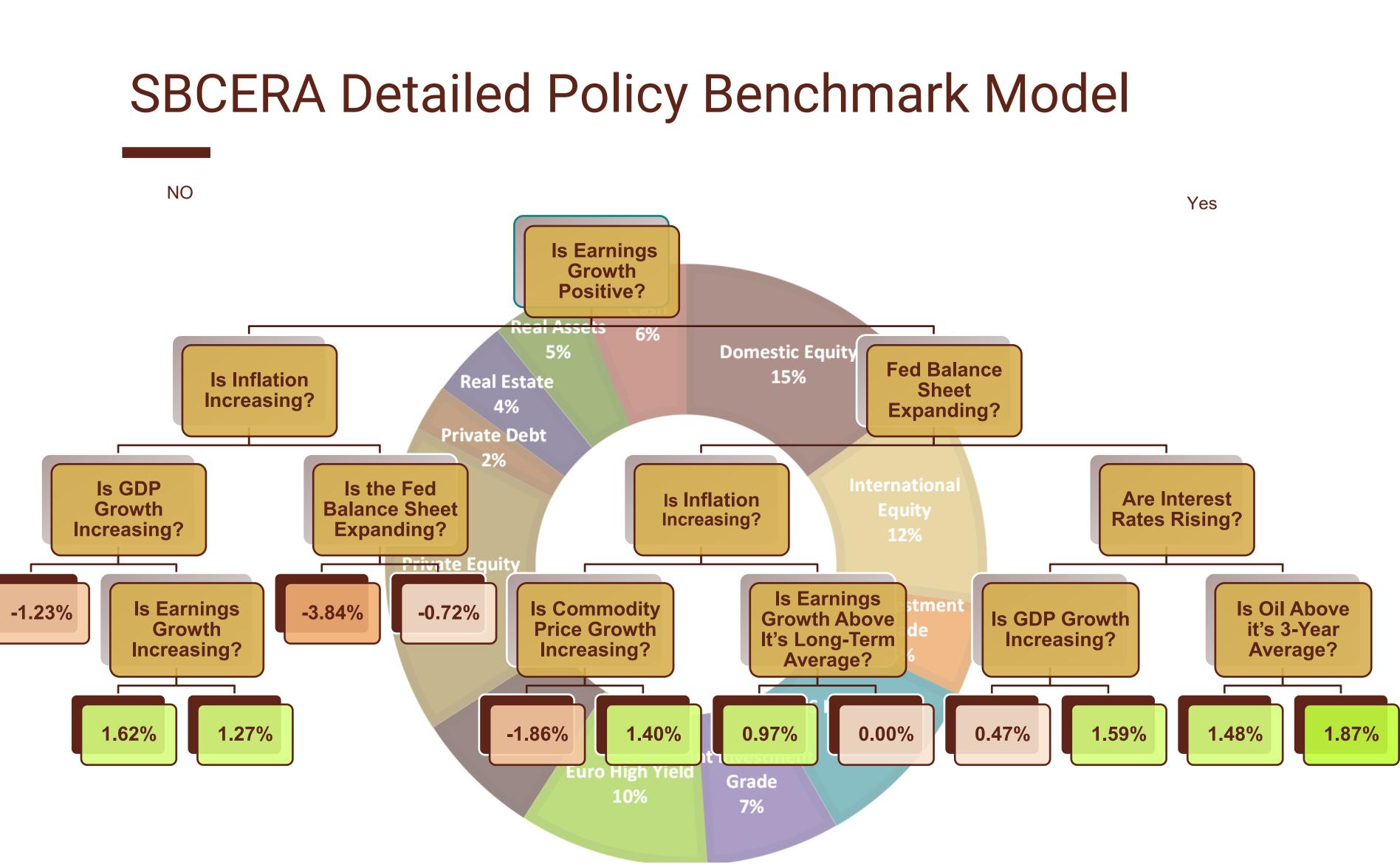
Source: Chantico Global SBCERA 2022 Manager Survey



2022 2023





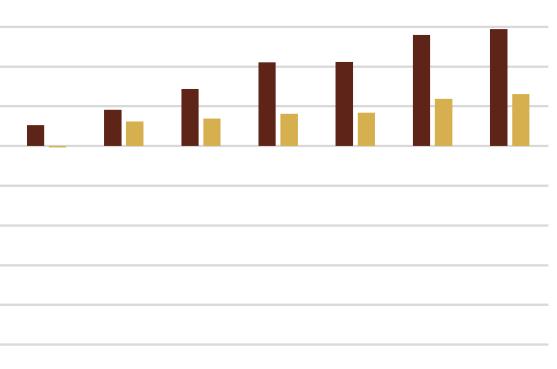


-20% to -16.6% to -9.7% to -6.3% -6.3% to -2.9% to 0.5% to 4%

2022 Model Results

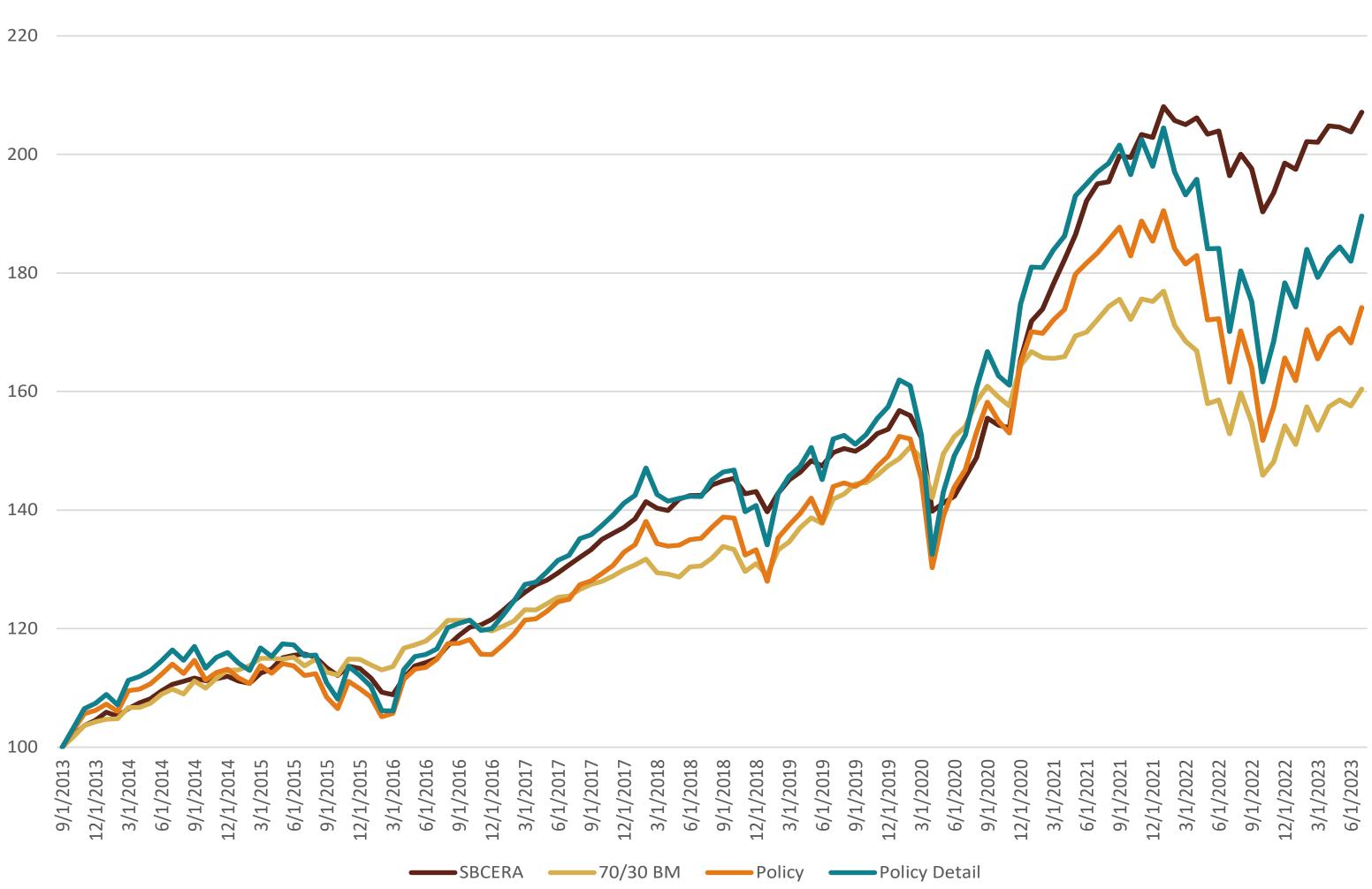
| | Detailed Policy Benchmark | | 70/30 Benchmark | SBCERA Portfolio Return | ZScore | Rates (Rising) | GDP (Growing) | CPI (Increasing) | S&P Earnings (Positive) | Oil (Above Average) | Commoditi es (Growing) | Balance Sheet |
|----------|---------------------------------|--------------------|-----------------------------|-------------------------------|--------|-------------------|------------------|---------------------|-------------------------------|------------------------|------------------------------|------------------|
| | | | | | | | | | | | | (Expanding) |
| 2022-08 | -2.83% | -3.60% | -3.10% | -1.20% | -2 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 2022-09 | -7.78% | -7.53% | -5.81% | -3.70% | -3 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 2022-10 | 4.22% | 3.68% | 1.55% | 1.68% | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 2022-11 | 5.89% | 5.30% | 4.14% | 2.61% | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 2022-12 | -2.31% | -2.33% | -2.07% | -0.54% | -1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 2023-01 | 5.60% | 5.33% | 4.22% | 2.38% | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 2023-02 | -2.59% | -2.90% | -2.51% | -0.07% | -1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 2023-03 | 1.82% | 2.30% | 2.58% | 1.37% | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 2023-04 | 1.05% | 0.84% | 0.74% | -0.10% | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 2023-05 | -1.33% | -1.47% | -0.65% | -0.38% | -1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 2023-06 | 4.21% | 3.55% | 1.80% | 1.62% | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 2023-07 | 2.87% | 2.62% | 1.03% | 1.24% | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| | | Level 1 Level 2 | | 8.00% 6.00% | | | | | | | | |
| | | Level 3 | | 4.00% | | | | | | | | |
| | | Level 4 | | 2.00% | | | | | . | | I. II | |
| | | | | 0.00% | | | | | | | | |
| | | | | -2.00% | | | | | | | | |
| | size and sig | | 9 75.00% | -4.00% | | | | | | | | |
| Correct | - | | 1 8.33% | 0.0070 | | | | | | | | |
| Incorrec | t | 1 | 2 16.67% 2 83.33% | -0.0070 | | | | | | | | |

