



*Since 1916*

America's Cement Manufacturers™

# US Cement Outlook

November 2023

Pennsylvania Regional Outlook

# ANTITRUST STATEMENT

The Portland Cement Association assigns the highest priority to full compliance with both the letter and the spirit of the antitrust laws, and it is vital that this meeting be conducted in a manner consistent with that policy.

If at any time during the course of the meeting, PCA counsel or staff believe that a sensitive topic under the antitrust laws is being discussed, or is about to be discussed, they will so advise the meeting and halt further discussion.

As attendees at this meeting, you should likewise not hesitate to voice any concerns you may have in this regard. It is important to bear in mind that those in attendance at this meeting may be your competitors.

Any discussions of commercial matters with one's competitors may create the appearance of an antitrust violation, even though there is none. Therefore, such discussions should be avoided at all times before, during, and after this meeting

# Today's Agenda

- |  |                    |                          |
|--|--------------------|--------------------------|
| • <b>Welcome/Introduction</b>                    | <b>Ed Sullivan</b> | <b>1:00 PM – 1:15 PM</b> |
| • <b>PCA US Cement Outlook</b>                   | <b>Ed Sullivan</b> | <b>1:15 PM – 2:15 PM</b> |
| • <b>Moody's National &amp; Regional Outlook</b> | <b>Sarah Crane</b> | <b>2:15 PM – 3:15 PM</b> |
| • <b>Break</b>                                   |                    | <b>3:15 PM - 3:30 PM</b> |
| • <b>PCA Regional Outlook</b>                    | <b>Joe Chiappe</b> | <b>3:30 PM – 4:30 PM</b> |



The PCA logo is displayed in white against a dark background. It features the letters 'PCA' in a bold, sans-serif font, followed by a stylized white swoosh that curves upwards and to the right, ending in a registered trademark symbol (®).

**PCA®**

*Since 1916*

America's Cement Manufacturers™

A solid blue rectangular overlay covers the lower half of the image, serving as a background for the title text.

## Introduction to the Market Intelligence Group

# Market Intelligence Group

*Data and its interpretation and analysis are the cornerstone for good business decisions. PCA's Market Intelligence Group has one mission and that is to transform data into information, and information into insight and guidance.*

To this end, Market Intelligence targets four specific areas of information support including:

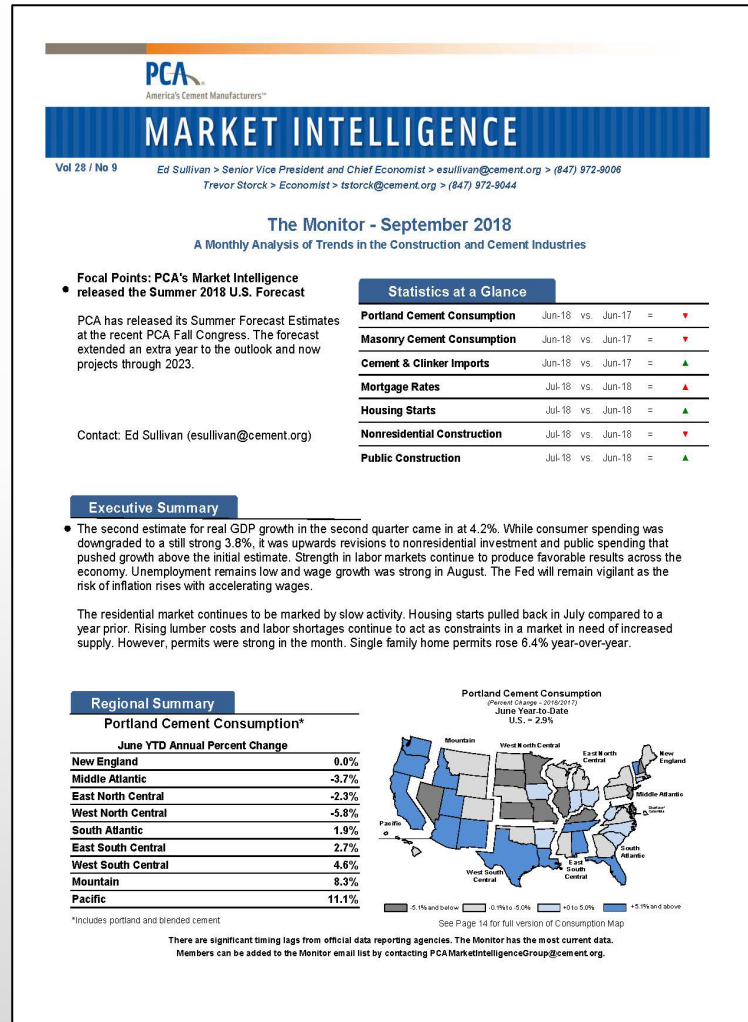
- Forecast assessments and market tracking,
- Legislative and regulatory advocacy support,
- Market research, market share intelligence, and development support.



# U.S. Reports & Service

## 260 Reports Released in 2021.

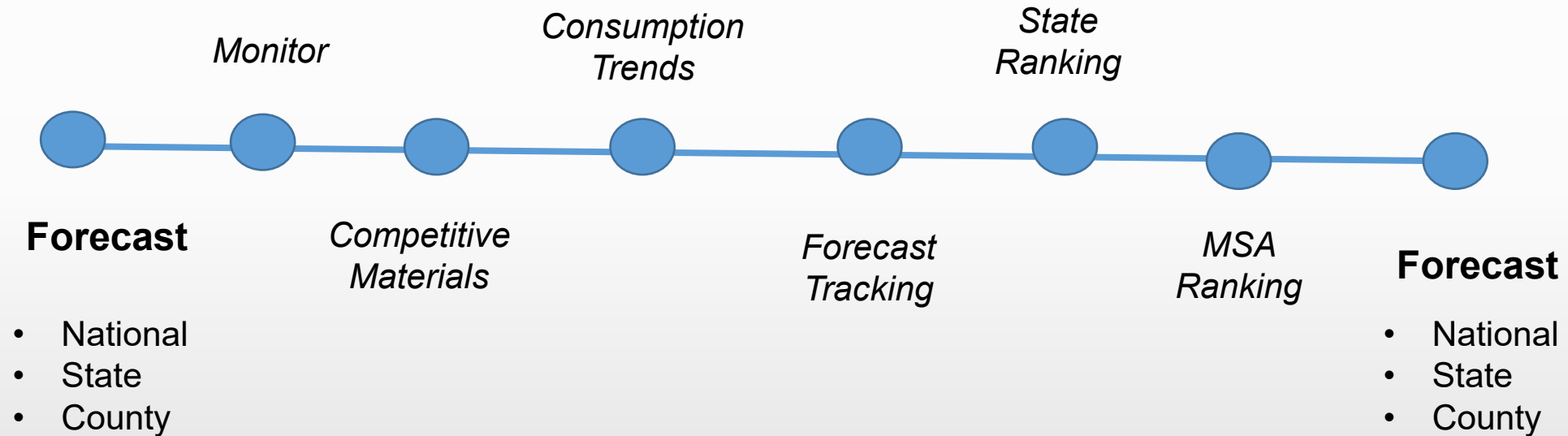
- Monitor
- Tracking Report
- Consumption Trends Report
- Shipments Report
- Competitive Materials Report
- National Forecasts
- Regional Forecasts
- County Forecasts
- State Ranking Reports
- US Invue
- Flash Reports
- Annual Yearbook
- MSA Ranking Report
- Data Dashboard



## Highlights

- Nearly 1,000 persons follow our regular reports.
- 610 PCA member subscribers.
- Member personnel ranges from logistics, plant managers, sales and marketing, to CEOs.
- US & Parent member subscribers.
- 29 Associate member subscribers.
- More than 5,000 hours of direct member & allied support.
- More than 300 non-member subscribers that include banks & financial, industry suppliers, & consultants.

## U.S. Reports & Service: Strategy of Reports



# Advocacy Support: Data & Policy Assessments

## Data

The strategic plan for advocacy support is driven by Washington, D.C.

To this end, MI regularly collects industry specific data through surveys of cement manufacturers. This data is the foundation of PCA advocacy efforts.

- **Plant Info Survey**
- **Labor-Energy & Energy Star**
- **Sustainability Survey**
- **RPG Model & State Fact Sheets**
- **Specialized Surveys**

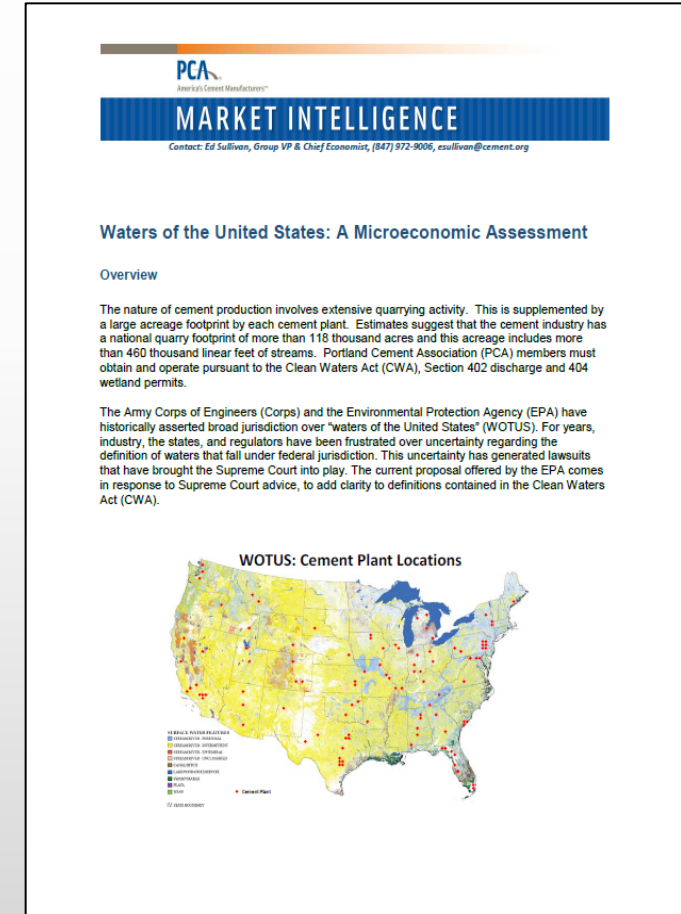
## Assessments

Being able to leverage this data in response to specific regulatory pressures allows for unique industry advocacy analysis.

PCA Market Intelligence regularly assesses the industry impacts of various legislative and regulatory proposals

These reports will often be supplemented by special member surveys to get unique industry data specific to the issue at hand.

- Cross-State Air Pollution Rule (CSAPR) for Nox
- NAAQS PM 2.5. It is anticipated that EPA will lower the annual standard to either 8 or 10 micrograms per cubic meter (ug/m<sup>3</sup>) from the current level of 12 ug/m<sup>3</sup>. MI will perform an economic impact study on the proposed change.





# PCA Market Intelligence's Dashboard



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# US Cement Outlook

November 2023

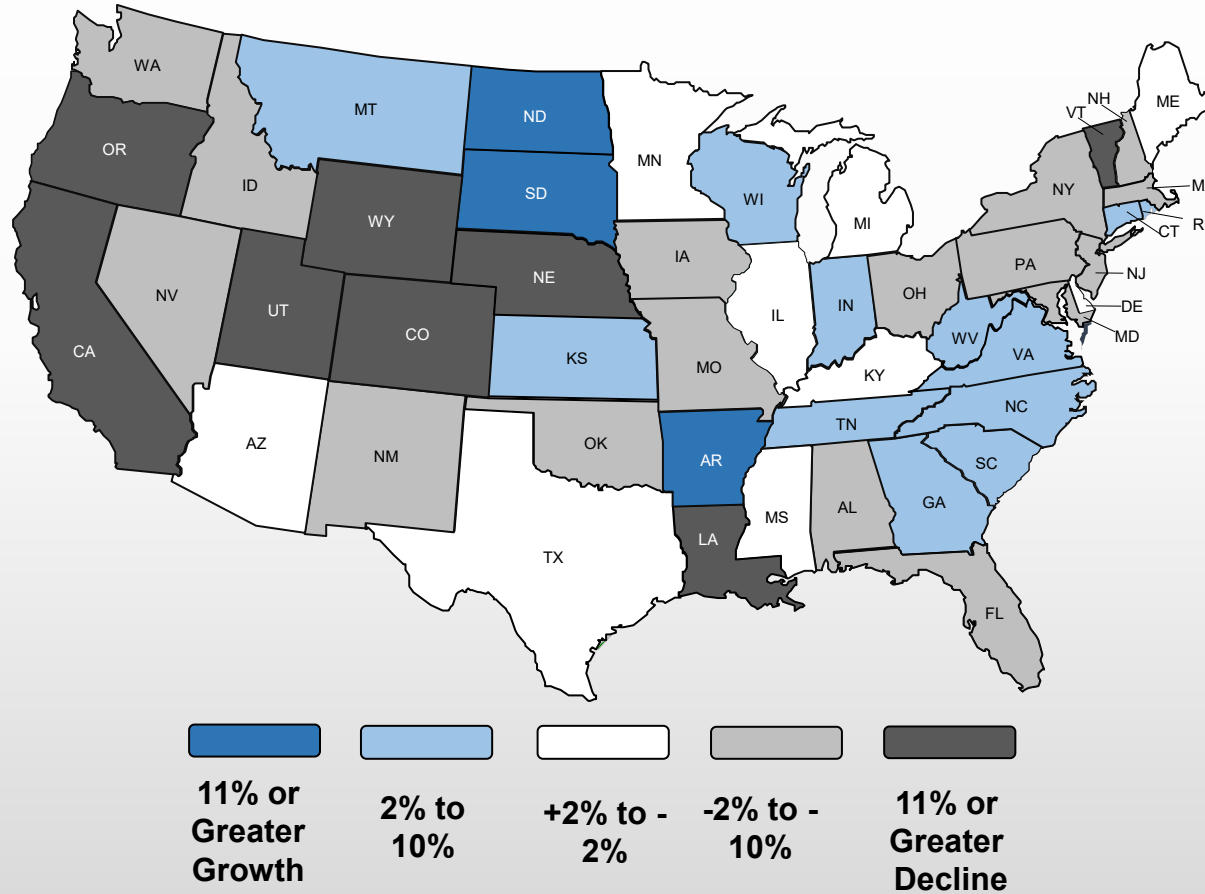
Pennsylvania Regional Outlook

# Introduction



# Cement Consumption

%, Implied YTD through September 2023



## Growth Rates by Region YTD - September

East South Central	0.9%
South Atlantic	0.0%
East North Central	-0.7%
West North Central	-2.8%
West South Central	-3.0%
New England	-4.6%
Mountain	-7.0%
Middle Atlantic	-10.4%
Pacific	-13.3%
<b>United States</b>	<b>-4.3%</b>

Source: USGS/PCA

# General Economic Context

# The Economy is Strong....But...

## **Current Strength**

- The economy recently recorded 4.9% growth.
- More than 2 million net new jobs have been created this year.
- The unemployment rate stands at a low 3.8%.
- All of this has been bolstered by strong consumer spending.

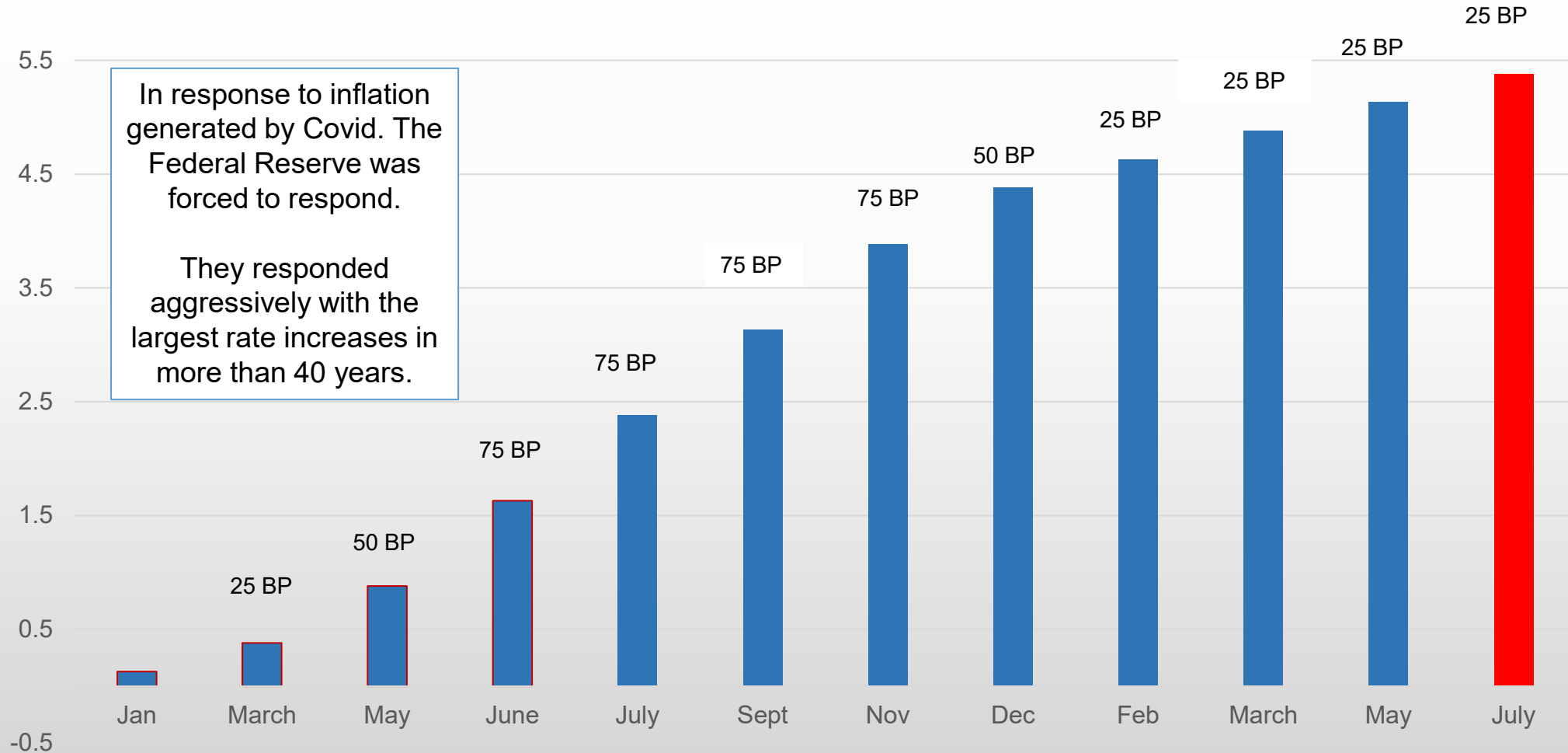
## **Headwinds Lie Ahead**

- Interest rates are high and will remain high for some time.
- Long lags exist in monetary policy and the harshest impacts of all the rate hikes still lie ahead.
- Consumers' saving cushion and support from Covid relief programs are quickly disappearing.
- Access to capital and credit tightening is emerging.