Detailed Policy Benchmark



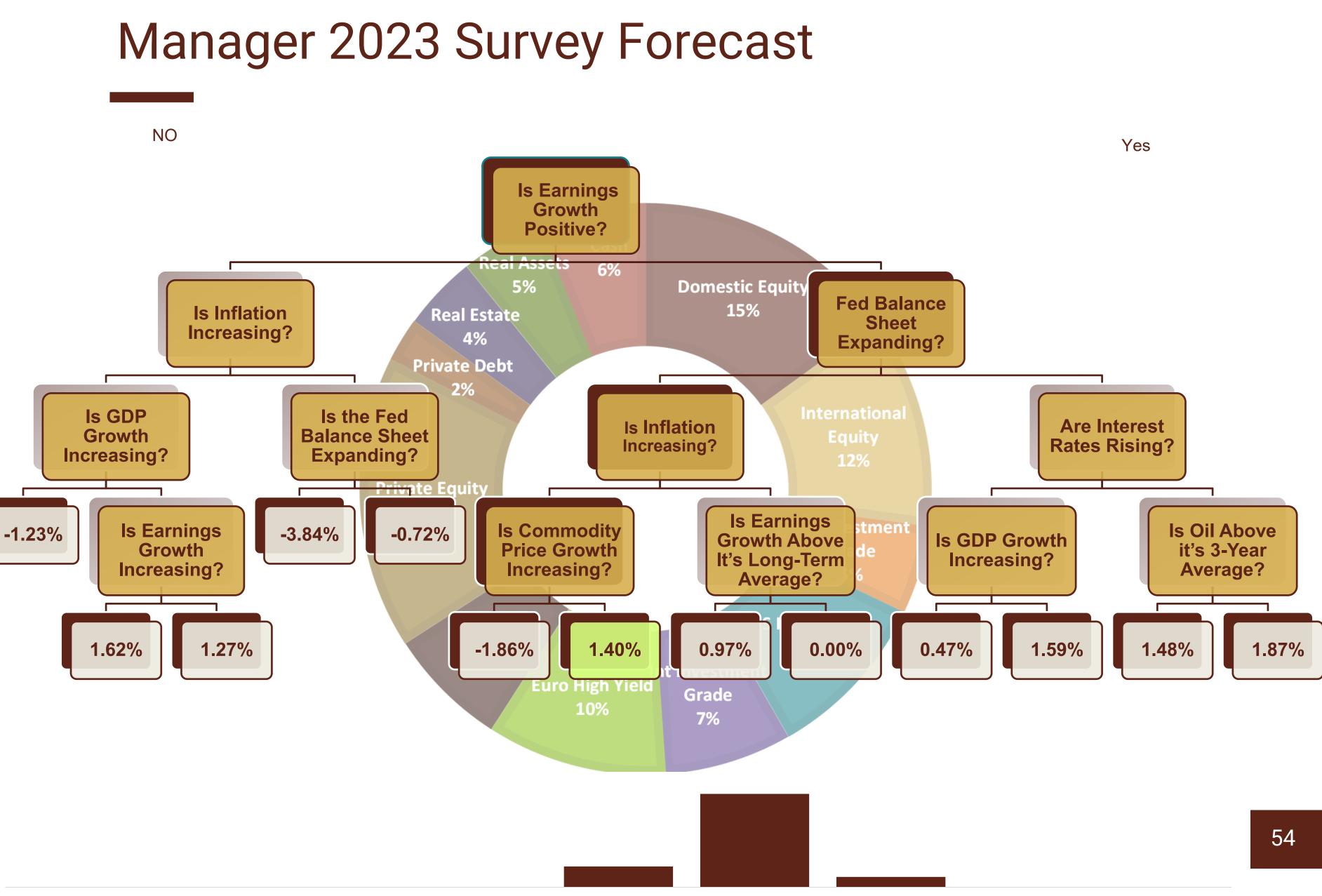


SBCERA Long Term Results

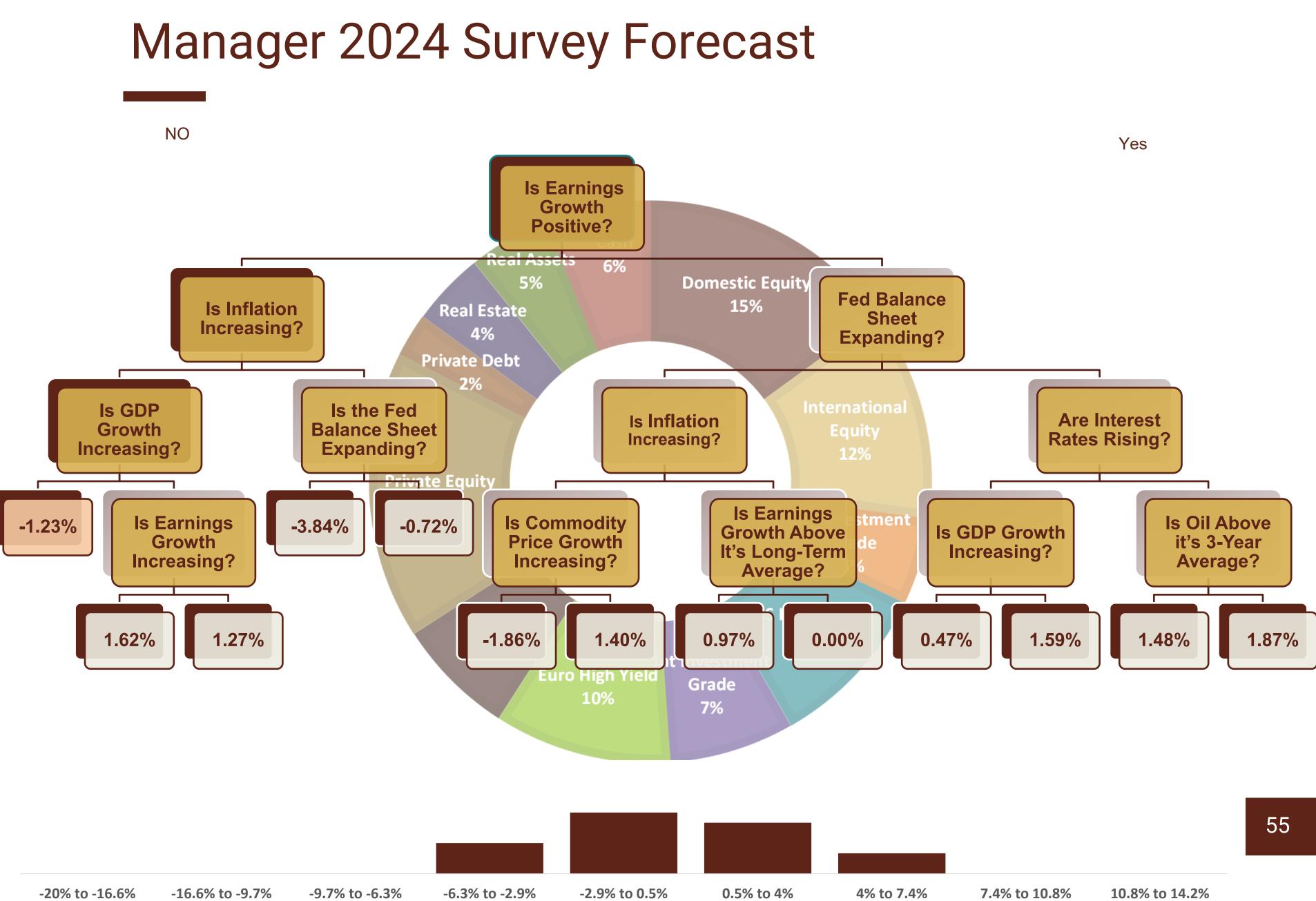


Source: Chantico Global, State Street

53



0.5% to 4%



Appendix: Manager Survey

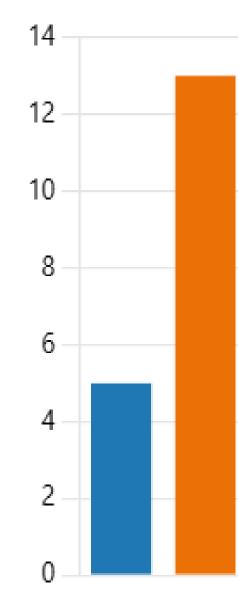


Respondents

2. What is your role?

More Details

| Chief Investment Officer | 5 |
|--------------------------|----|
| Portfolio Manager | 13 |
| Portfolio Analyst | 0 |
| Fund Strategist | 2 |
| Fund Economist | 0 |
| Relationship Manager | 3 |
| SBCERA Staff | 0 |
| SBCERA Trustee | 0 |

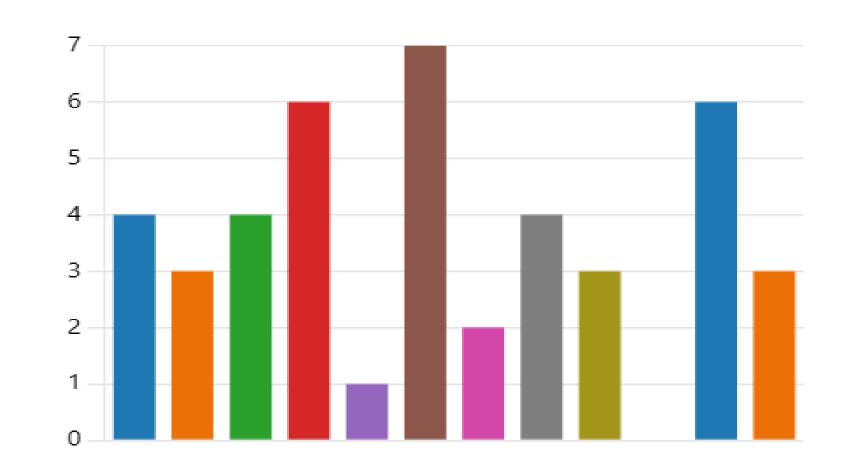


Respondents

3. Please select your asset class (Please select all that apply)

More Details

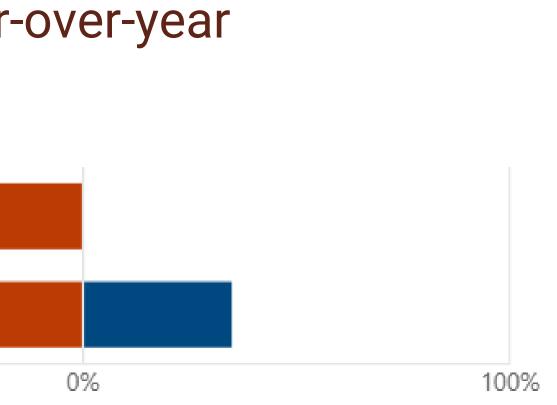


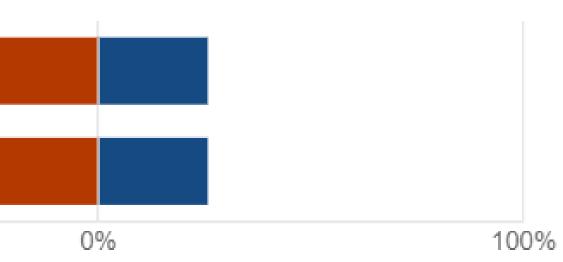




Do you believe GDP growth in the United States will be positive? For reference: 2022 GDP Growth = 2.1%, year-over-year

| Positive Negative | | |
|-------------------|------|--|
| 2023 | | |
| 2024 | | |
| | 100% | |
| August 2022: | | |
| Positive Negative | | |
| 2022 | | |
| 2023 | | |
| | 100% | |





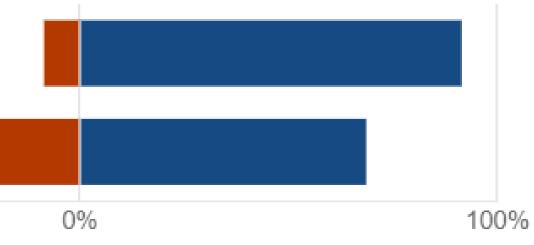


Do you believe that GDP growth will be increasing or decreasing from the year prior (2023 should refer to 2022 expectation)?

| Increasing Decreasing | |
|-----------------------|------|
| 2023 | |
| 2024 | |
| | 100% |
| August 2022: | |
| Increasing Decreasing | |
| 2022 | |
| 2023 | |

100%

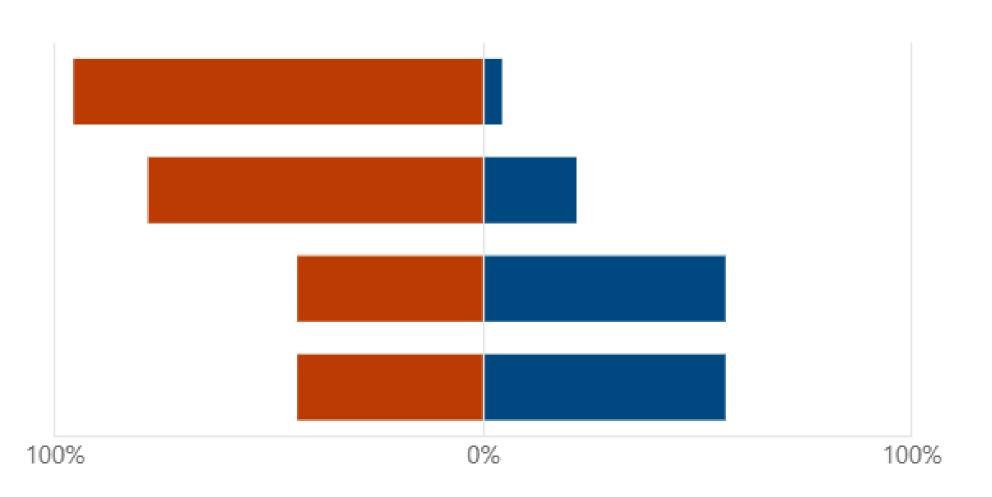




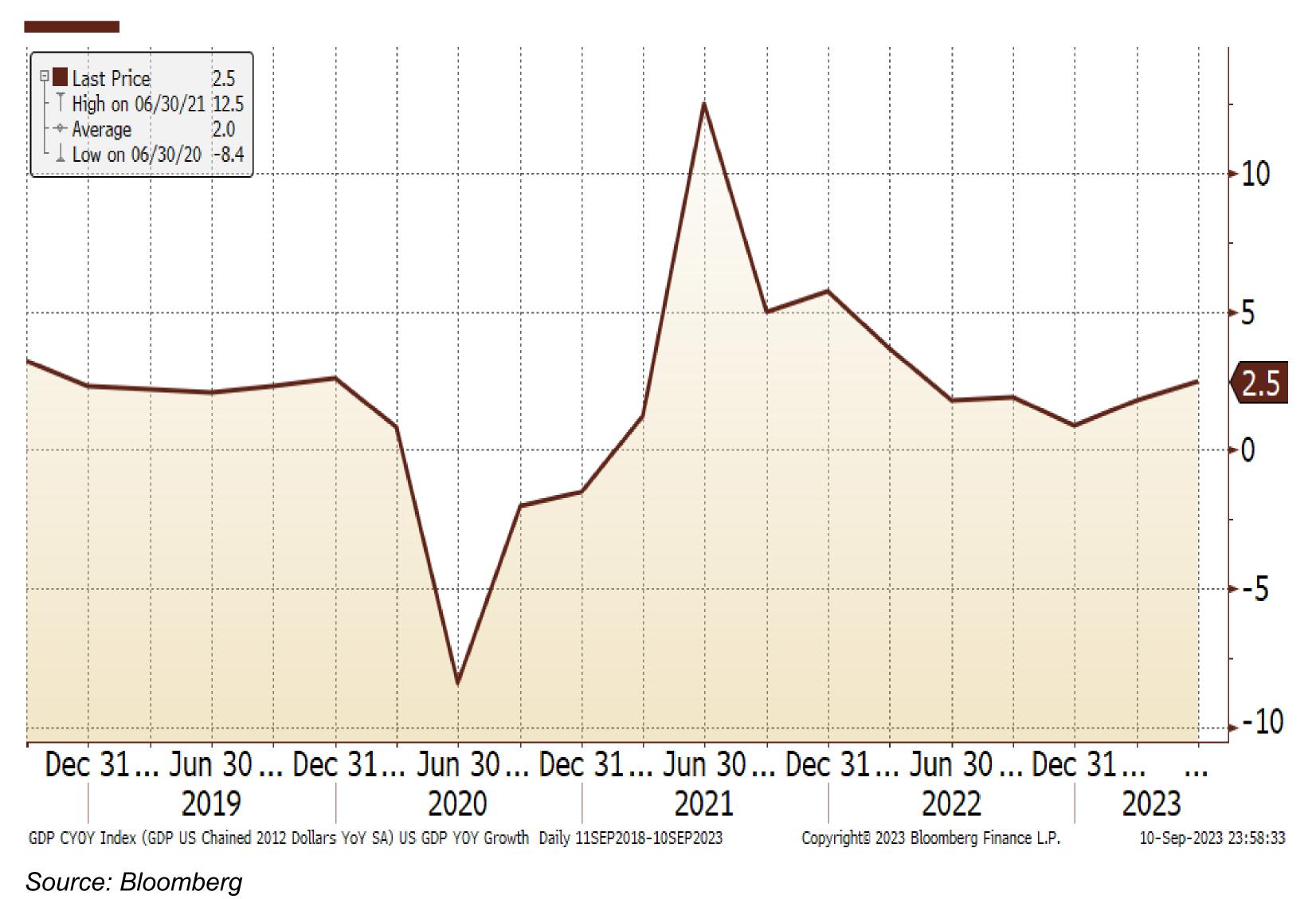


Do you believe that quarterly GDP growth will be positive the next four quarters? For reference: Most recent quarterly GDP data: 22Q2: -0.6%, 22Q3: 3.2%, 22Q4: 2.6%, 23Q1: 1.3%