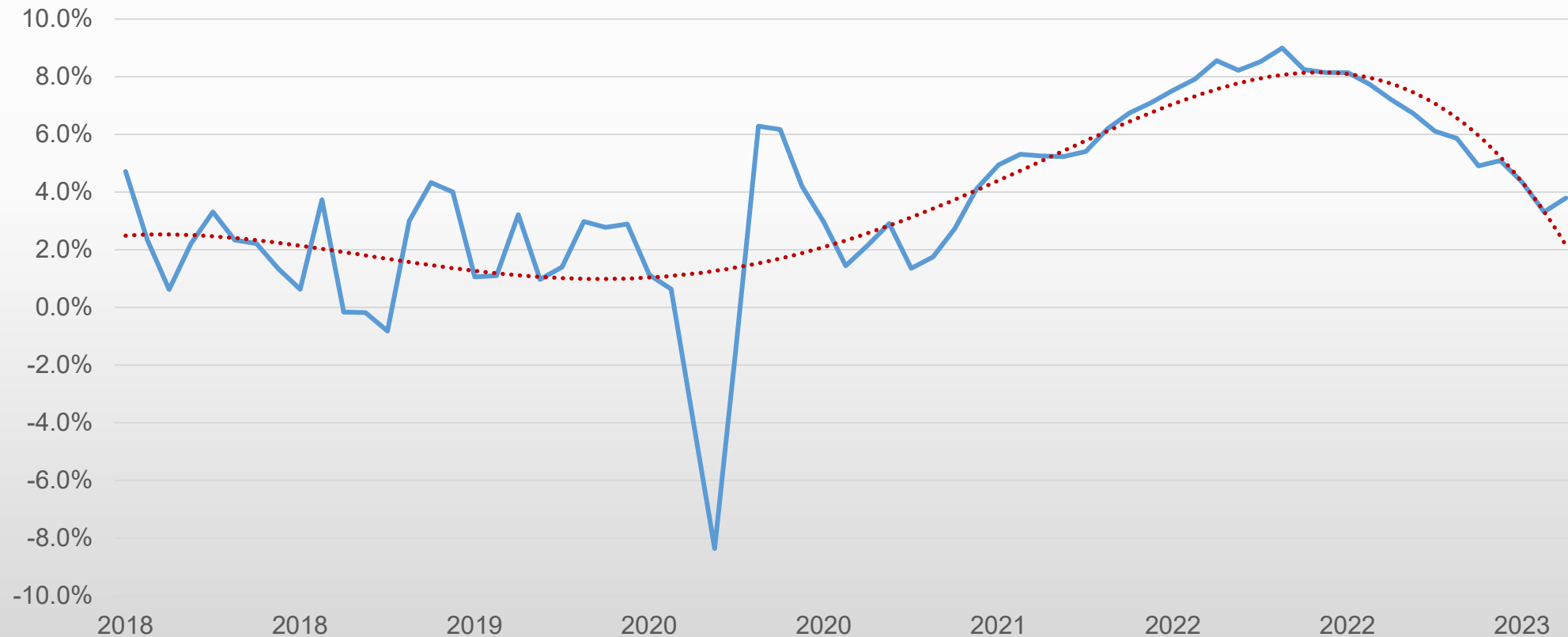
# Federal Reserve Responded to Elevated Inflation check chrt

## Fed Funds Rate



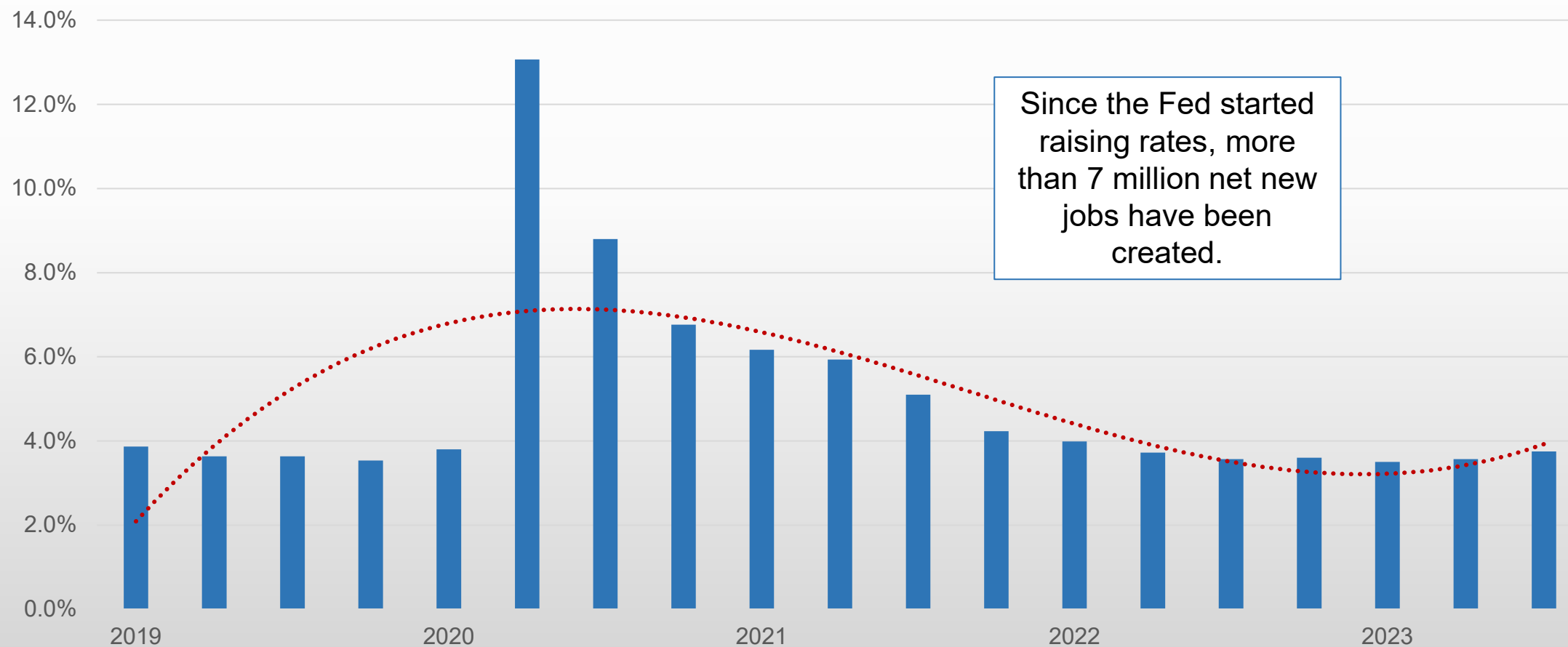
# Inflation Has Improved...check data

**Consumer Price Index**  
- BLS



# And Yet.... Labor Markets Have Remained Strong

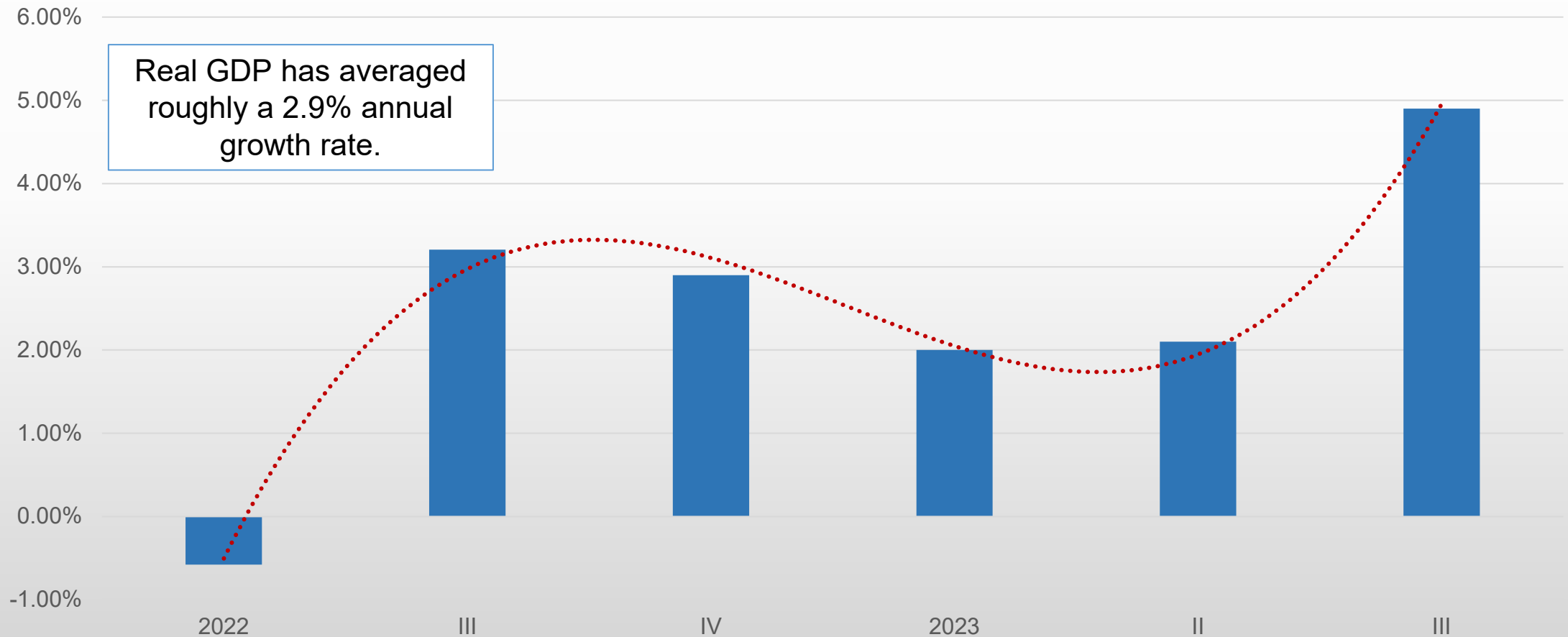
## Unemployment Rate





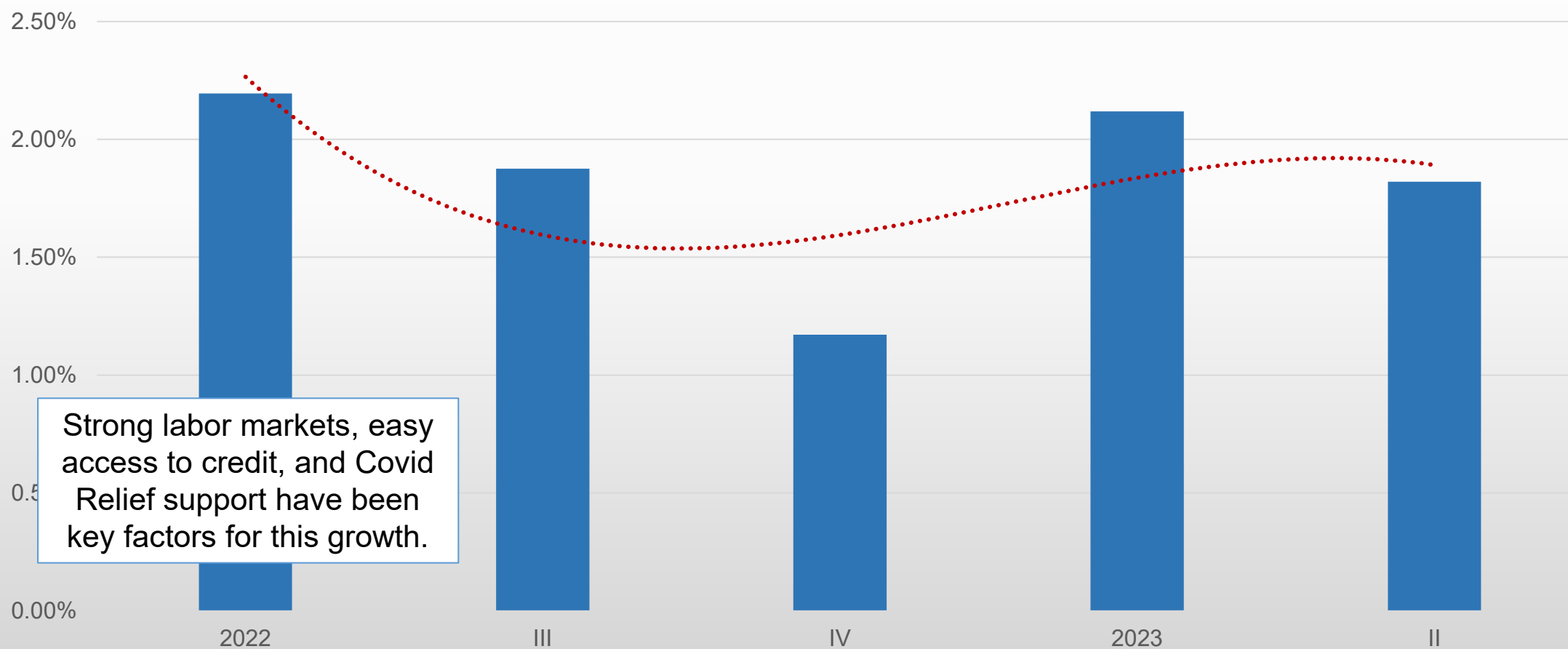
# Economic Growth Has Not Been Shaken...

Annual Y-O-Y Growth Rate



# Consumer Spending Has Been the Key Source of Strength

## Annual Y-O-Y Growth Rate



But...Headwinds Lie Ahead



# Macroeconomic Headwinds

## Assessed

Student Loan  
Hiatus Ends

Lagged Impact  
of FF Increases

Sunset of Covid  
Relief Programs

Savings Cushion  
Depleted

Credit  
Tightening

## Transitory

Spikes In  
Oil Prices

UAW Strike  
Impacts

Government  
Shutdown

Global Political  
Unrest

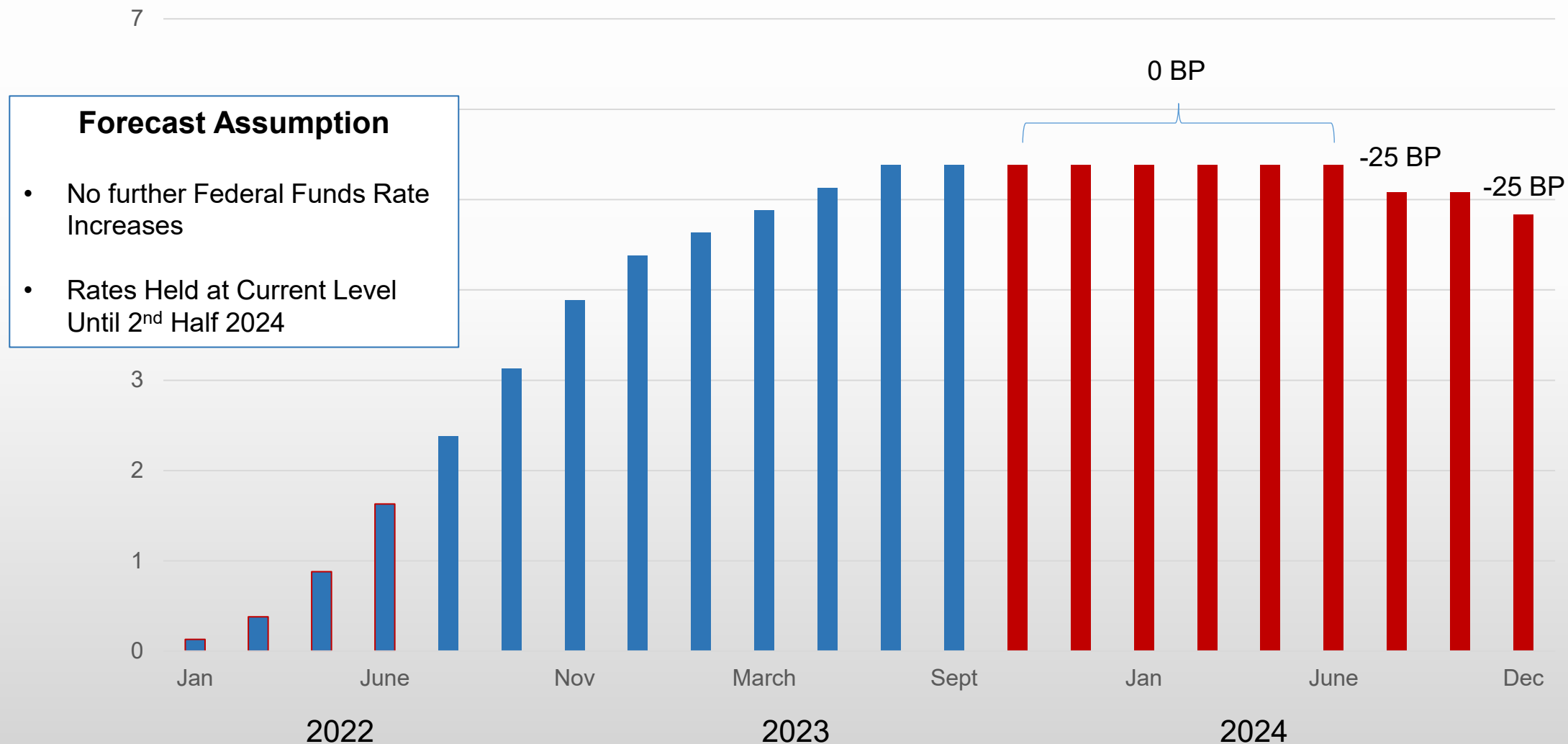
These areas could represent forecast risks to the extent they persist and are not assessed.

Sustained oil prices and potential reduction in US Government credit rating are viewed as largest risks.