Positive Negative 2023 - Q2 2023 - Q3 2023 - Q4 2024 - Q1









Do you believe the yield on the U.S.10 Year Treasury will rise or fall relative to the yield at year-end of the prior year? For reference: the U.S. 10 Year Treasury yield at year-end 2022 was 3.875%

| Rise Fall | |
|--------------|------|
| 2023 | |
| 2024 | |
| | 100% |
| August 2022: | |
| Rise Fall | |
| 2022 | |
| 2023 | |
| | 100% |





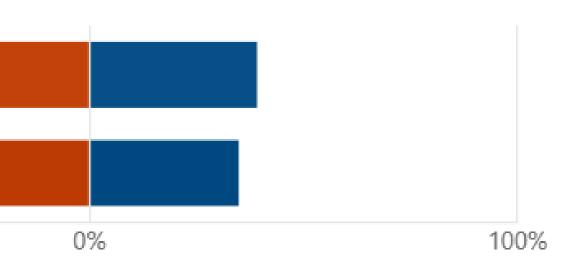
US 10 Yield

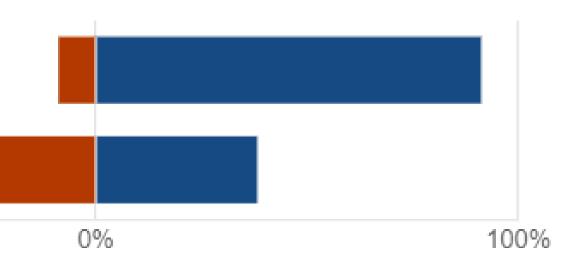




Will the U.S. Treasury Yield Curve steepen or flatten compared to the prior year (2024) should refer to 2023 expectation)? For reference: at year-end 2022, the difference between the 10 Year yield and the 2 Year yield was -55 bps

| Steepen | Flatten | | | |
|-----------|---------|----|-----|--|
| 2023 | | | | |
| 2024 | | | | |
| | | 10 |)0% | |
| August 20 | 022: | | | |
| Steepen | Flatten | | | |
| 2022 | | | | |
| 2023 | | | | |
| | | 1 | 00% | |

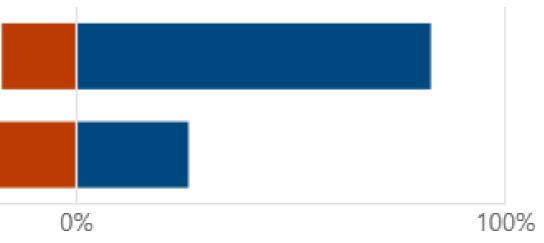




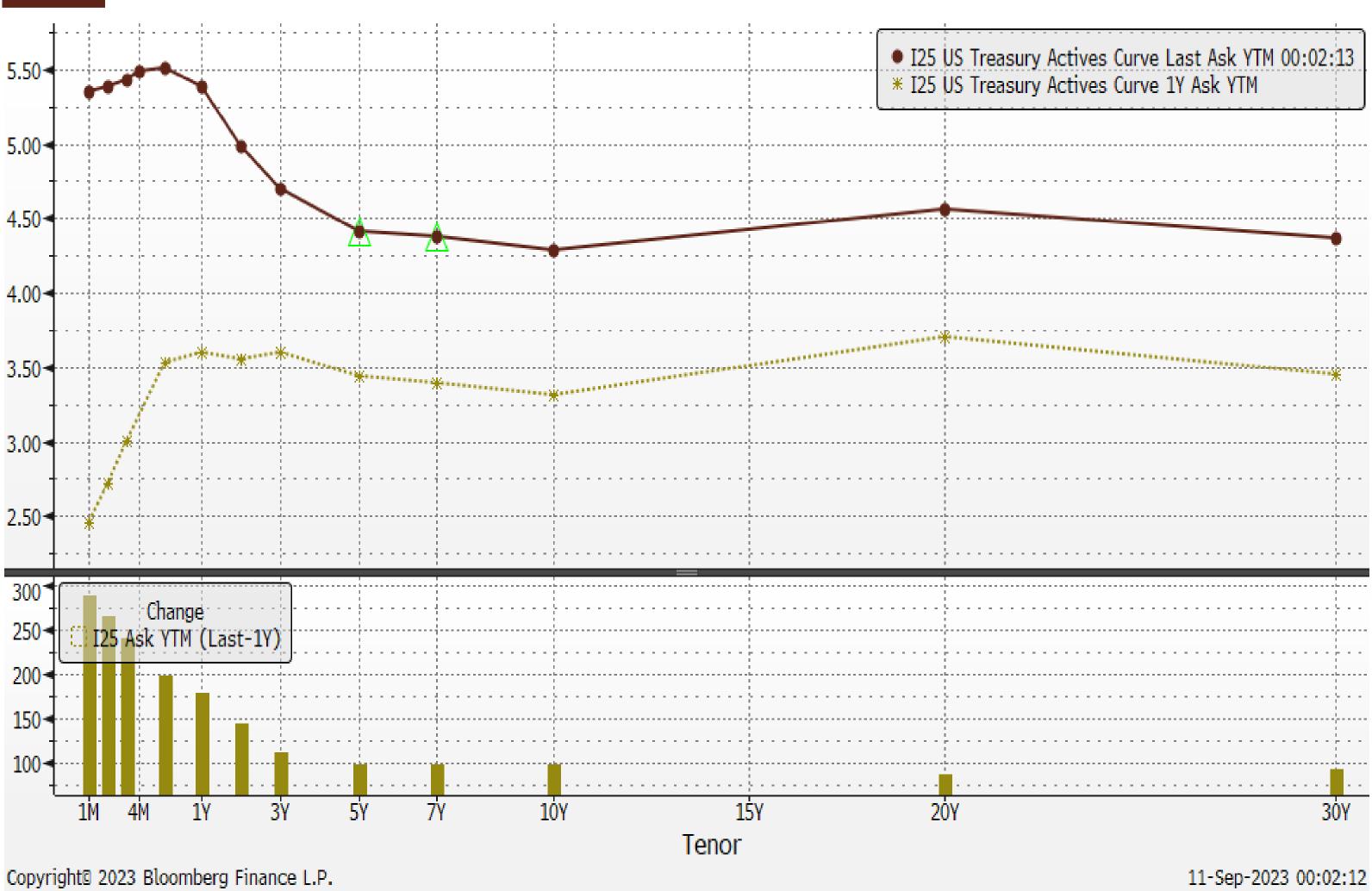


Will the U.S. Treasury Yield Curve be normal or inverted ? For reference: at year-end 2022, the yield curve was inverted

| Normal | Inverted | | | |
|--------|----------|----|----|--|
| | | | | |
| 2023 | | | | |
| 2024 | | | | |
| | | 10 | 0% | |



US Yield Curve



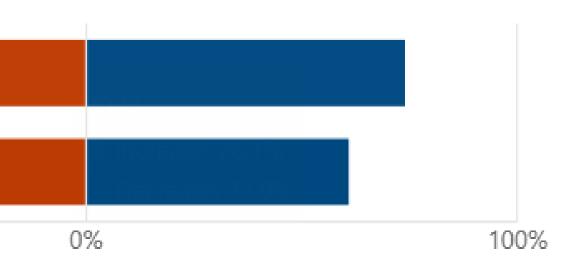
Source: Bloomberg

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Fed Balance Sheet

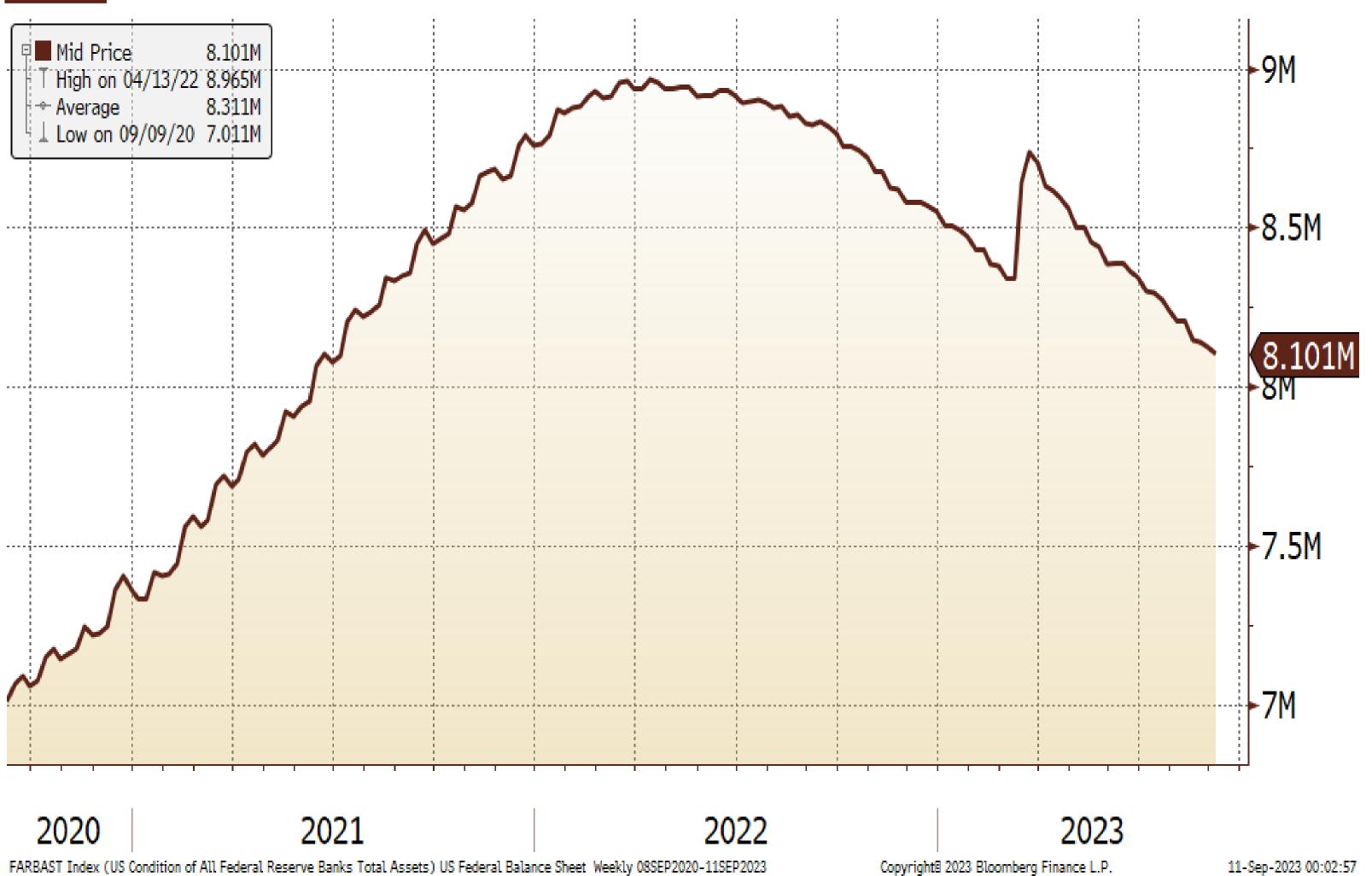
Will the Fed Balance Sheet increase or decrease relative to the year prior (2023 should refer to 2022 expectation)? For reference: as of year-end 2022, the Federal Research Balance Sheet totaled \$8.55 trillion.

| Increase | |
|-------------------|------|
| 2023 | |
| 2024 | |
| | 100% |
| August 2022: | |
| Increase Decrease | |
| 2022 | |
| 2023 | |
| | 100% |





US Fed Balance Sheet



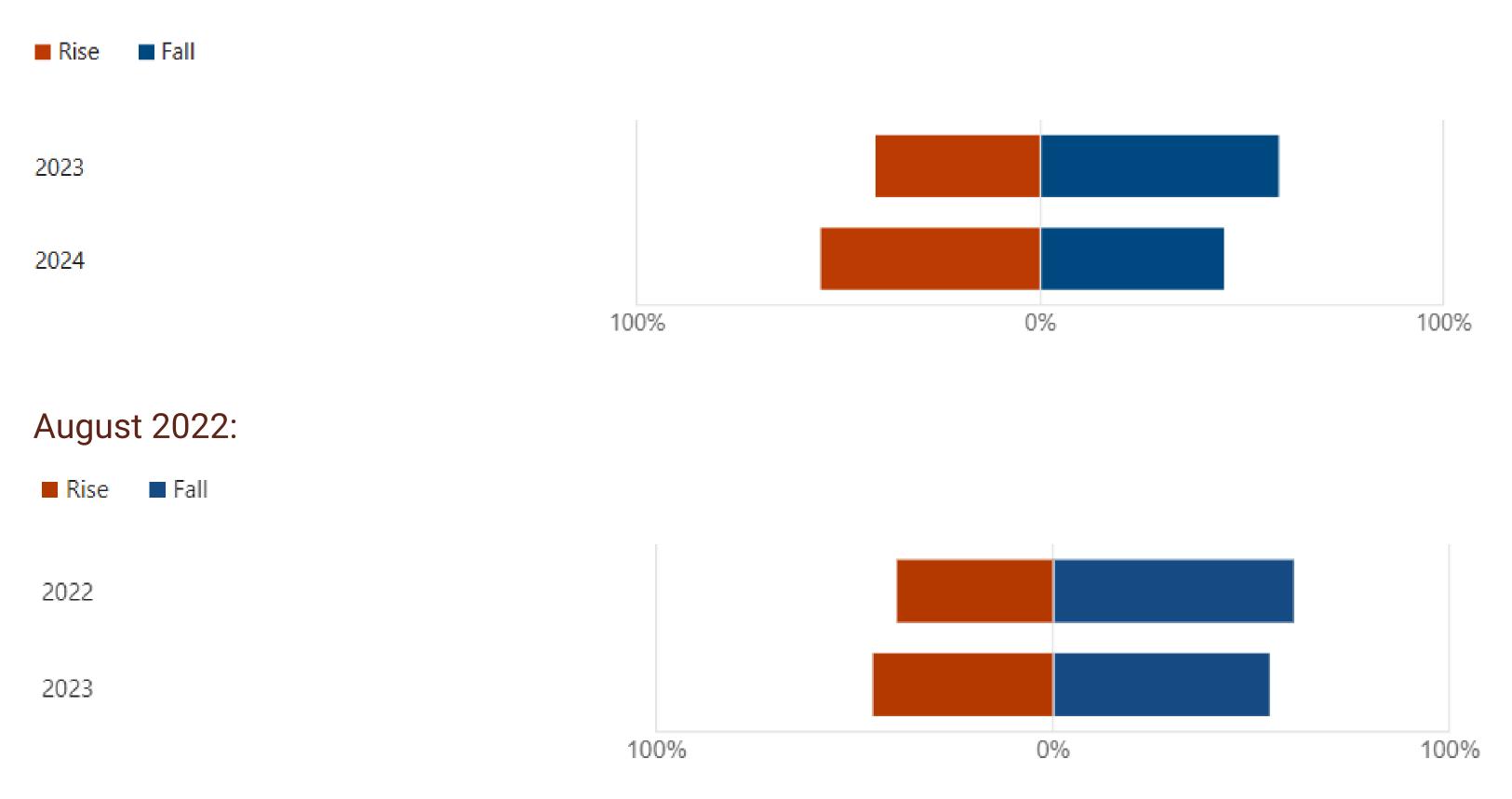
Source: Bloomberg

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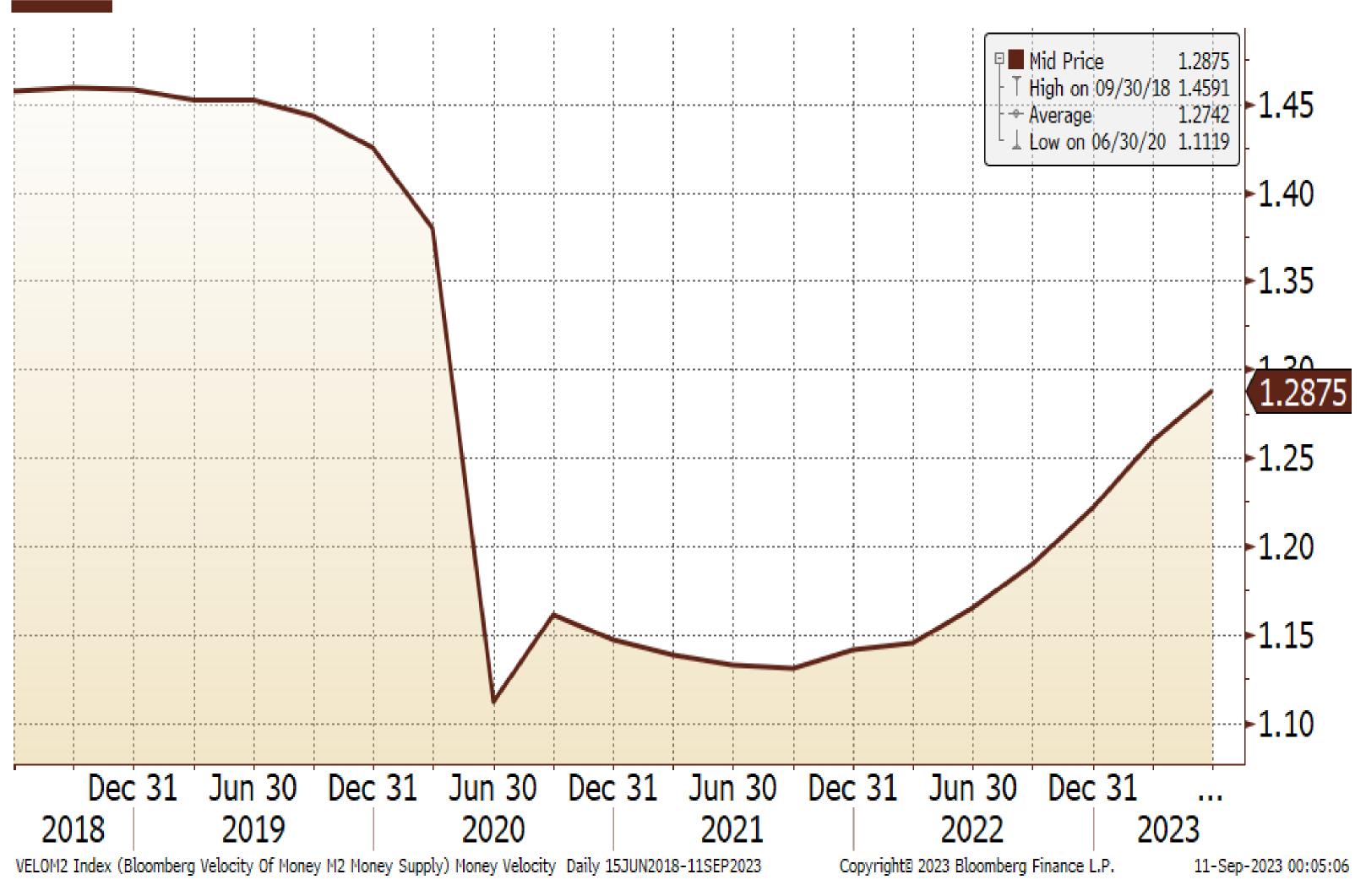
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M2 Money Velocity