# Monetary Policy Leans Against Economic Growth Throughout the Forecast Horizon

# Federal Reserve's Federal Funds Outlook

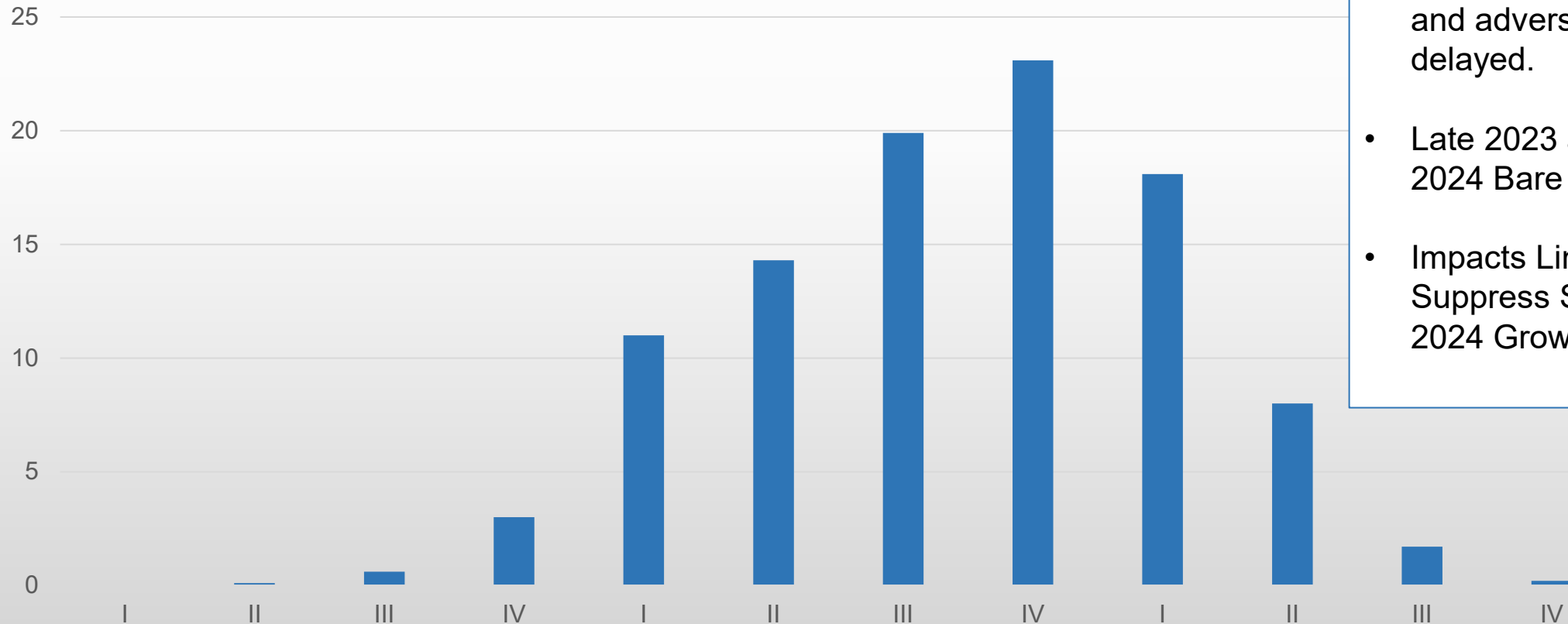
## Fed Funds Rate



# Monetary Policy: Lag Structure Revisited Skew

## - In-Place & Projected Additional Actions

Percent of Total  
Policy Actions

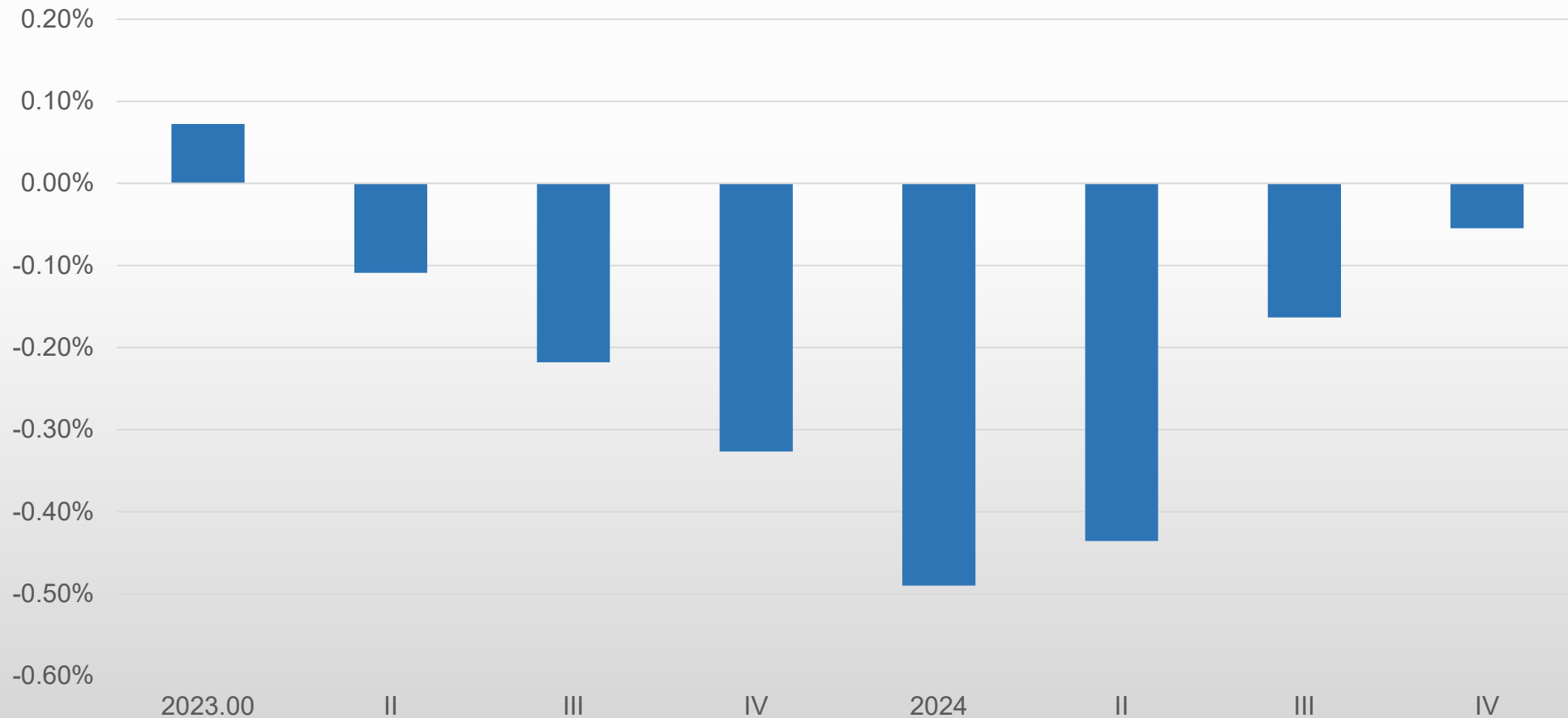


### What it Means

- Suggests longer lags and adverse impacts delayed.
- Late 2023 and Early 2024 Bare Brunt
- Impacts Linger and Suppress Strength of 2024 Growth Recovery

# What This Means.....

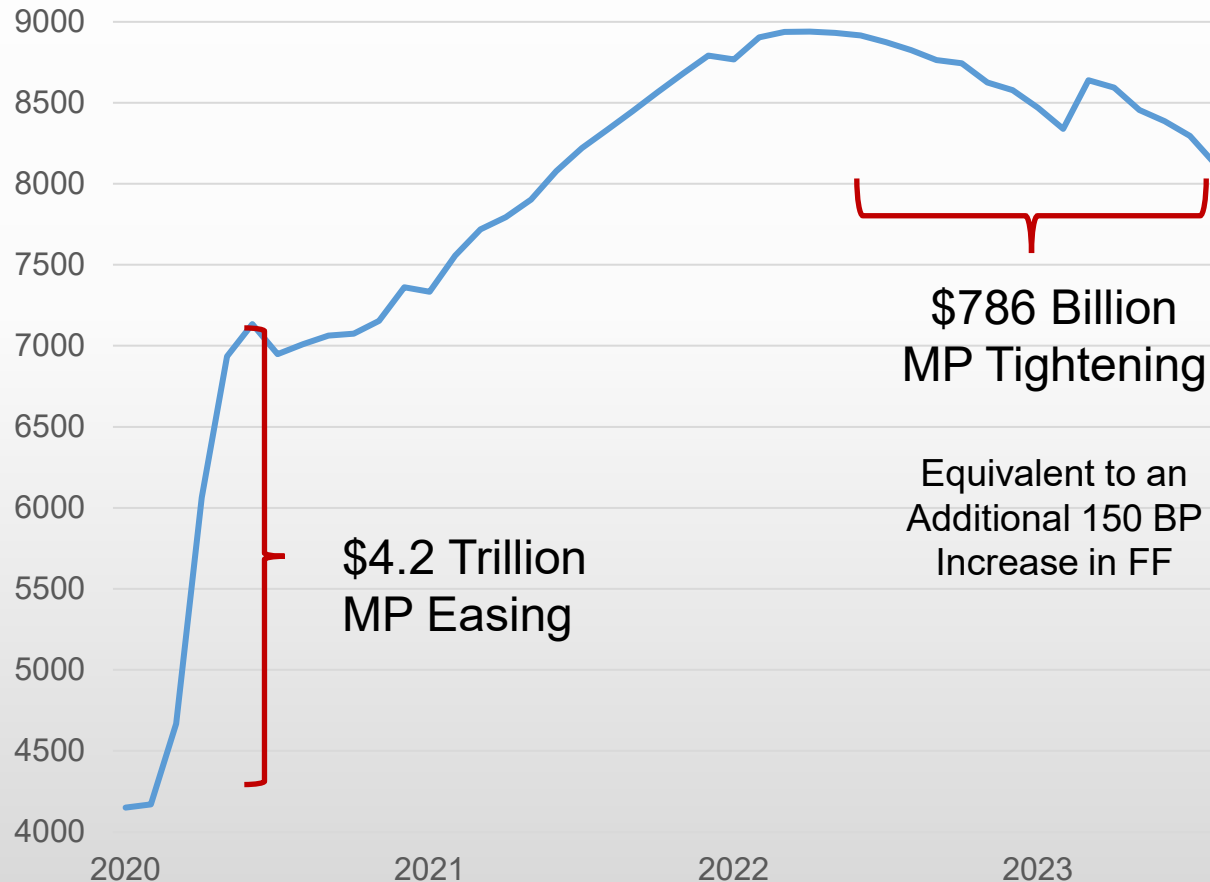
Rate Increases Quarterly Impact on GDP





# Monetary Policy: It's More than Federal Funds Rate

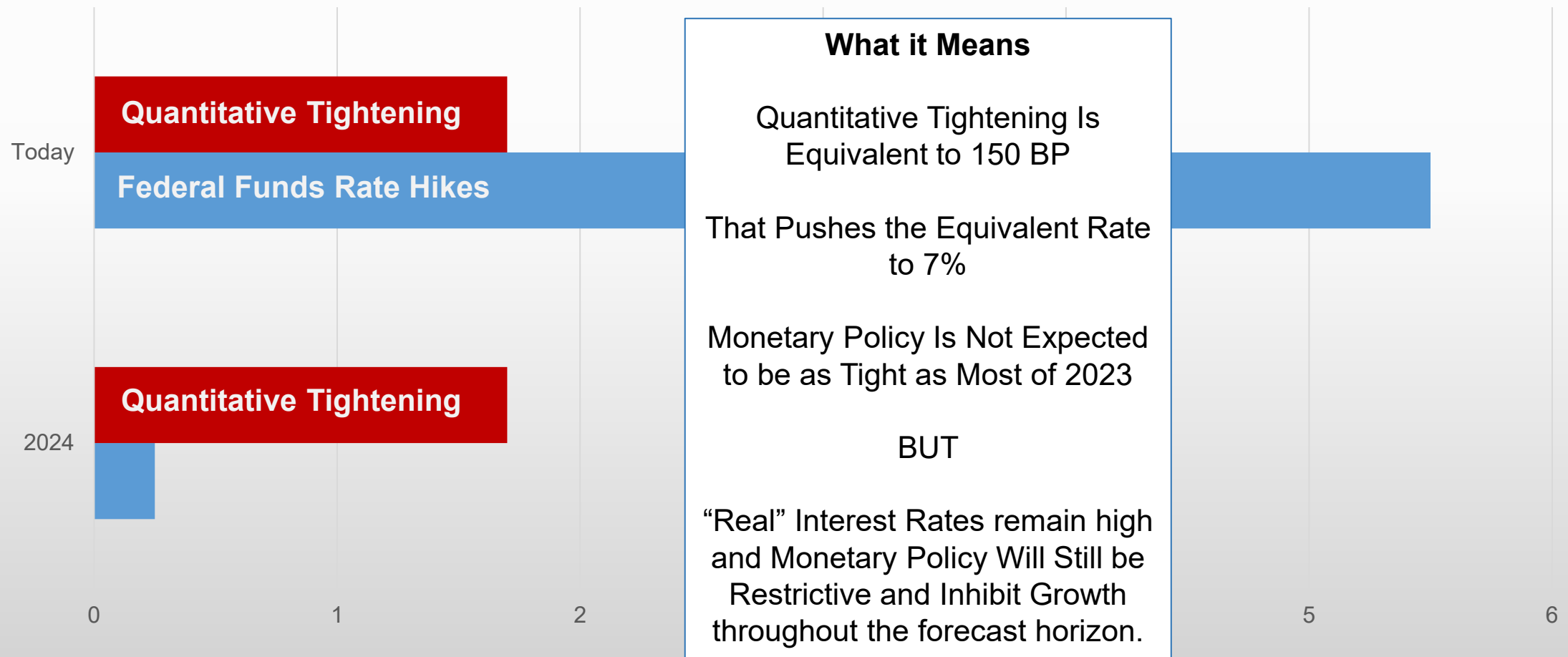
## Federal Reserve Assets



### Quantitative Monetary Policy (Q)

- Changes in the Interest Rates as a result of manipulating the purchase & sale of financial assets.
- Buy Assets – Results in lower interest rates
- Sell/Retire Assets – Results in higher interest rates
- Assets : (T-Bills & Mortgage Backed Securities)

# Monetary Policy Still Tightens Even If The Fed Stops Raising the FF Rate

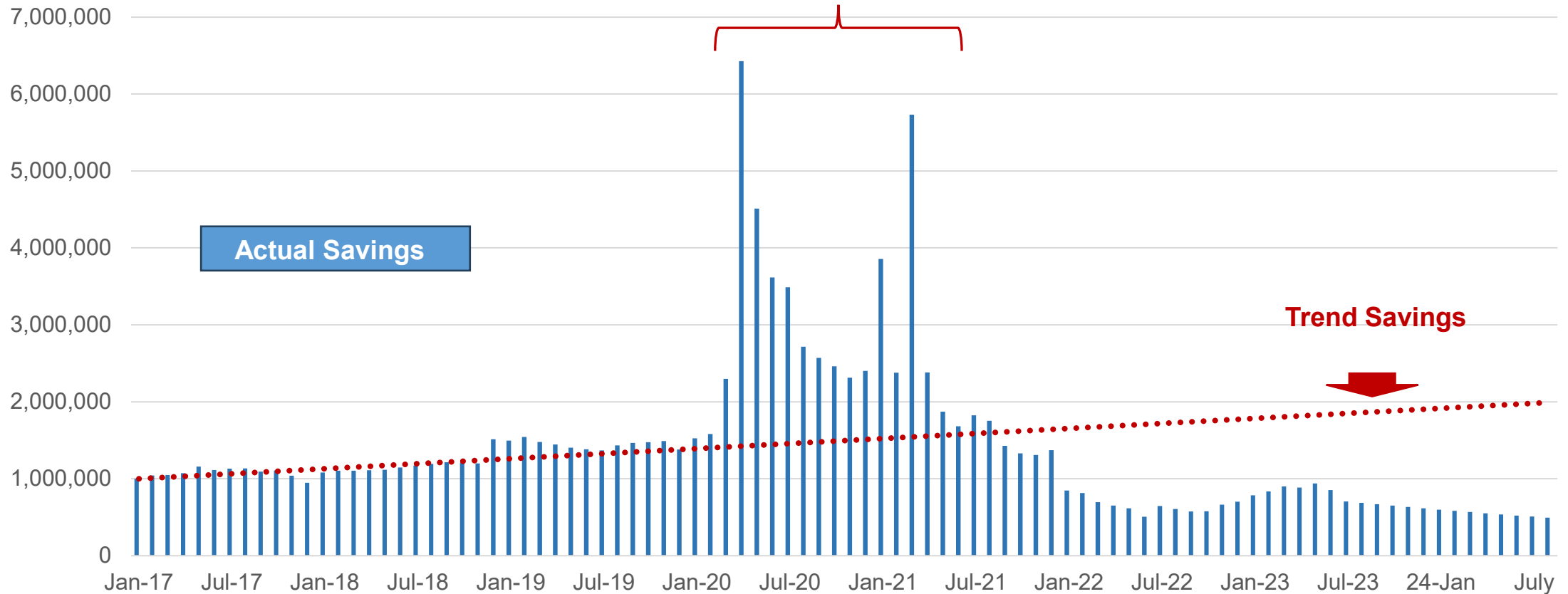


# Consumers Strength Will Be Challenged

# Net Private Savings

Trillion \$

More than \$5 trillion in covid relief spending and stay-at-home lifestyle resulted in dramatic increase in savings