Will Money Velocity (Change in GDP/Change in M2 Money Supply) rise or fall relative to the prior year (2023 should refer to 2022 expectation)? For reference: M2 Money Velocity measured 1.22 at year-end 2022





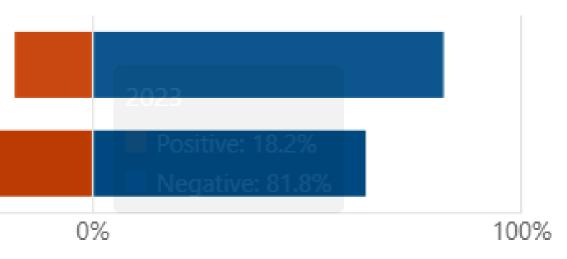


Source: Bloomberg

Asset Price Inflation

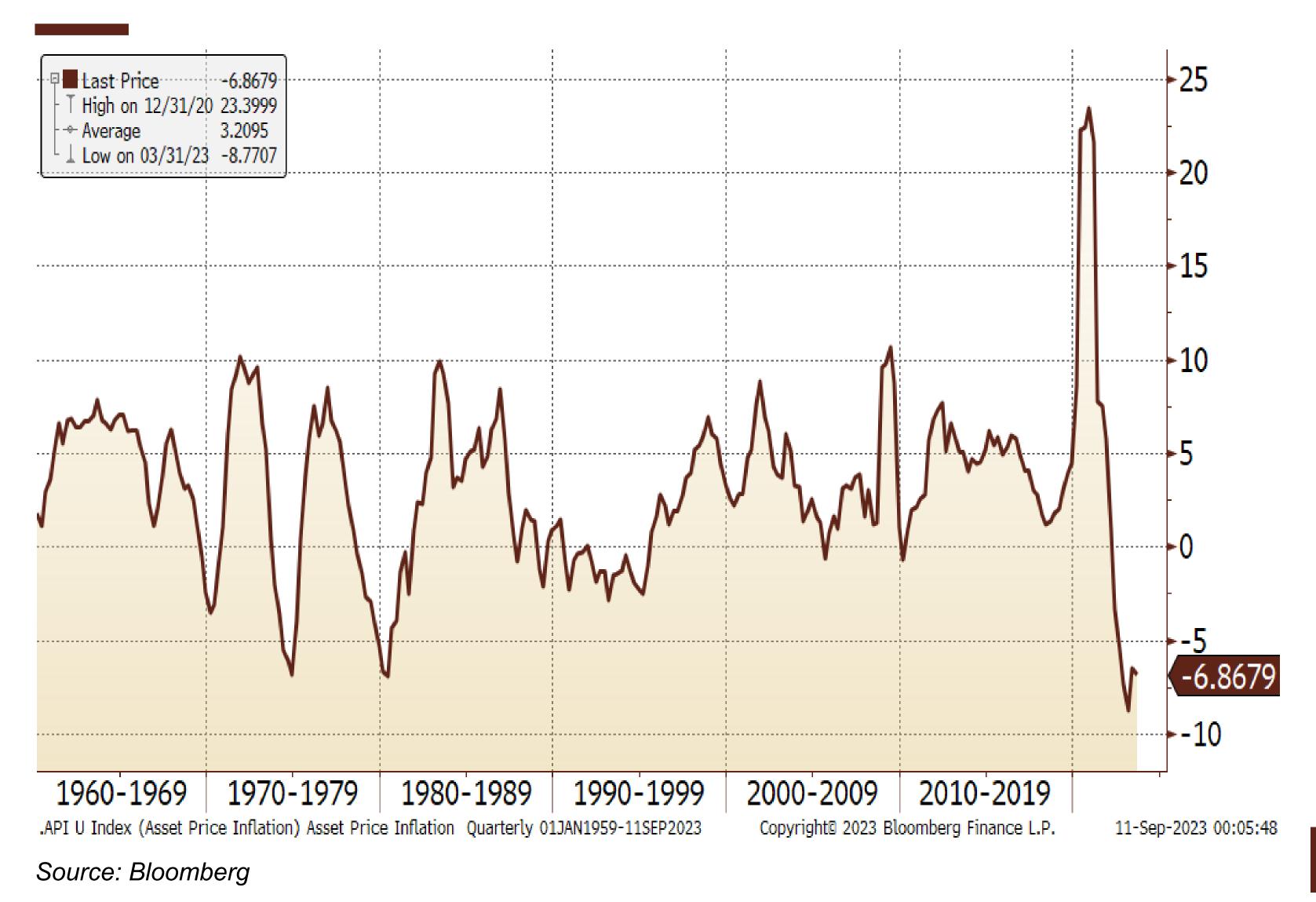
Will asset price inflation (money supply growth in excess of inflation growth) be positive or negative? For reference: at year end 2021, M2 Money Supply grew -0.9% while CPI grew 6.45% for an imputed asset price inflation reading of -7.3%

| Positive Negative | | |
|-------------------|------|--|
| 2023 | | |
| 2024 | | |
| | 100% | |
| August 2022: | | |
| Positive Negative | | |
| 2022 | | |
| 2023 | | |
| | 100% | |





Asset Price Inflation



US Inflation

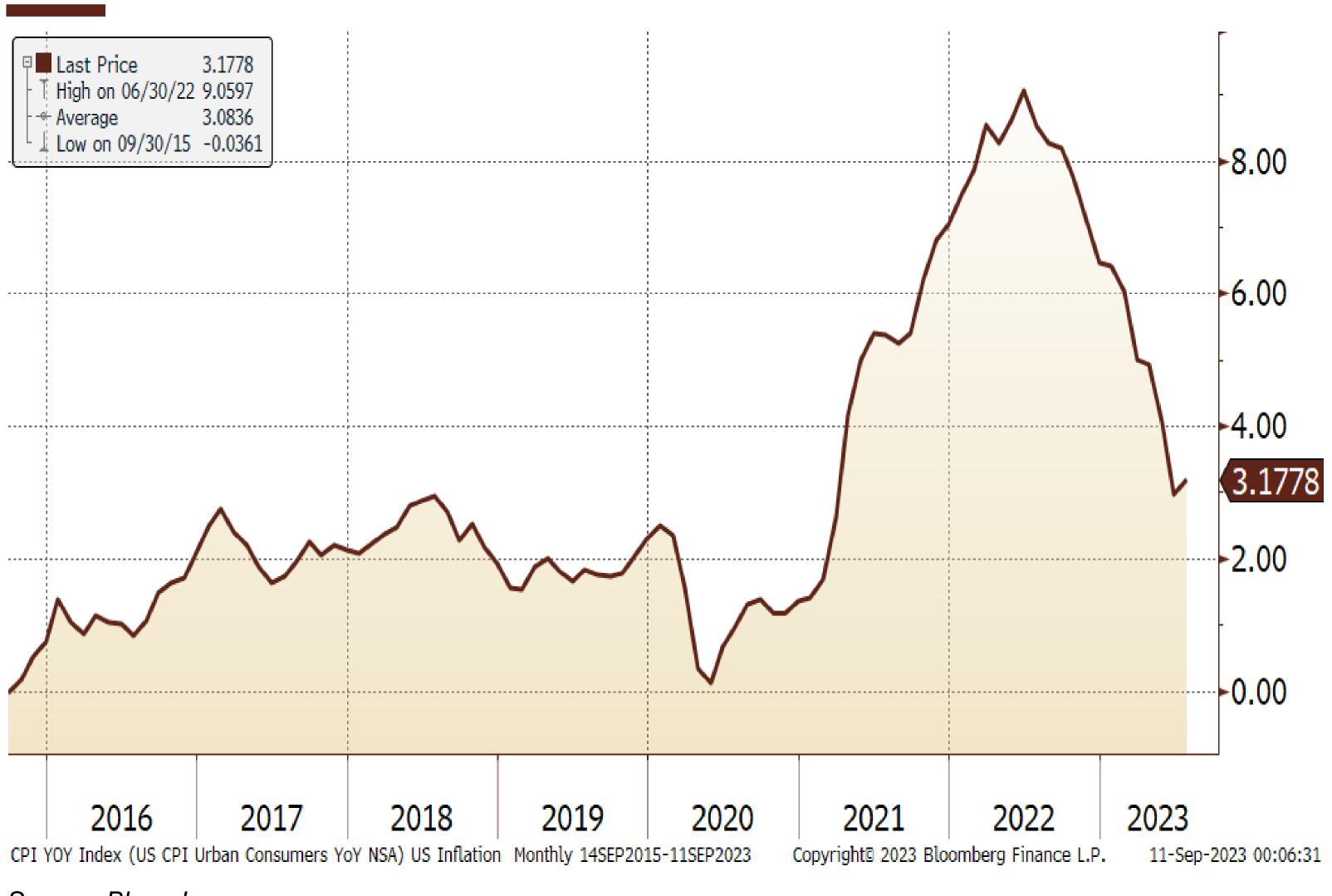
Do you believe that Inflation (Consumer Price Index) growth will be increasing or decreasing from the prior year (2023 should refer to 2022 expectation)? For reference, CPI Growth, year-over-year at year end 2022 was 6.54%

| Rise | Fall | | | | |
|--------|------------------|------|---|--|--|
| 2023 | | | | | |
| 2024 | | | | | |
| | | 100% | | | |
| Augus | t 2022: | | | | |
| Increa | ising Decreasing | | | | |
| 2022 | | | | | |
| 2023 | | | | | |
| | | 100 | % | | |





Consumer Price Inflation

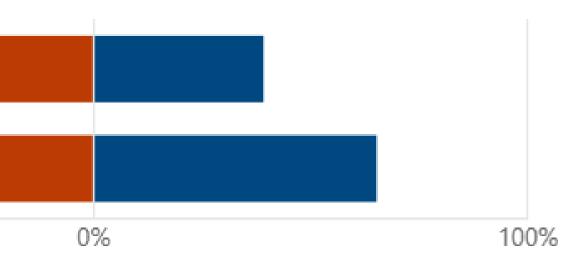


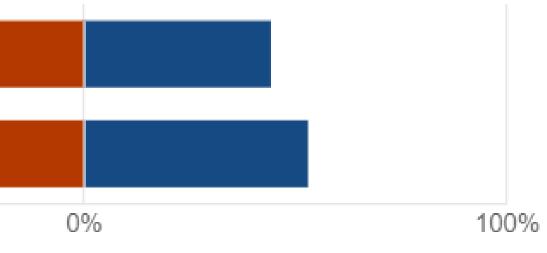
Source: Bloomberg

US Earnings

Will Earnings growth be positive or negative compared to the year prior (2023 should refer to 2022 expectation)? For reference: Earnings grew 12.45% at year-end 2022 compared to year-end 2021

| Positive Negative | |
|-------------------|------|
| 2023 | |
| 2024 | |
| | 100% |
| August 2022: | |
| Positive Negative | |
| 2022 | |
| 2023 | |
| | 100% |



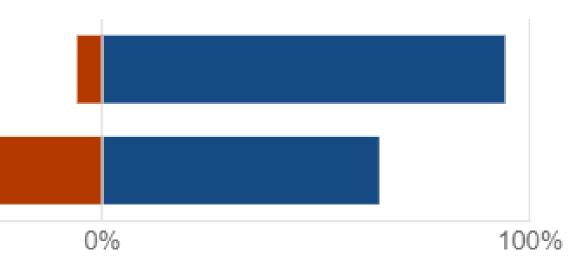


US Earnings

Will Earnings growth increase or decrease compared to the year prior (2023 should refer to 2022 expectation)?

| Inicrease | | |
|--------------------|------|--|
| 2023 | | |
| 2024 | | |
| | 100% | |
| August 2022: | | |
| Inicrease Decrease | | |
| 2022 | | |
| 2023 | | |
| | 100% | |





US Earnings Per Share (Trailing 12 month)



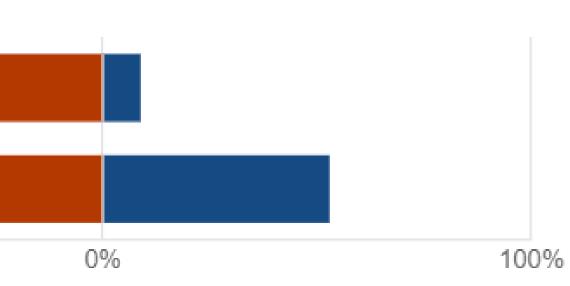
Source: Bloomberg



Will wage growth increase or decrease relative to the prior year (2023 should refer to 2022 expectation)? For reference: U.S. Median Wages grew by 6.1% at year-end 2022

| Increase Decrease | |
|-------------------|------|
| 2023 | |
| 2024 | |
| | 100% |
| August 2022: | |
| Increase | |
| 2022 | |
| 2023 | |
| | 100% |





US Wages

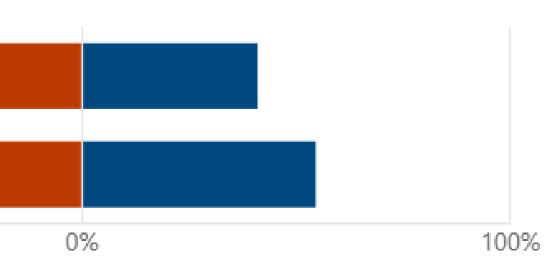


Source: Bloomberg

Commodities

Will a basket of commodity prices increase or decrease from the prior year (2023 should refer to 2022 expectation)? For reference: the Bloomberg Commodities Index (BCOM) ended 2022 at 112.81

| Increase Decrease | |
|-------------------|------|
| 2023 | |
| 2024 | |
| | 100% |
| August 2022: | |
| Increase | |
| 2022 | |
| 2023 | |
| | 100% |