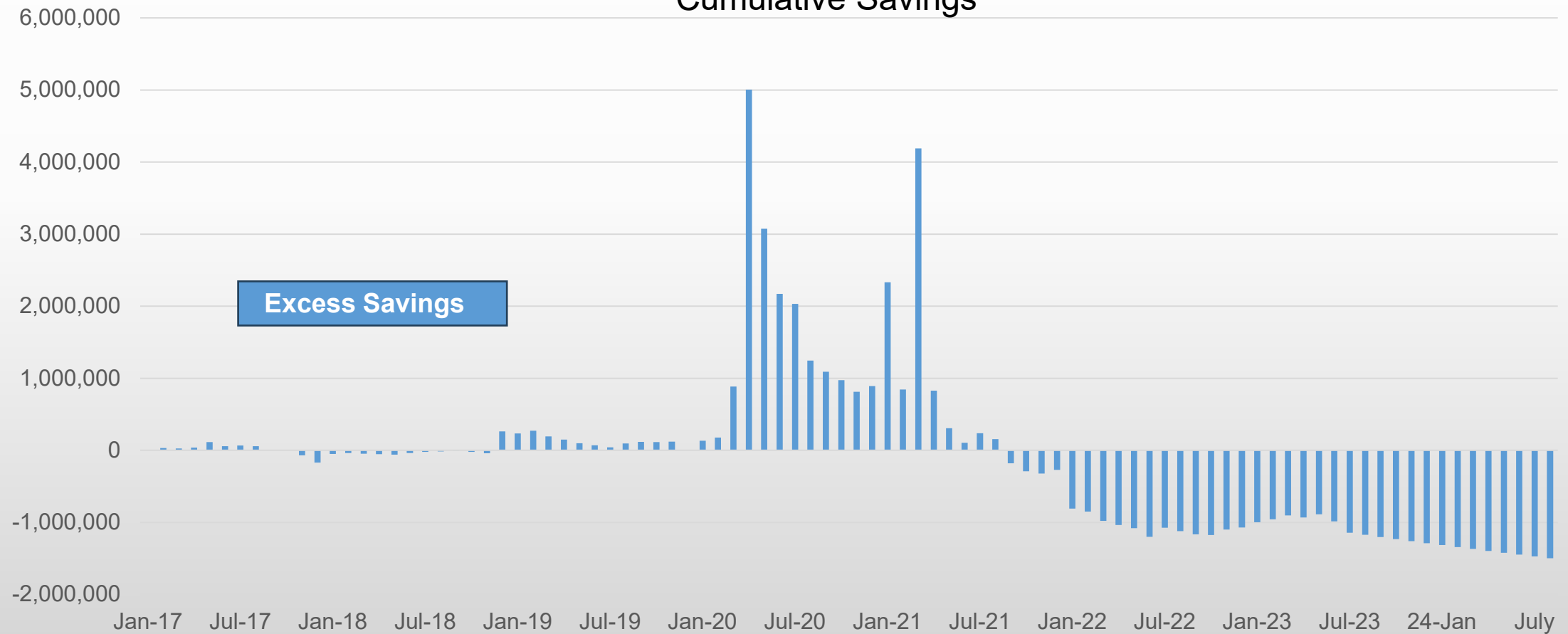




# Excess Savings

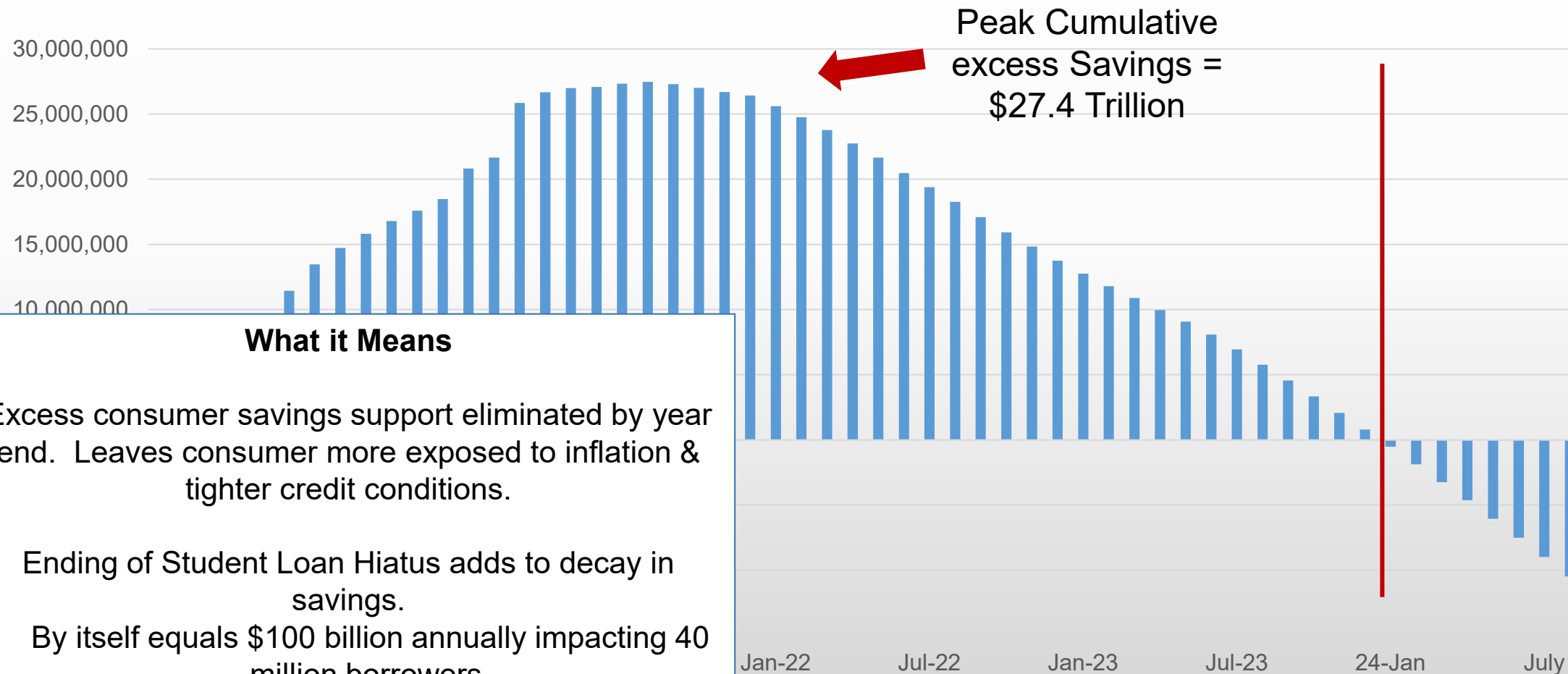
Trillion \$

Each Month Adds to  
Cumulative Savings



# Cumulative Excess Savings

Million \$



## What it Means

Excess consumer savings support eliminated by year end. Leaves consumer more exposed to inflation & tighter credit conditions.

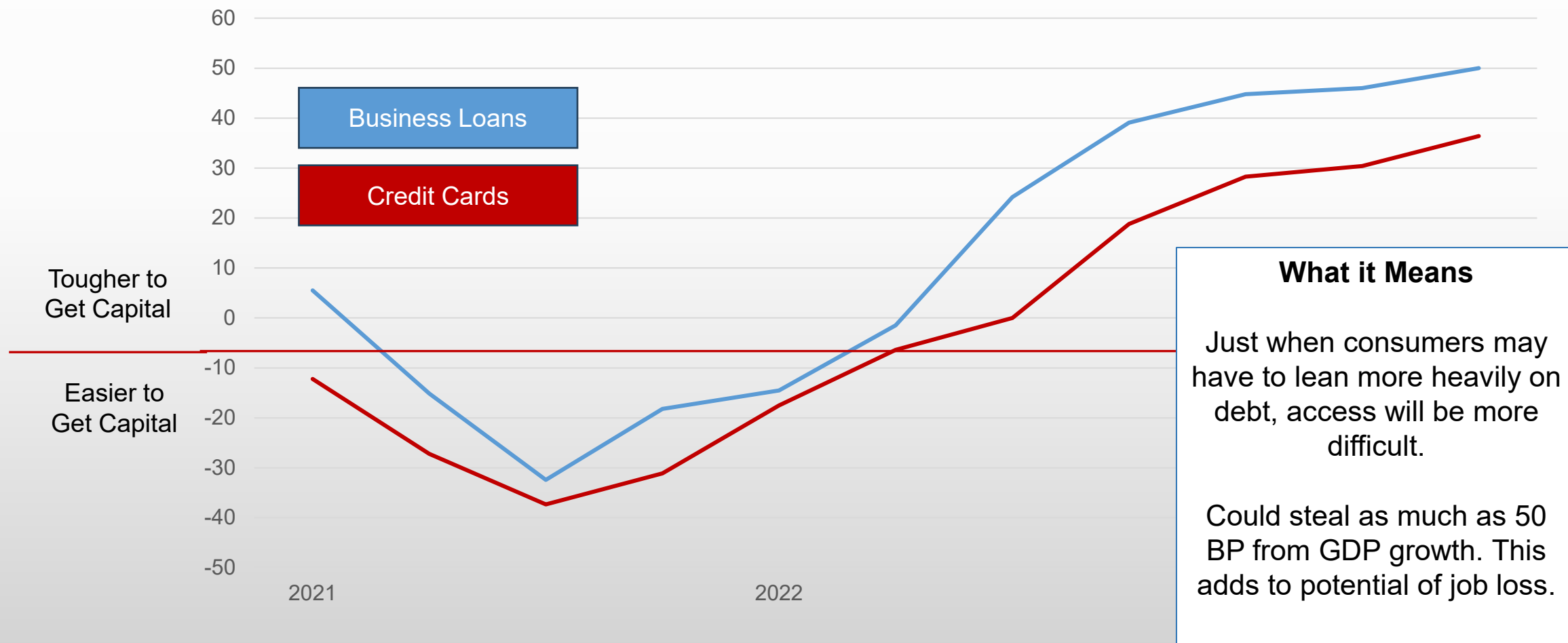
Ending of Student Loan Hiatus adds to decay in savings.

- By itself equals \$100 billion annually impacting 40 million borrowers.

# Credit Conditions Are Tightening

# Credit Standards are Tightening: Economy

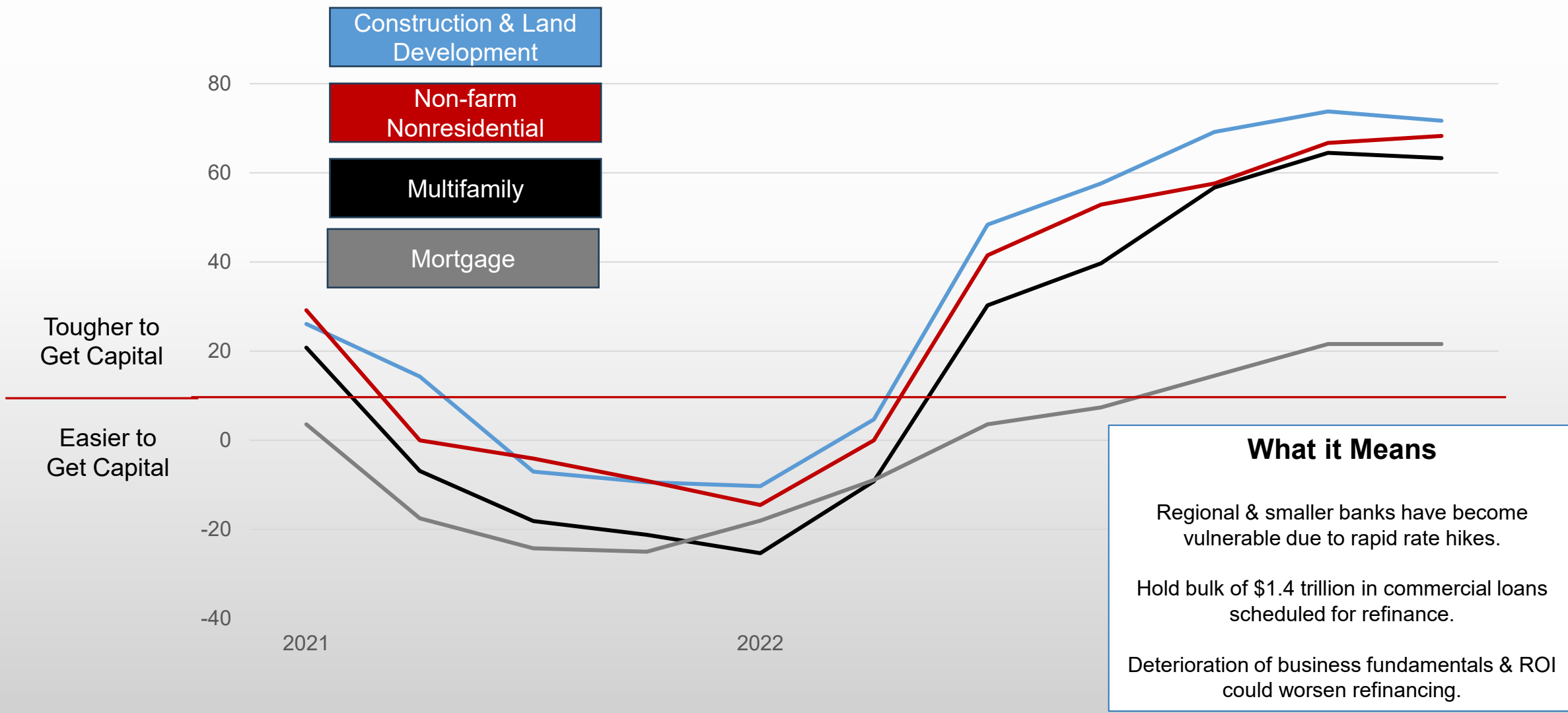
## Survey of Bank Lending Officers





# Credit Tightening Has Specific Risks for Construction

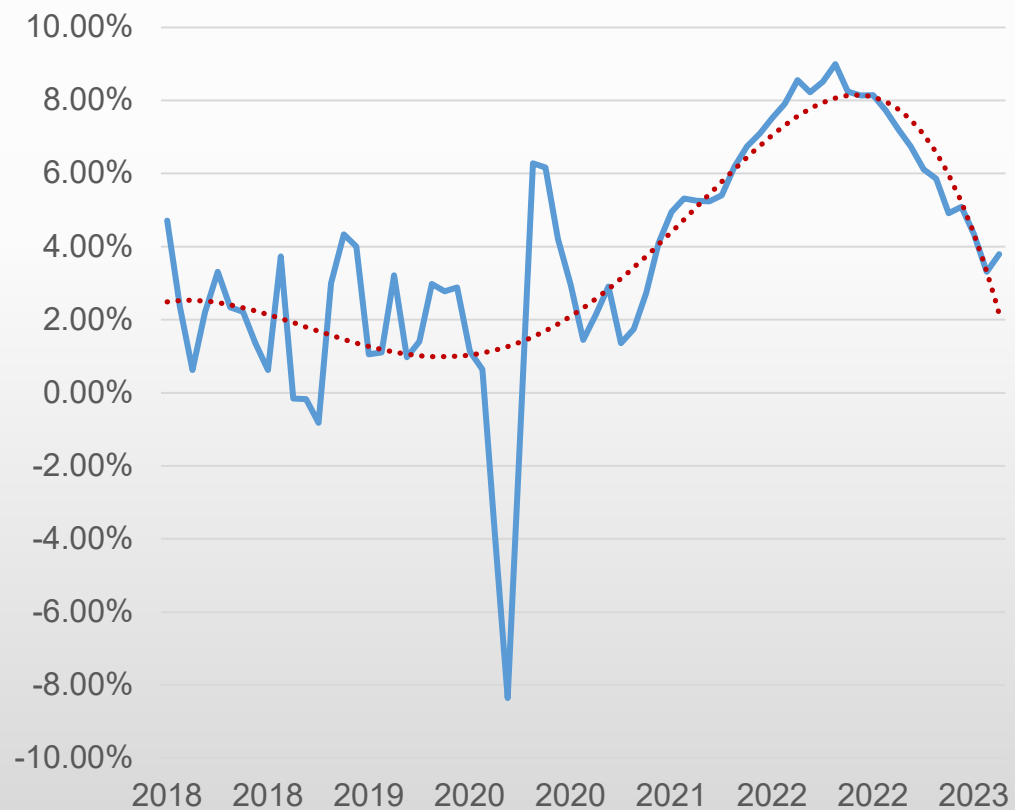
## Survey of Bank Lending Officers



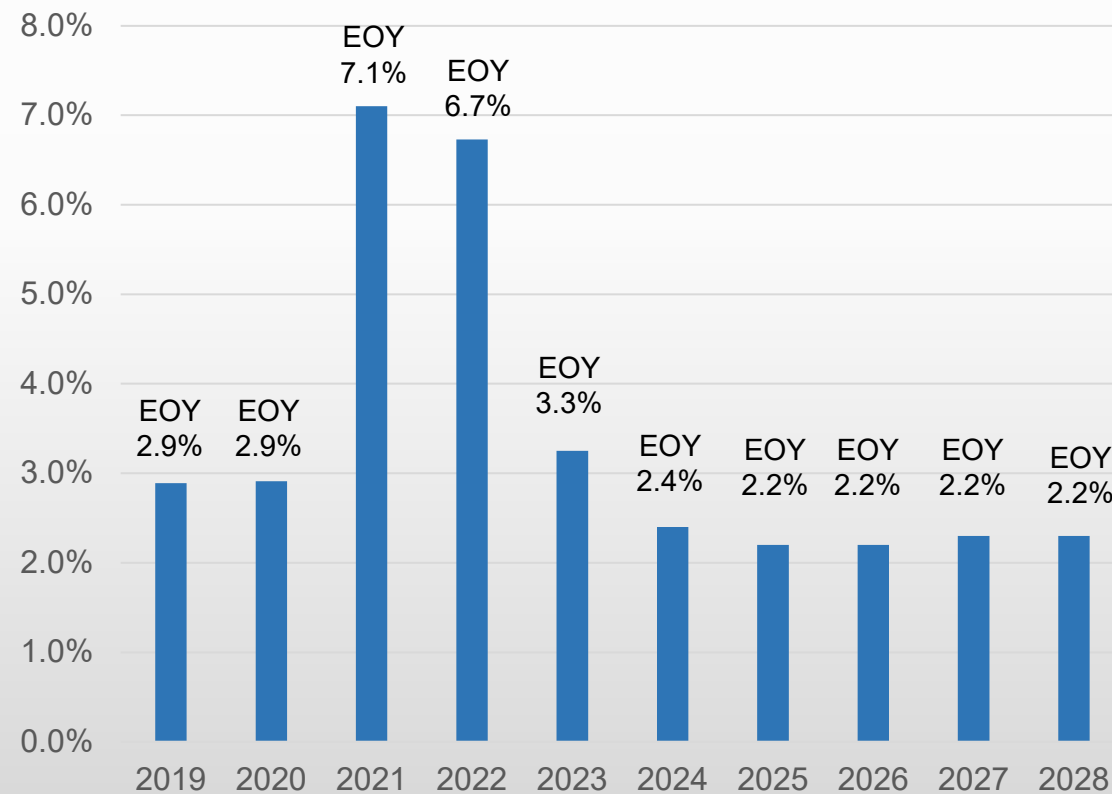
# Macroeconomic Summary

# Inflation Improvement

**Consumer Price Index**  
- BLS



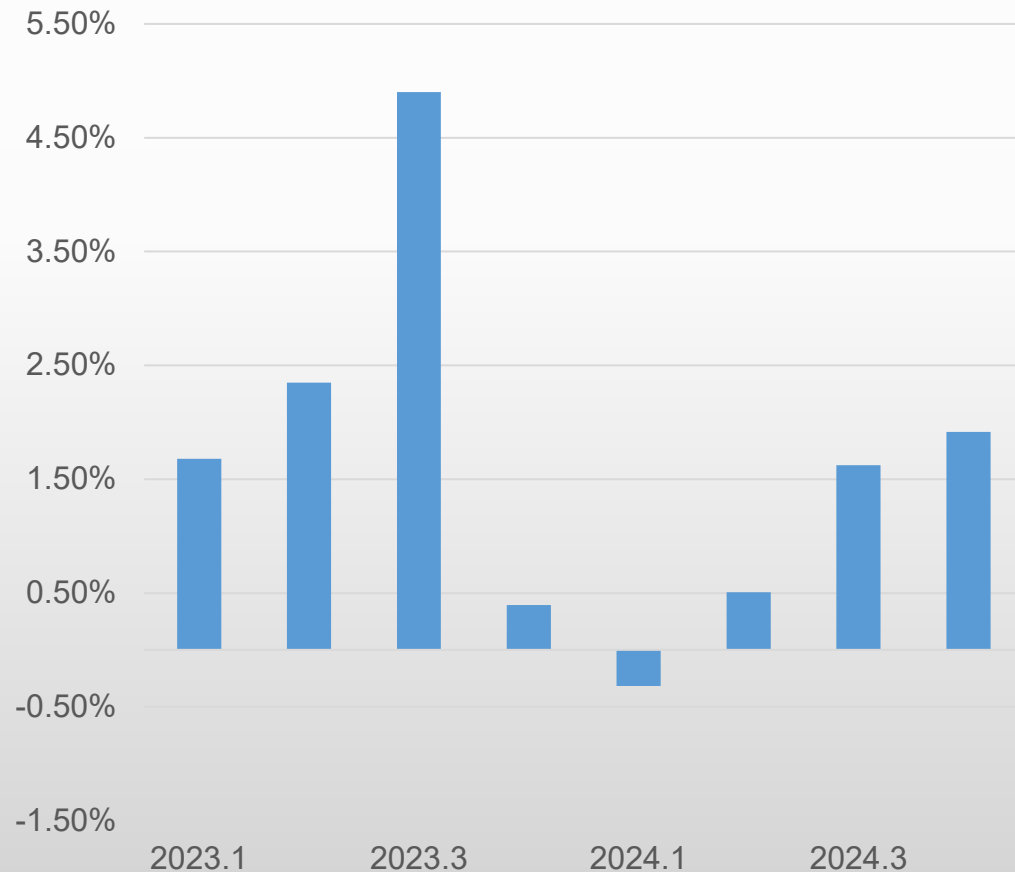
**Inflation Outlook**  
CPIU % Change, Monthly Average



# An Economic Slowdown is Likely, But No Recession

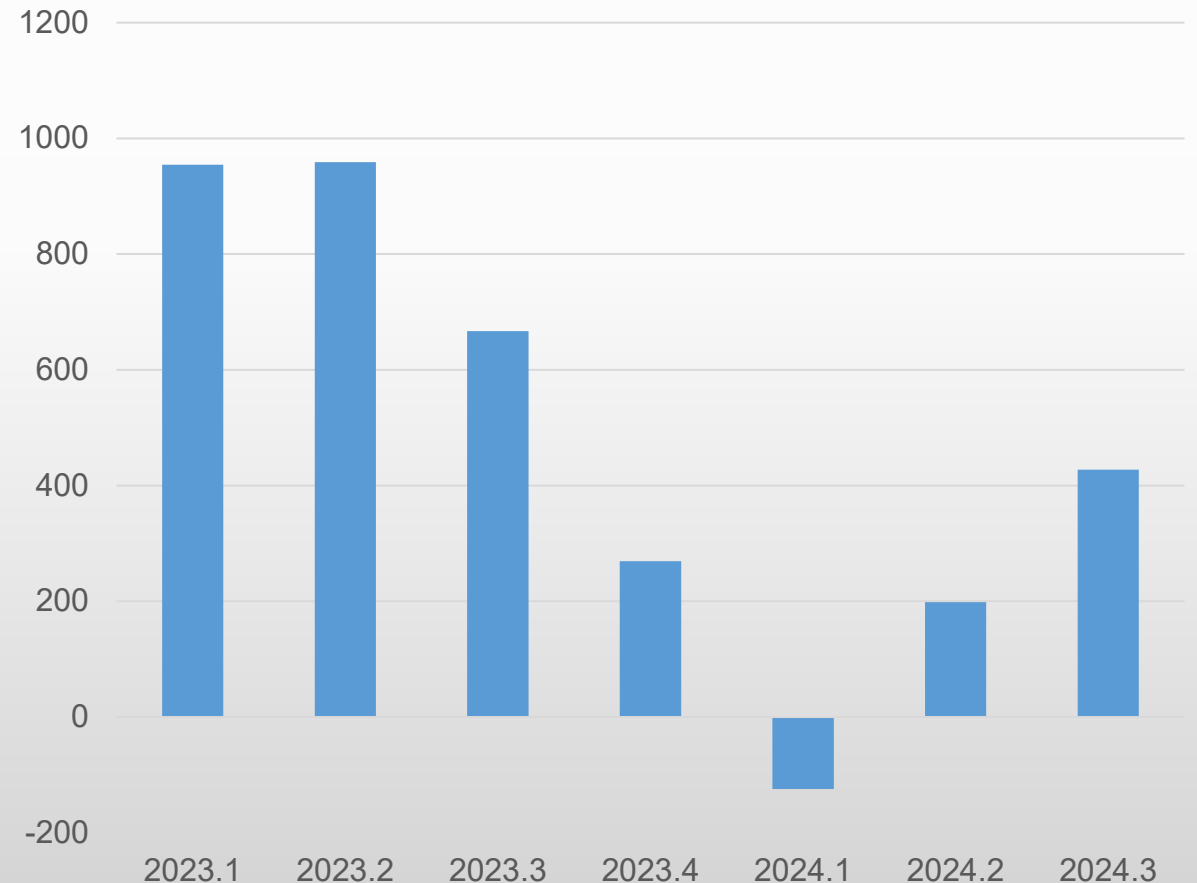
## Economic Growth Will Slow

GDP Growth Rate



## Job Losses Will Briefly Materialize

Quarterly Change in Employment, Thousands Average Monthly Rate



# Construction Summary



# Construction Outlook: 2024

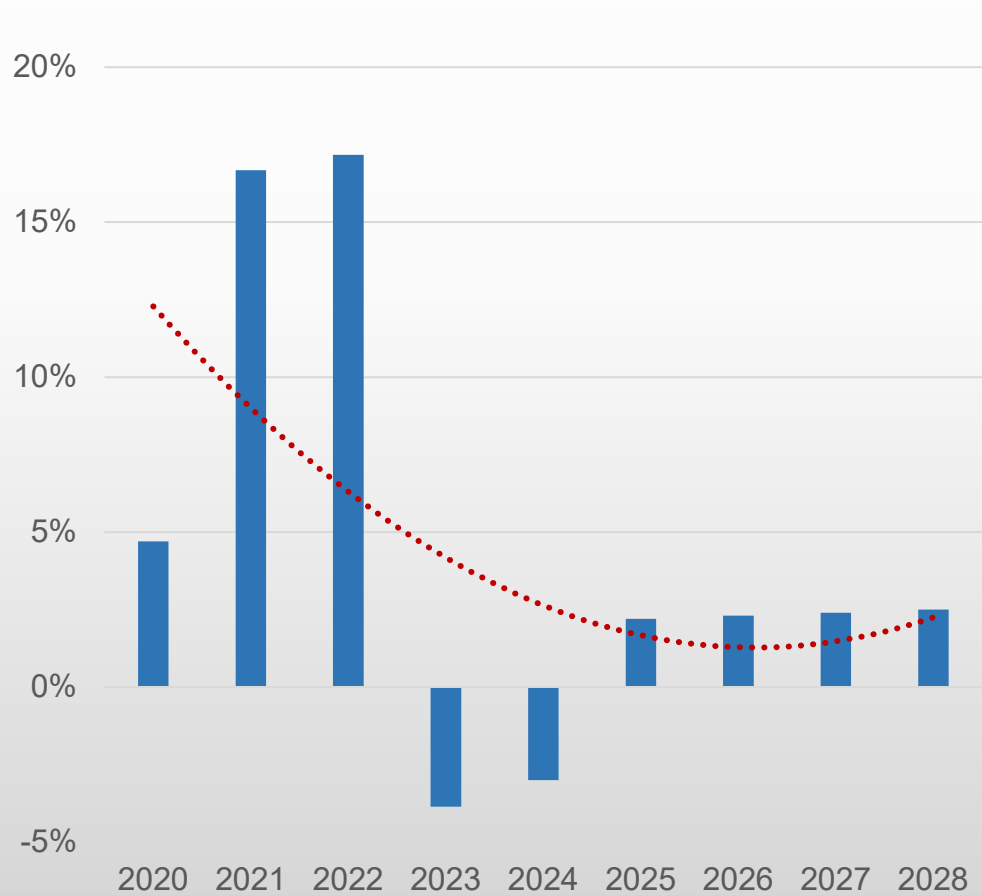
Reflects a battle between interest sensitive construction sectors against longer term construction commitments



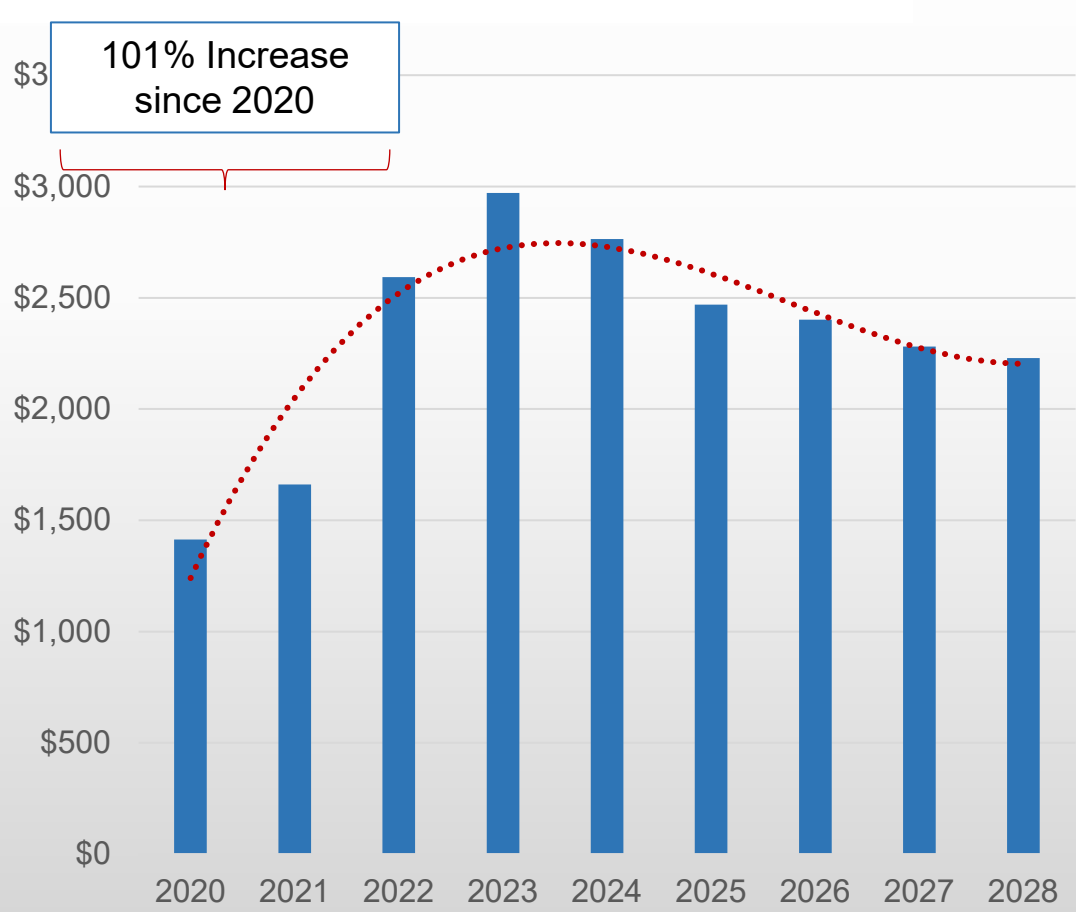
# Residential

# New Home Affordability

**New Home Price Outlook**  
 Annual % Growth



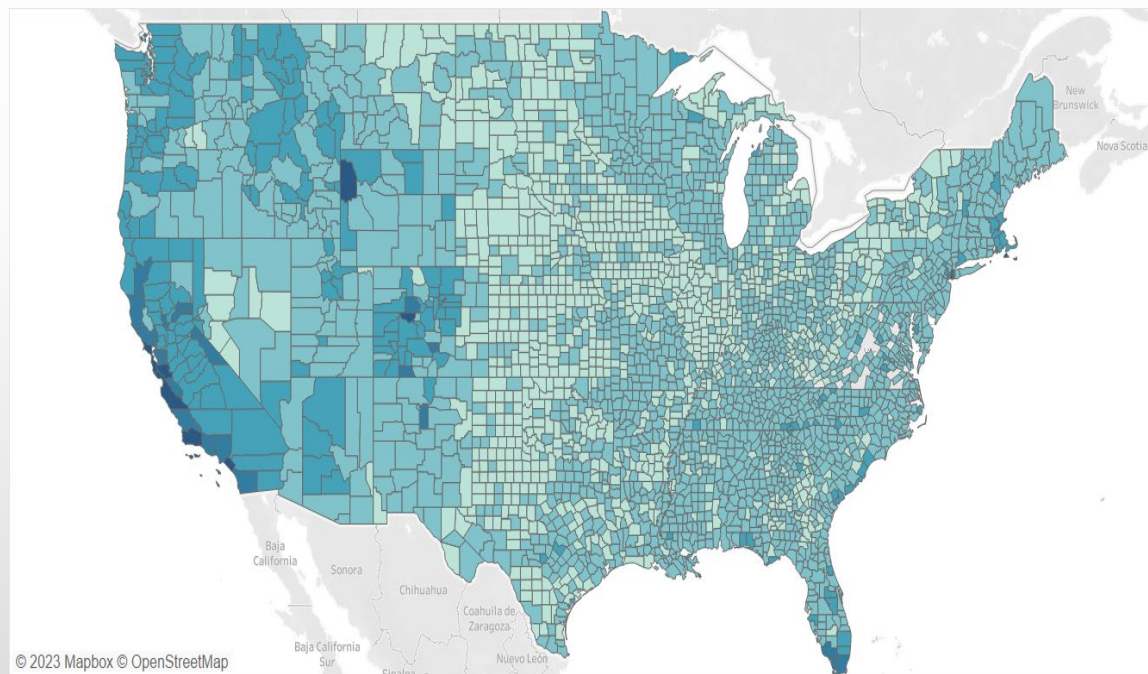
**Monthly Payment**  
 Annual



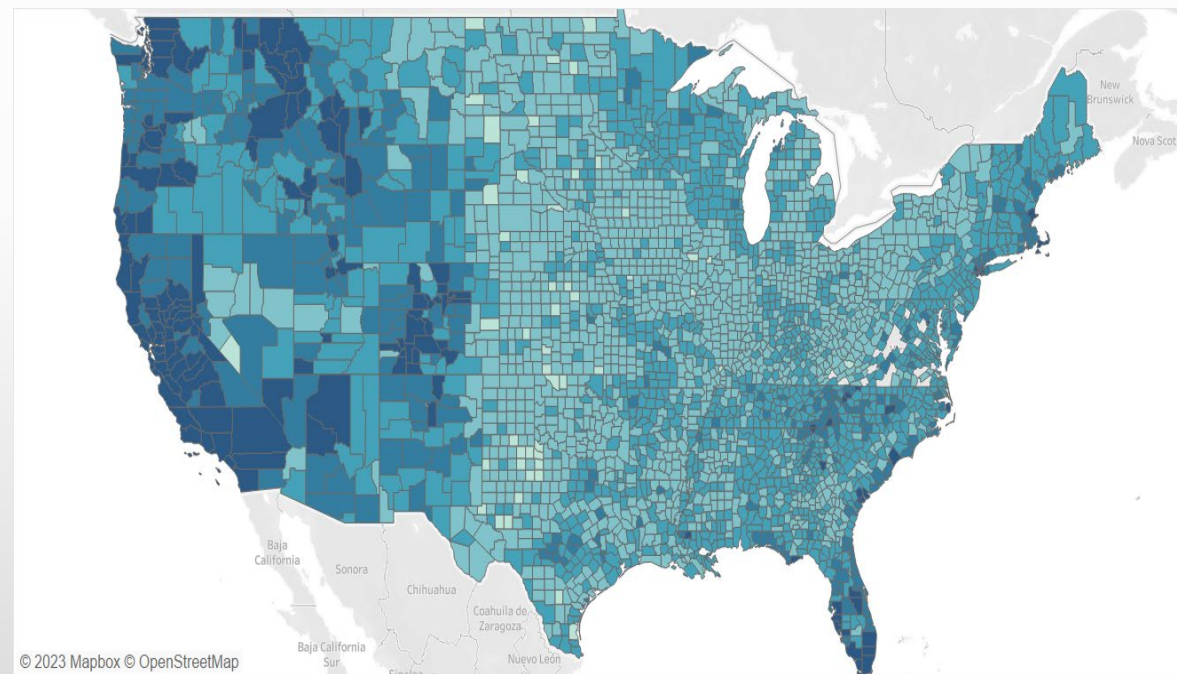
# Affordability Has Deteriorated Across the Country