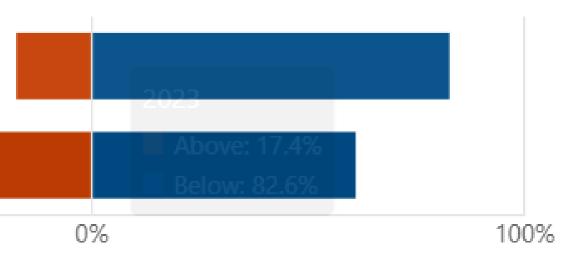
Commodities

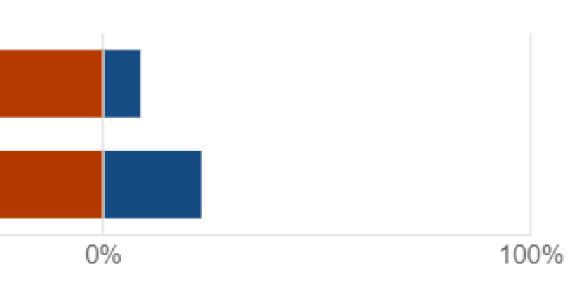


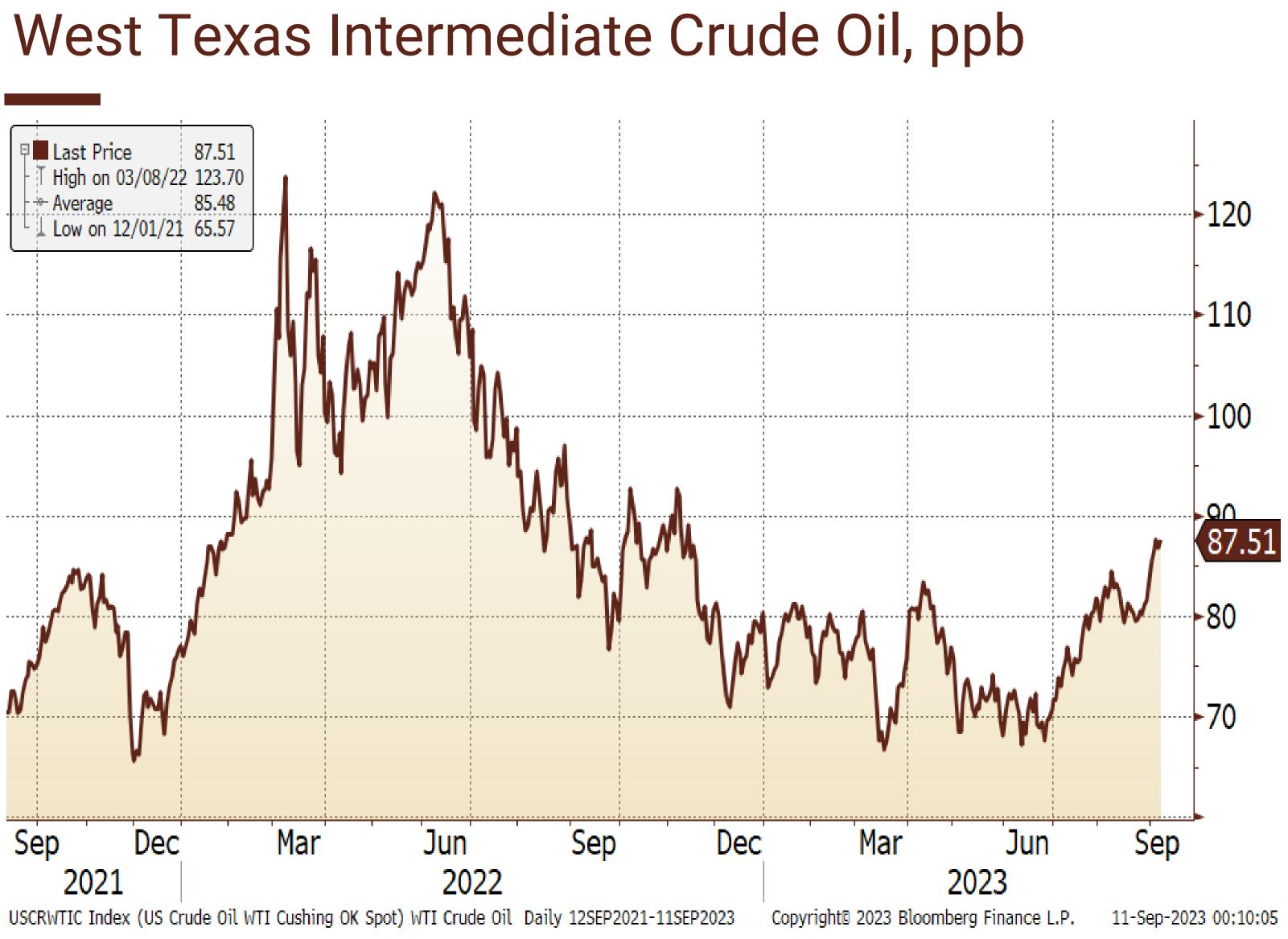
West Texas Intermediate Crude Oil, ppb

Will the West Texas Intermediate Crude Oil spot price be above the previous three-year average or below the previous three-year average at year end? For reference, the current WTI Crude Spot oil price three-year average is \$85

| Above Below | |
|--------------|------|
| | |
| 2023 | |
| 2024 | |
| | 100% |
| August 2022: | |
| Above Below | |
| 2022 | |
| 2023 | |
| | 100% |





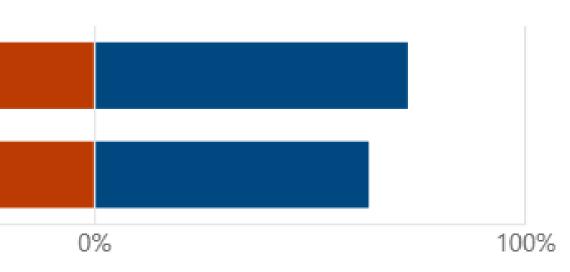


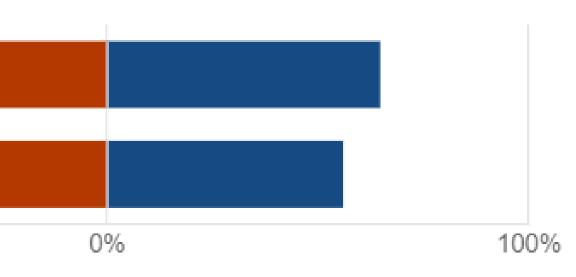
Source: Bloomberg

Global Trade

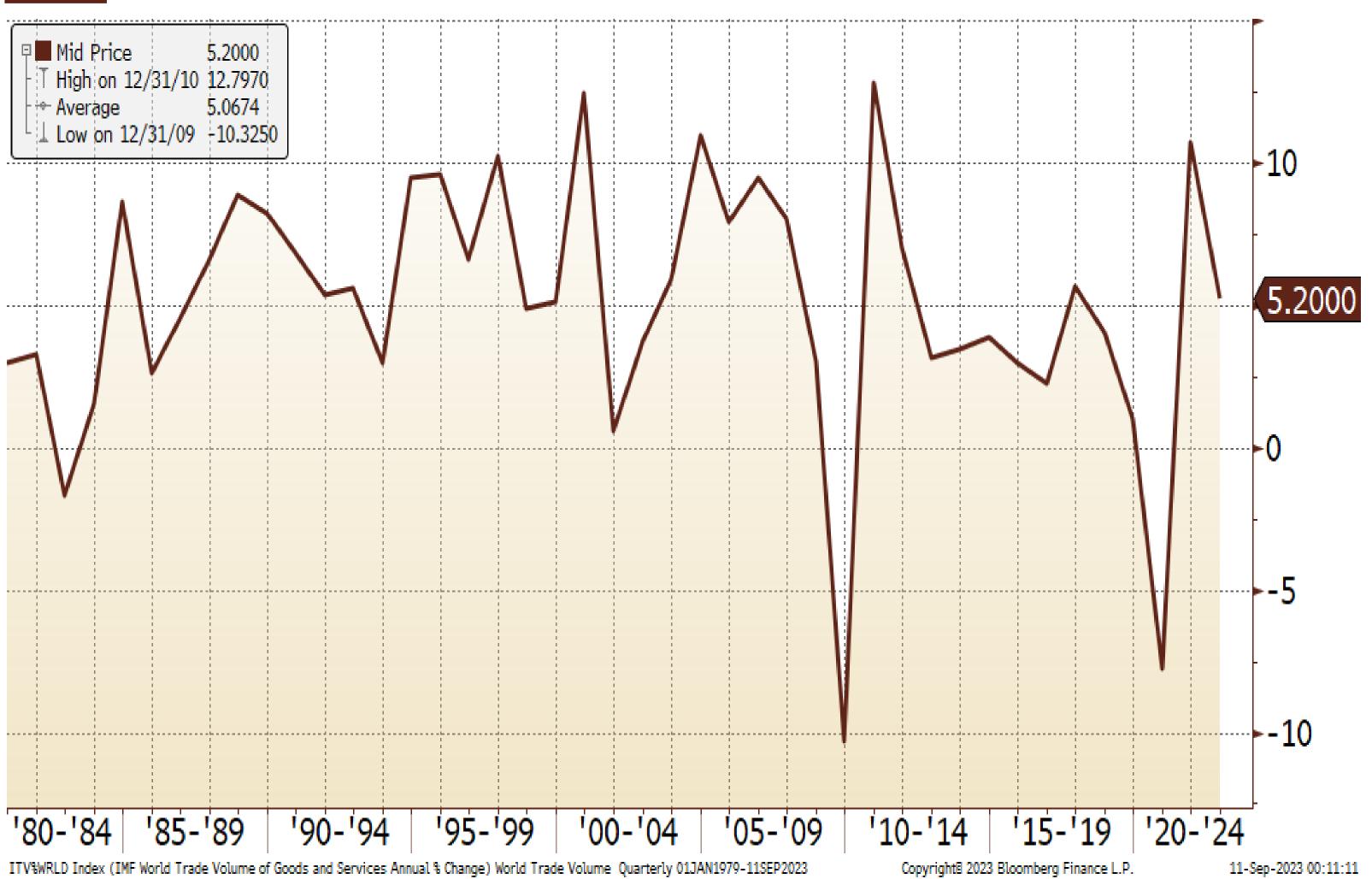
Wil the growth global trade volume increase or decrease relative to the prior year (2023) should refer to 2022 expectation)? For reference: IMF World Trade Volume of Goods and Services decreased 51.8% at year-end 2022

| Increase | crease | | |
|-------------|----------|------|--|
| 2023 | | | |
| 2024 | | | |
| | | 100% | |
| August 2022 | | | |
| Increase |)ecrease | | |
| 2022 | | | |
| 2023 | | | |
| | | 100% | |





Global Trade Volume

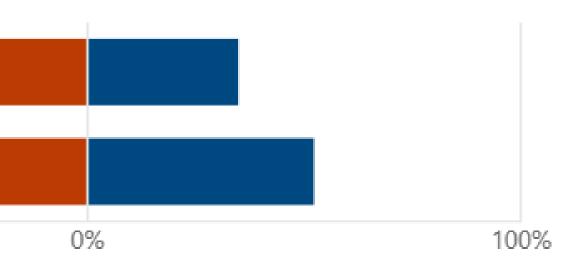


Source: Bloomberg



Will the U.S. dollar strengthen or weaken against a basket of global currencies relative to the prior year-end (2023 should refer to 2022 expectation)? For reference: The dollar index spot rate ended 2022 at 104.46

| Strengthen Veaken | |
|-------------------|------|
| | |
| 2023 | |
| | |
| 2024 | |
| | 100% |
| | |
| August 2022: | |
| Strengthen Weaken | |
| | |
| 2022 | |
| | |
| 2023 | |
| | 100% |





US Dollar Basket



2022 Manager Survey

Inflation pressures **Higher inflation** supply chain economic growth Fed rate hike recession inflation rates year-end higher rates prices markets peak inflation elevated inflation

Source: Chantico Global 2022 Manager Survey

interest rates year global slow down in inflation

2023 Manager Survey



Source: Chantico Global 2022 Manager Survey

GDP growth

inflation and higher

Building Investment Excellence



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