Median mortgage payment share of median family income

**2020 Q2**



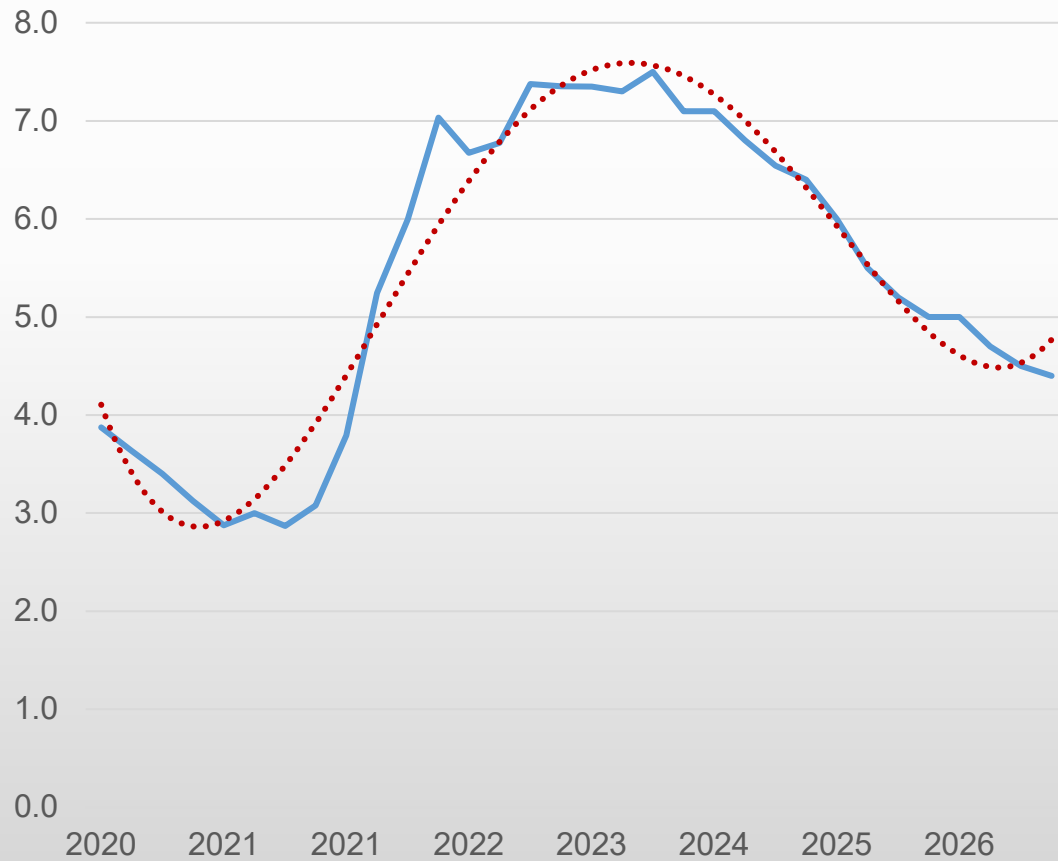
**2023 Q2**



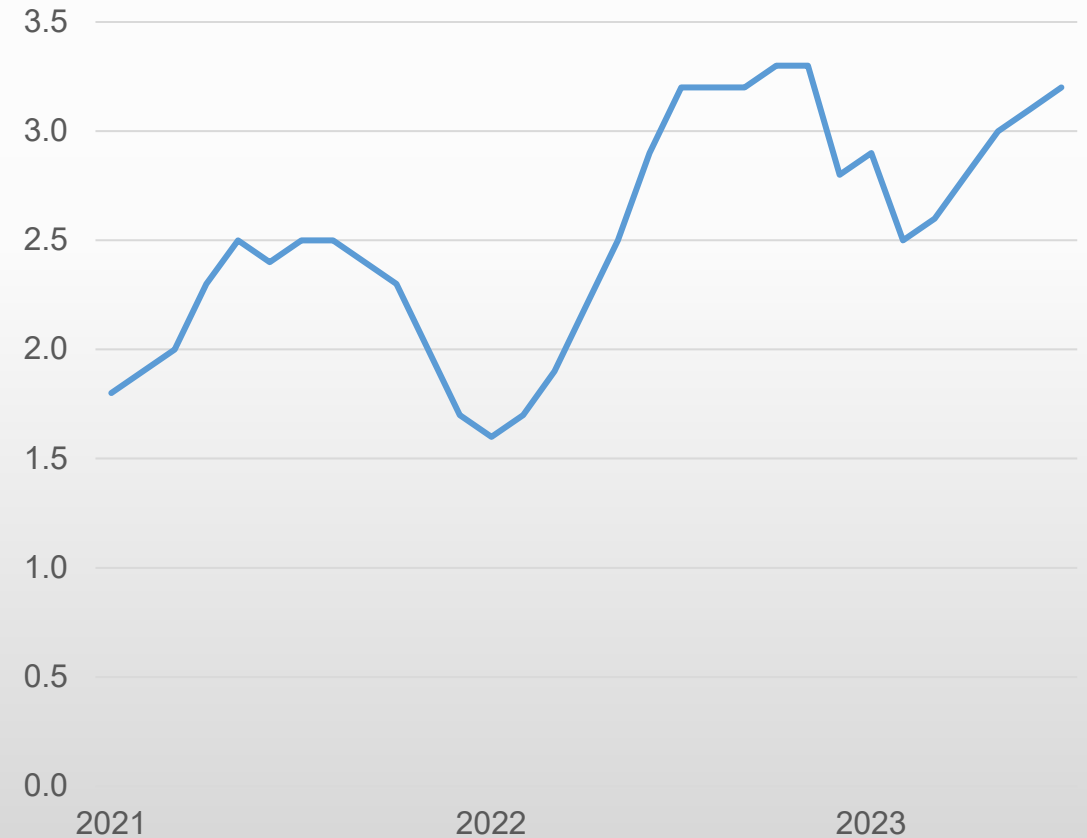
Darker = Greater Share Mortgage Payment as Percent of Income

# Affordability Erosion Is Not Expected to Improve Soon....

## 30 Year Conventional Mortgage Rates

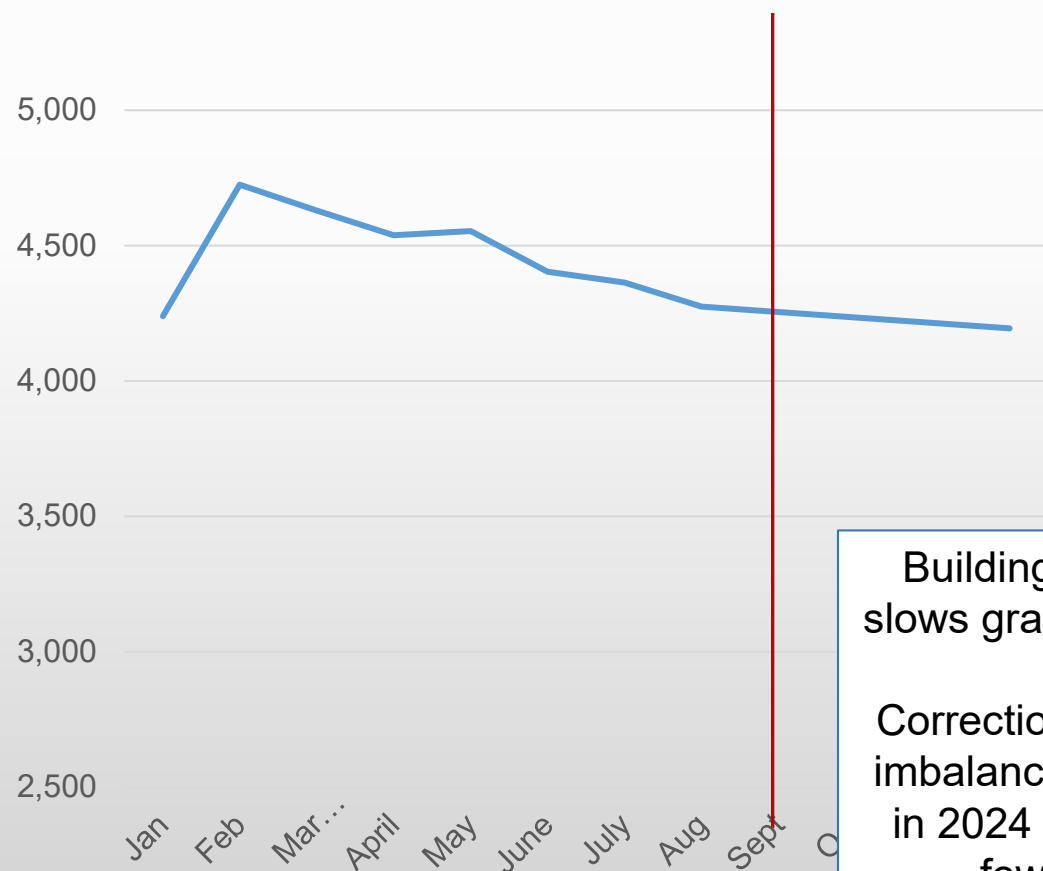


## Months Supply Existing Homes

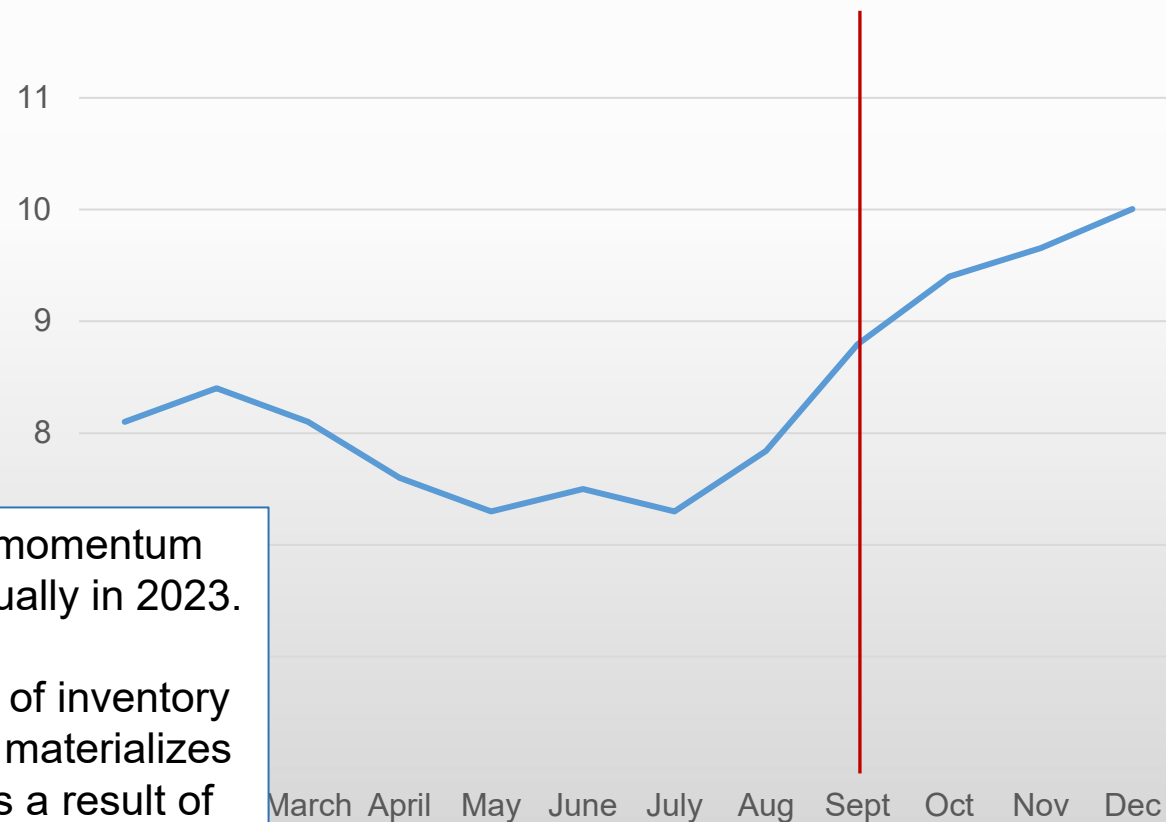


# New Home Inventory Correction Spills Into 2024...

Near Term Home Sales  
Thousands of Homes



New Home Month's Supply  
Months



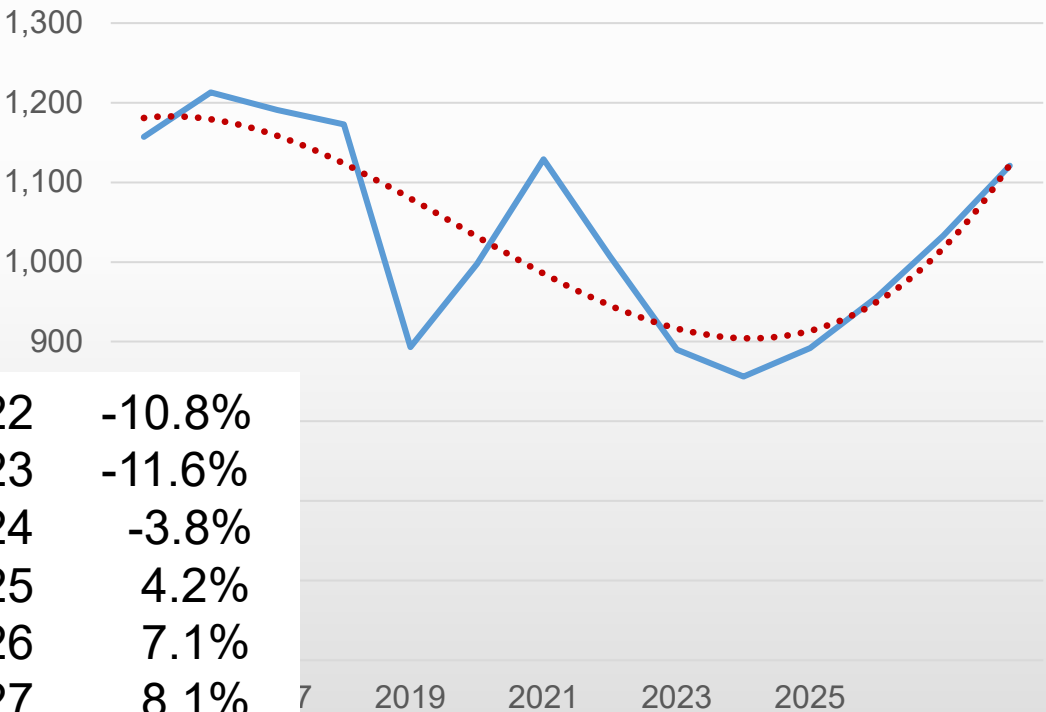
Building momentum slows gradually in 2023.

Correction of inventory imbalance materializes in 2024 as a result of fewer starts

# Housing Starts Outlook

## Single Family Starts

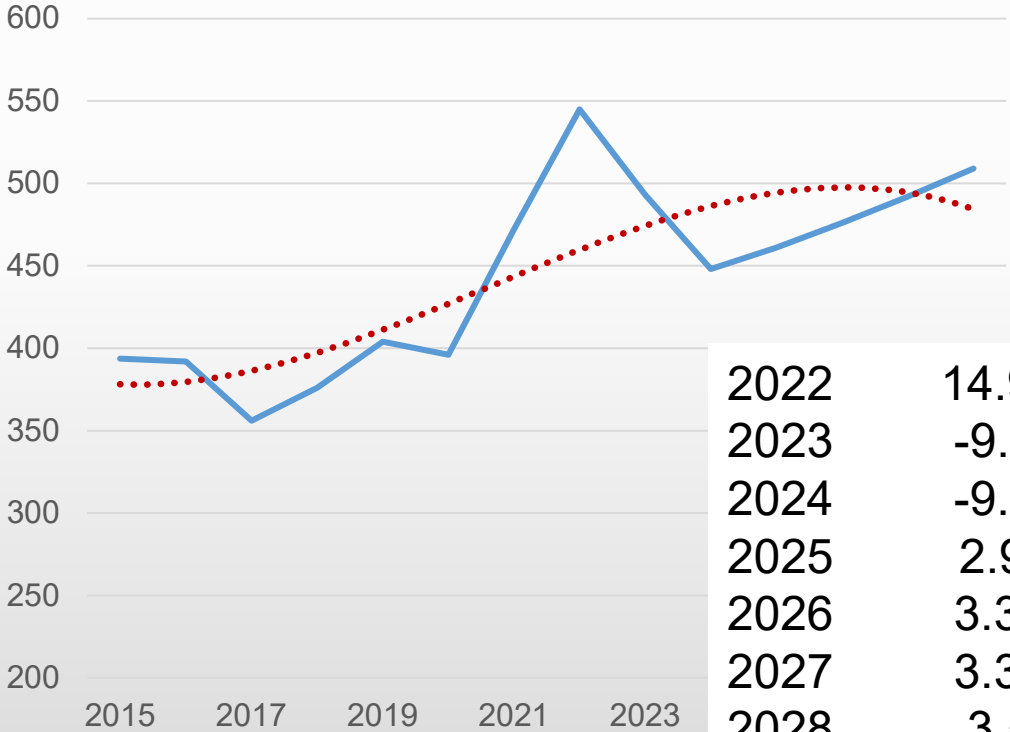
Thousands



2022	-10.8%
2023	-11.6%
2024	-3.8%
2025	4.2%
2026	7.1%
2027	8.1%
2028	8.5%

## Multifamily Starts

Thousands



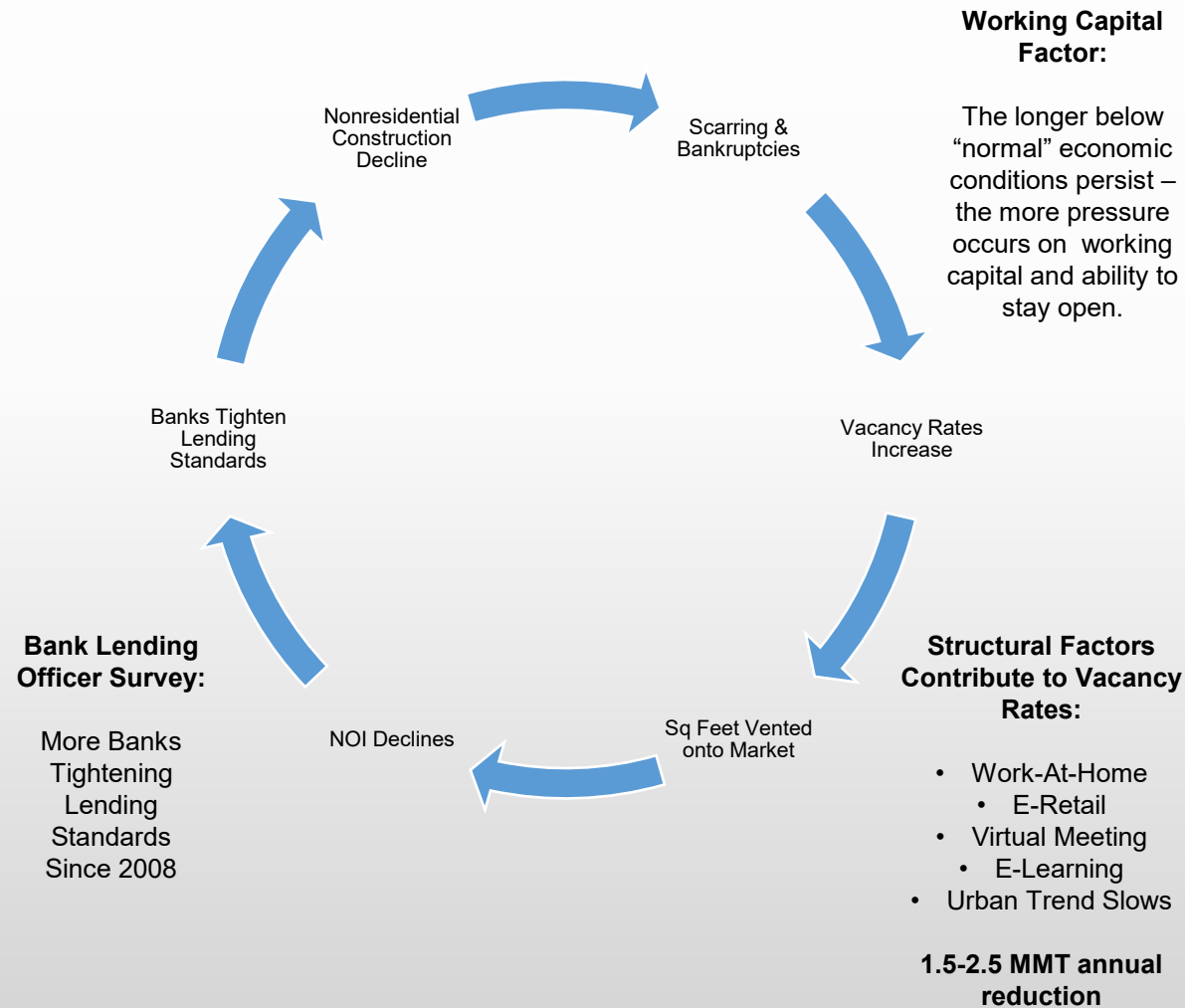
2022	14.9%
2023	-9.5%
2024	-9.1%
2025	2.9%
2026	3.3%
2027	3.3%
2028	3.5%

Downside Risks Exists  
for Both Sectors.



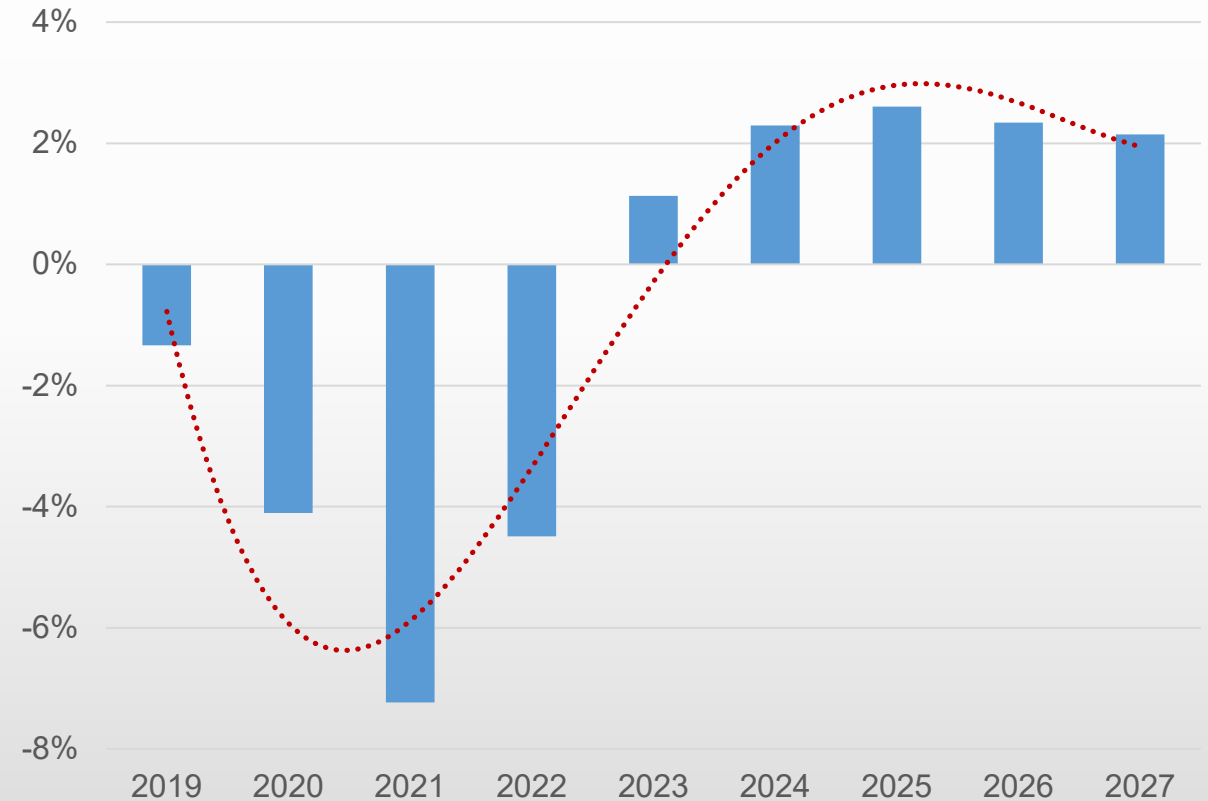
# Nonresidential

## Nonresidential Recovery Process



## Nonresidential Construction \*

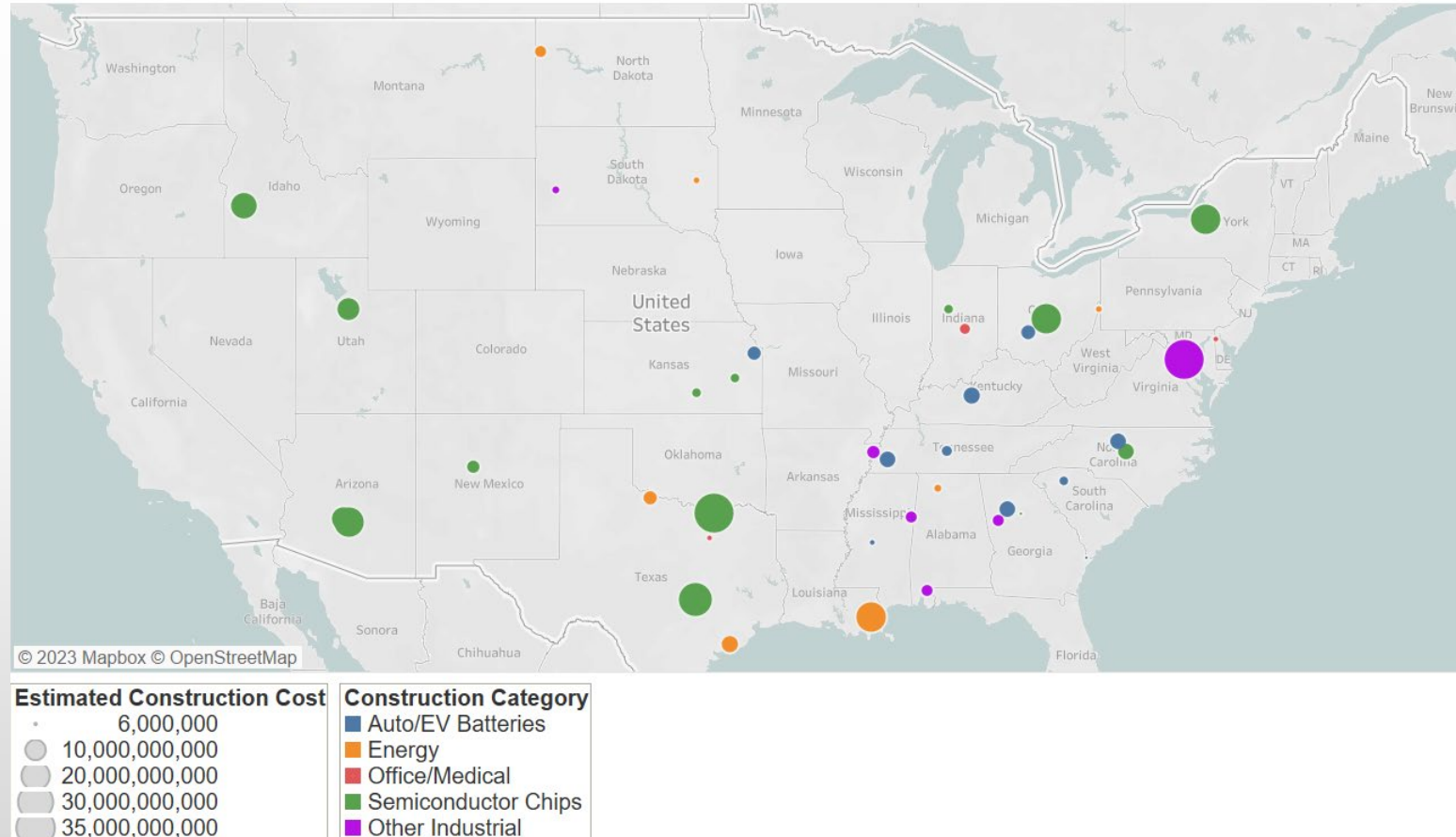
Real PIP, Y-O-Y Change



\* Excludes Industrial Manufacturing

# Onshoring US Manufacturing

## Large-Scale Investment Across the United States

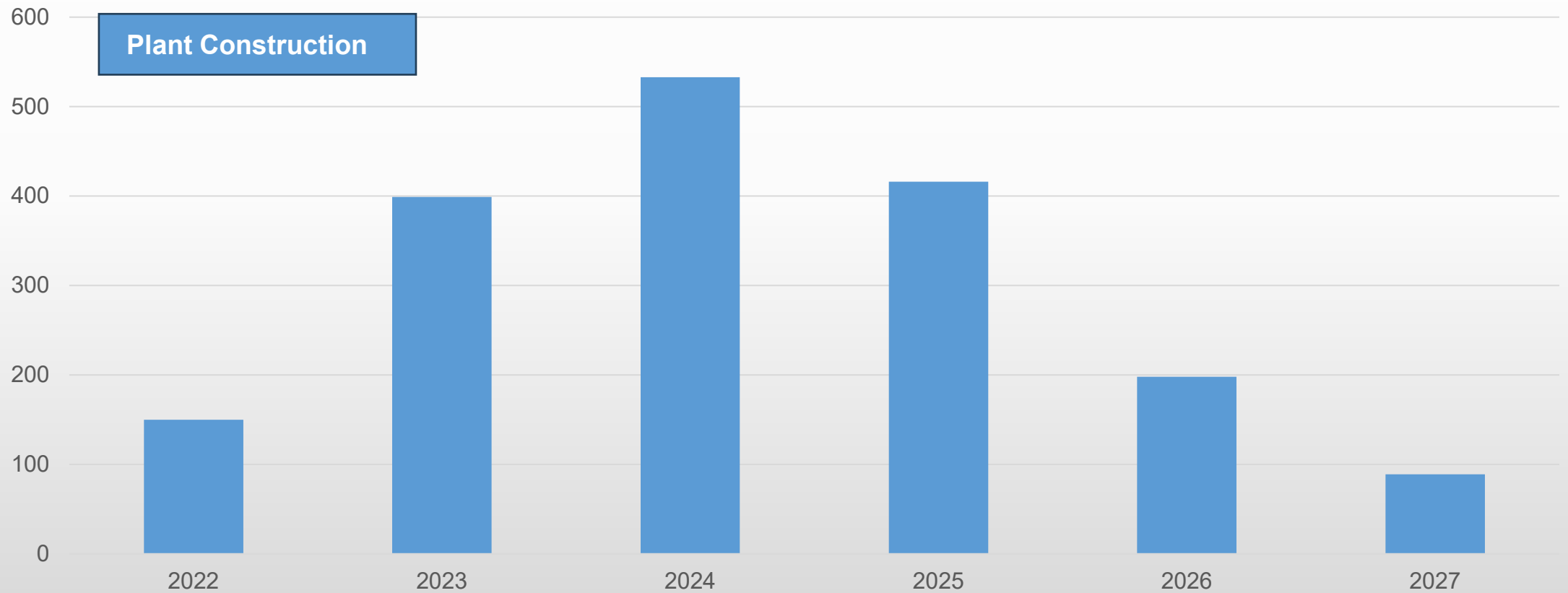


## PCA's MI Study

- Investment in response to national defense, supply chain, Chips Act & Inflation Reduction Act.
- Identified all (42) investments \$500 Million or Larger
  - Totaling more than \$300 billion.
  - Adding 80,000 direct jobs.
- Established baseline characteristics for each plant.
- Based on this established estimates for direct & indirect cement consumption
  - Plant, infrastructure, housing, nonresidential.

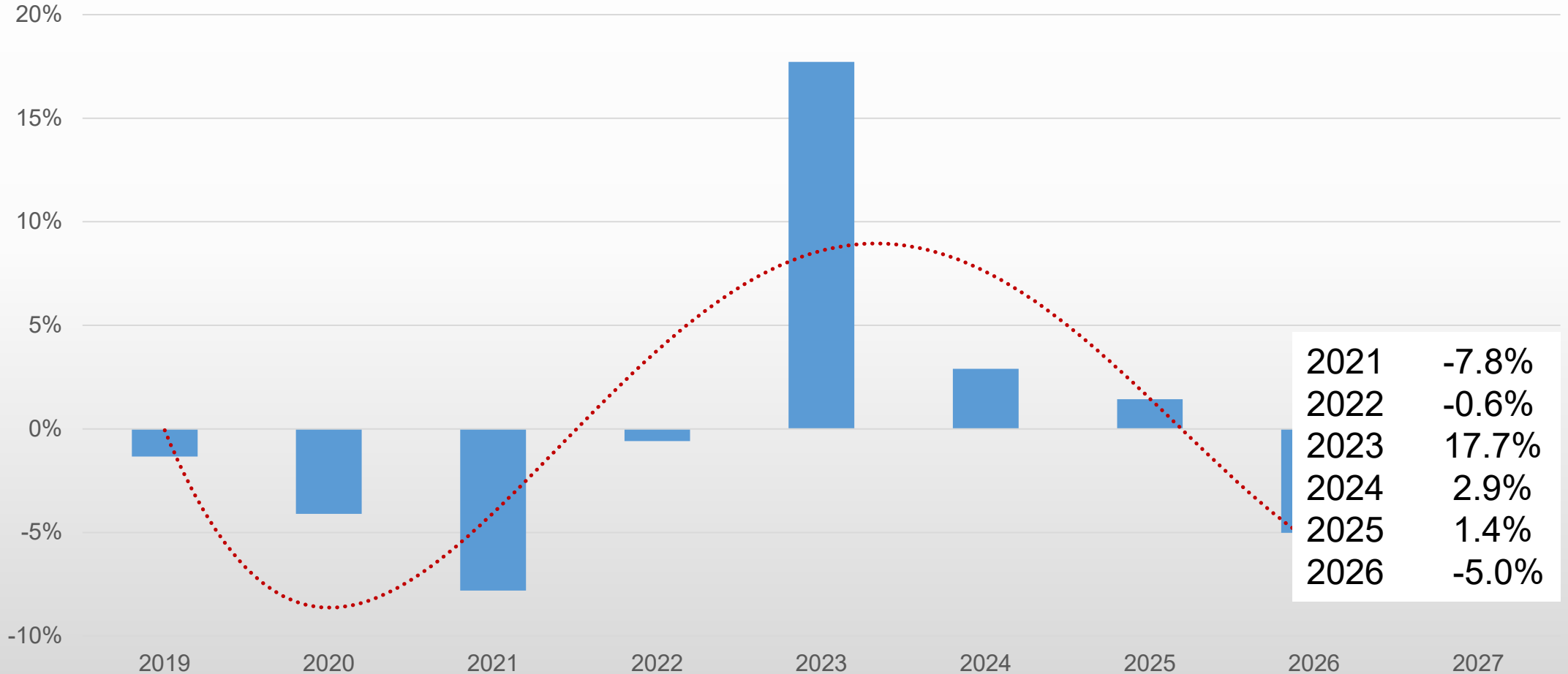
# On-Shoring Adds Significant Volume

Thousand Metric Tons



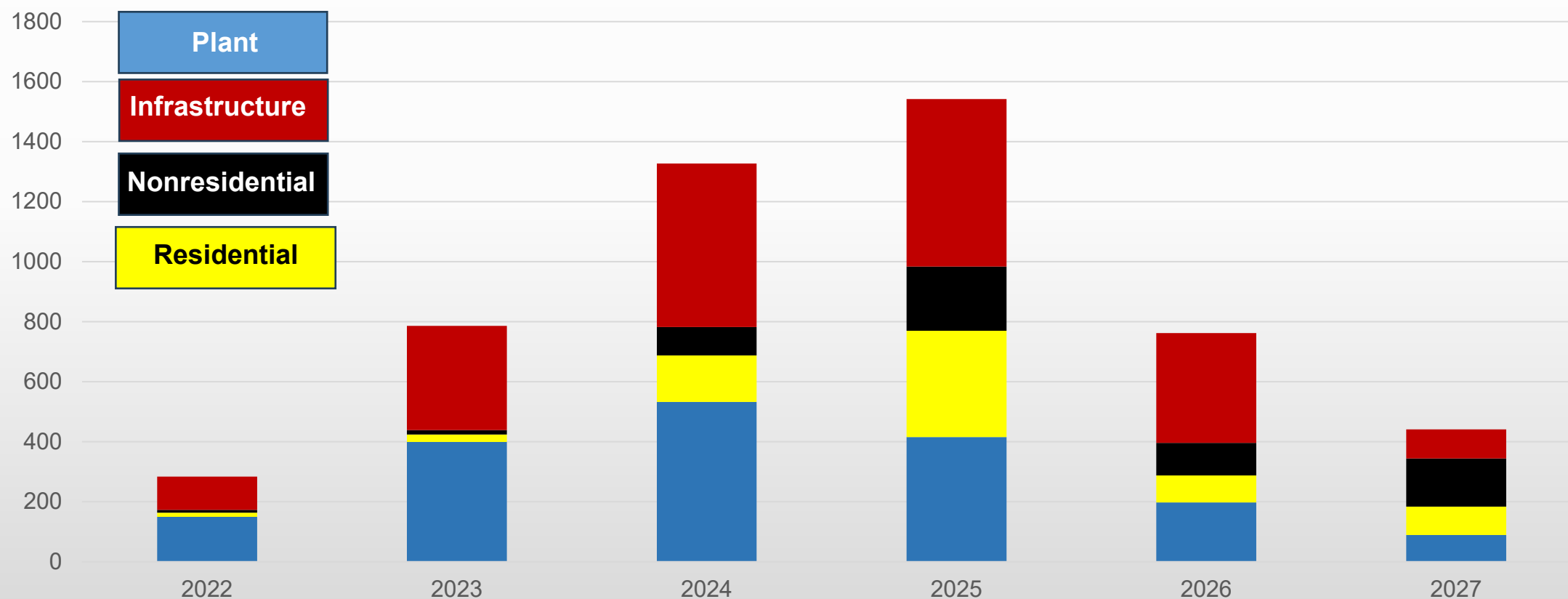
# Nonresidential Recovery Process

Annual Y-O-Y Percent Change Real Spending



# On-Shoring Adds to Residential, Nonresidential & Public

Thousand Metric Tons

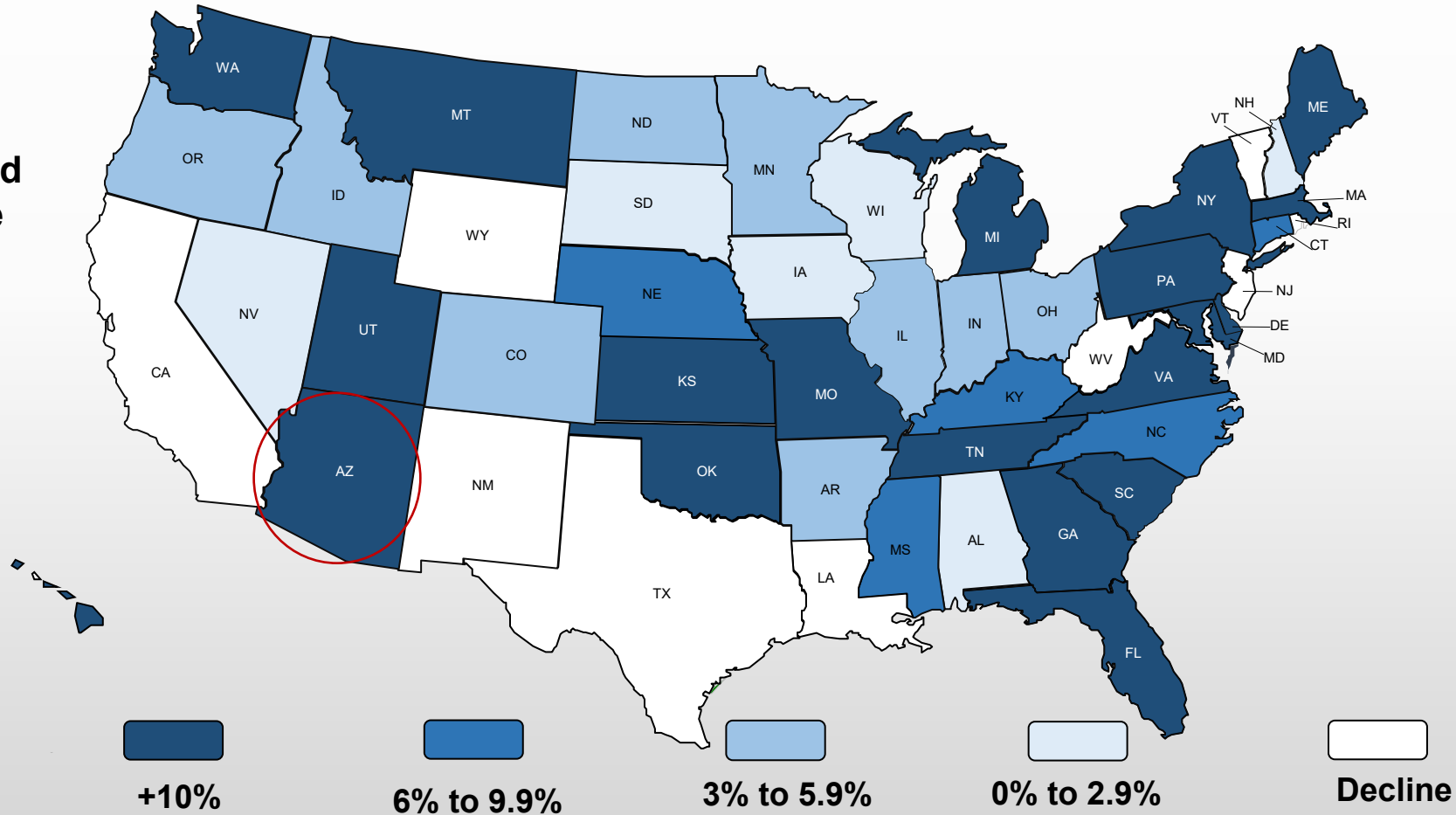


# Public

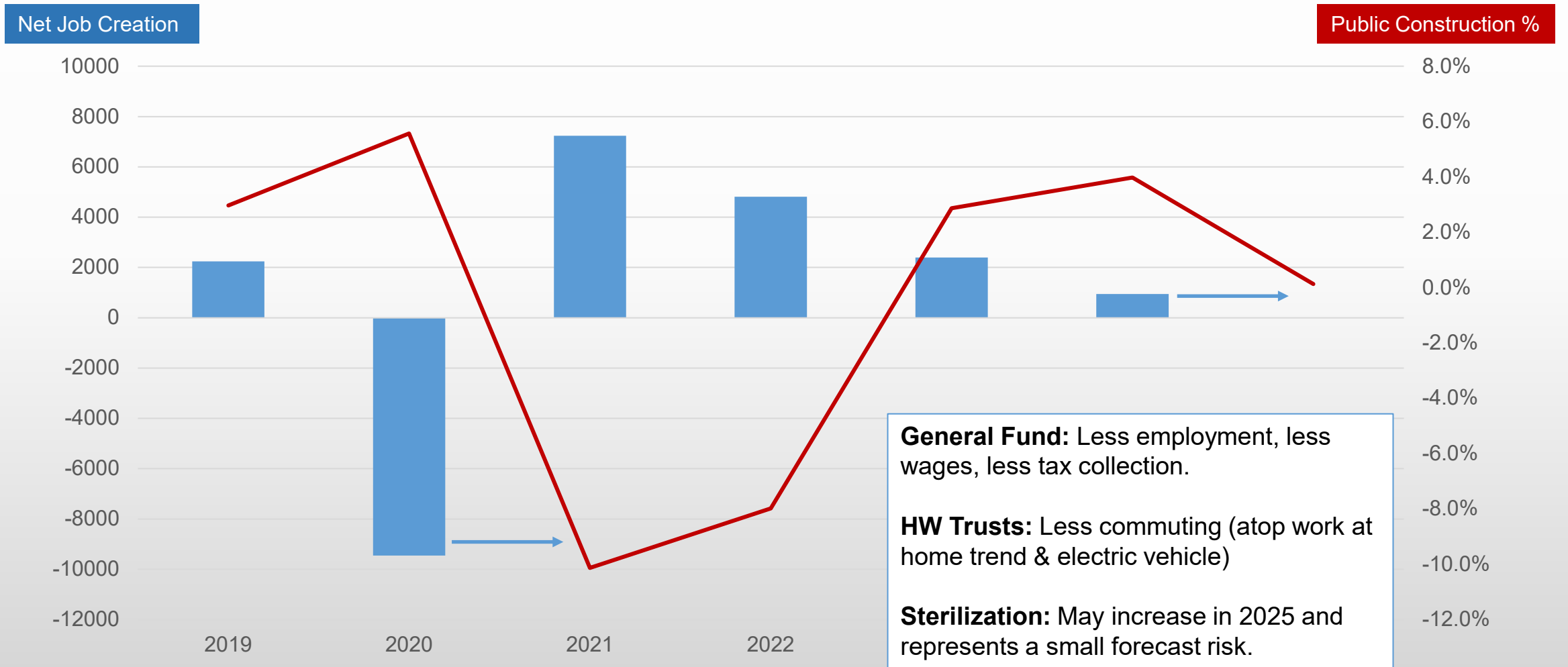


# General Fund Percentage Expenditure Change – FY2024

On a state weighted basis, 2024 general fund expenditures are expected to increase 6.7%.

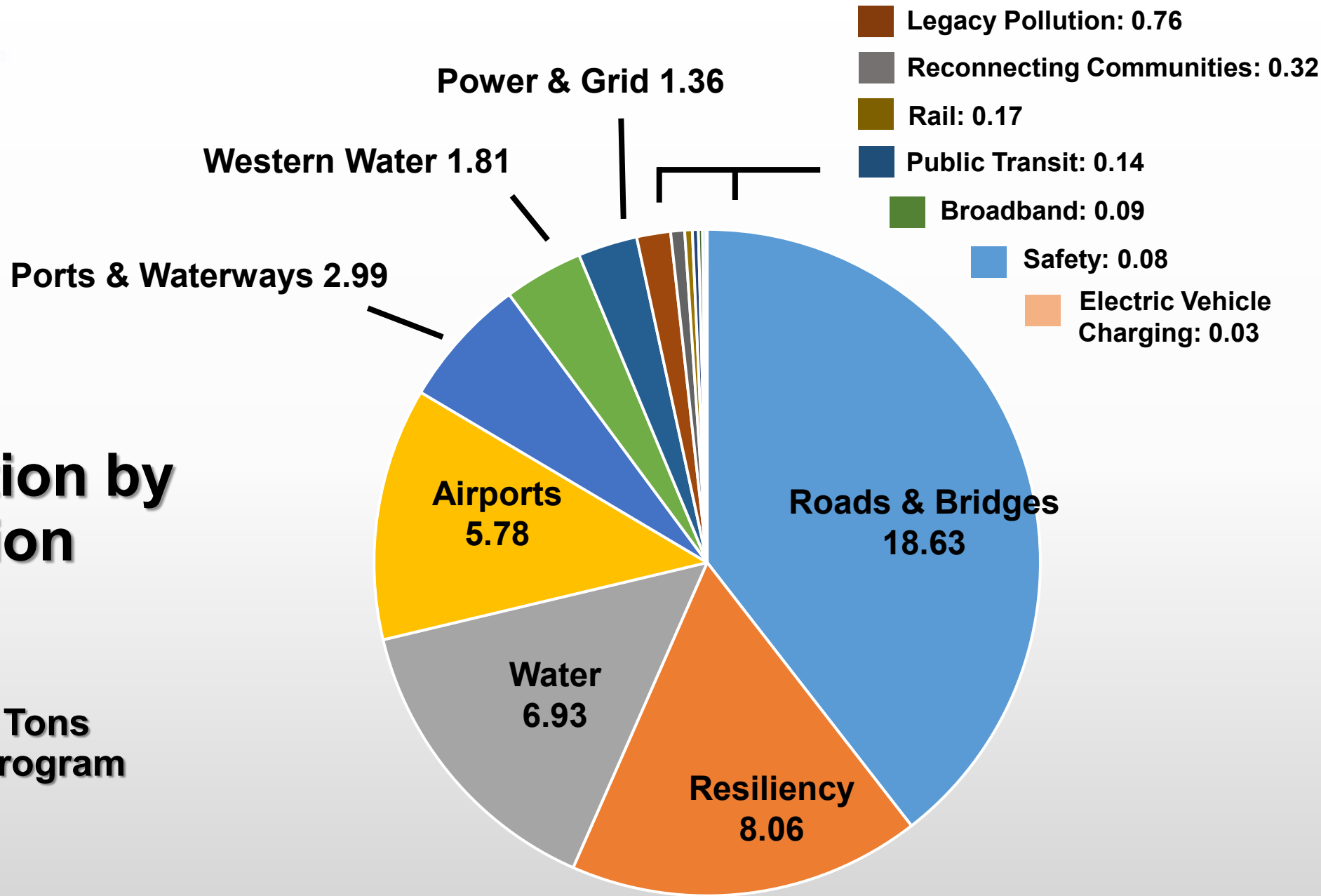


# Net Job Creation, State Finances & Public Construction



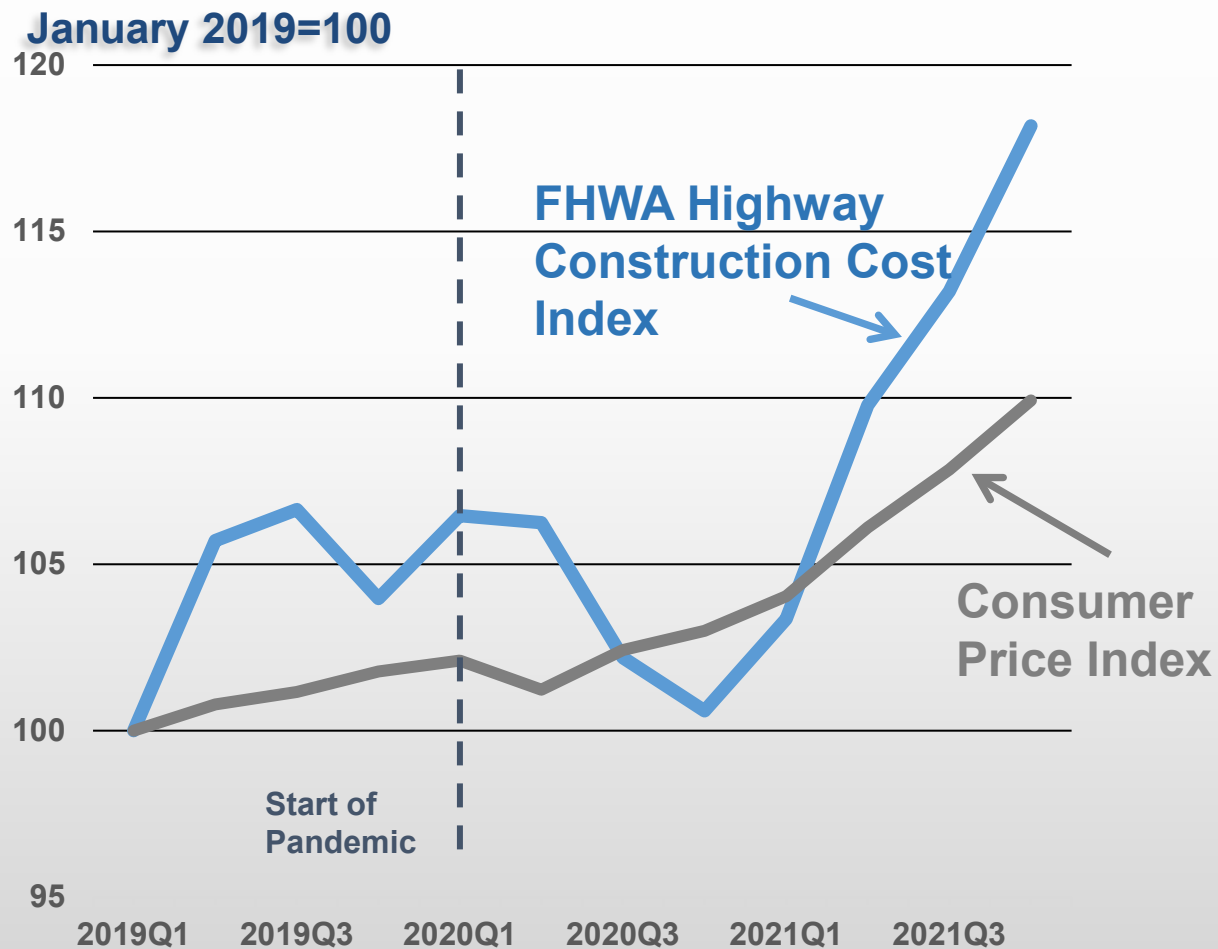
# Cement Consumption by Construction Sector

46 Million Metric Tons  
Over Five Year Program



# Infrastructure Has Experienced Higher Relative Inflation

## Highway Construction Costs vs CPI



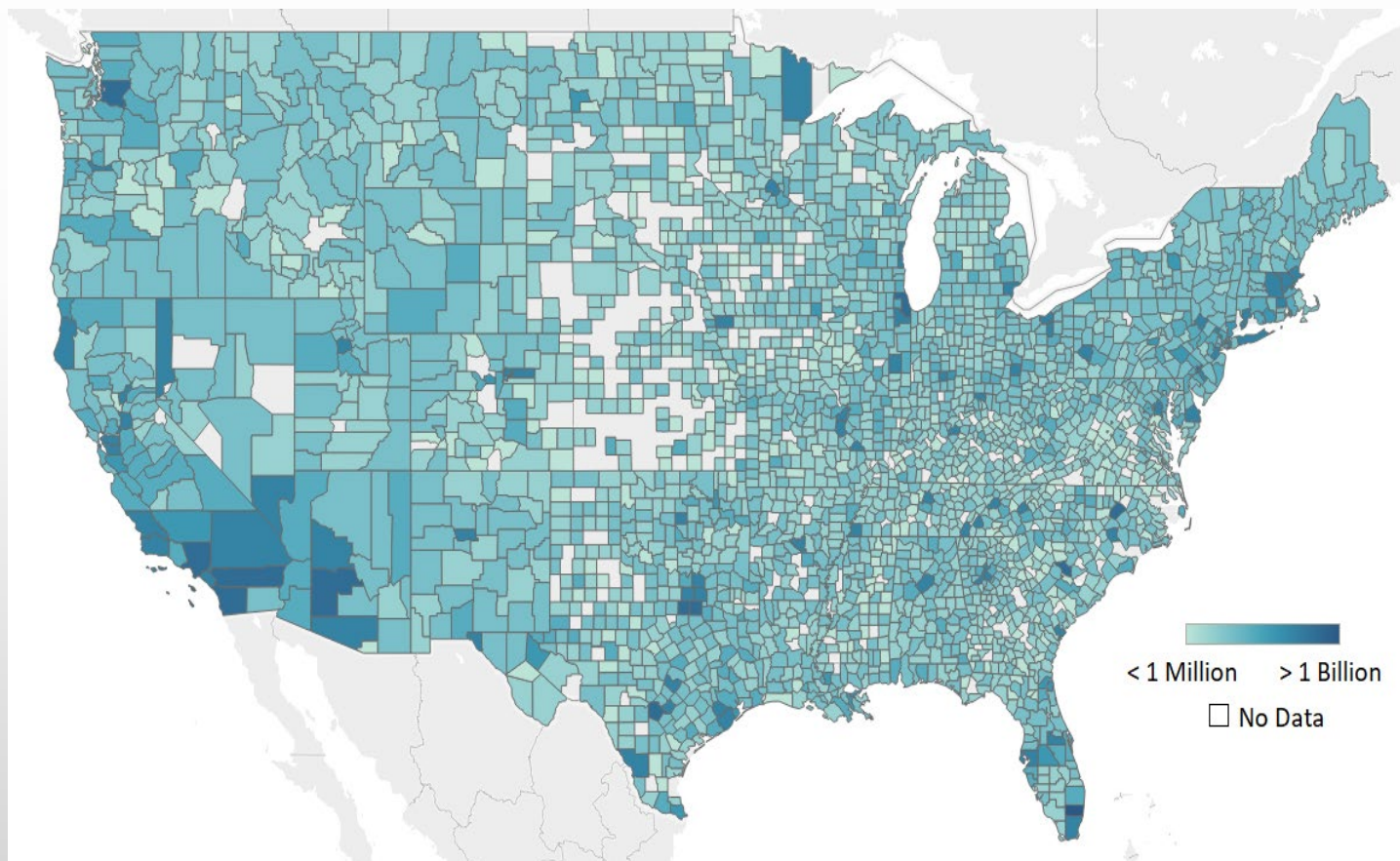
Source: FHWA, BLS PCA

## Bureau of Reclamation Construction Cost Index

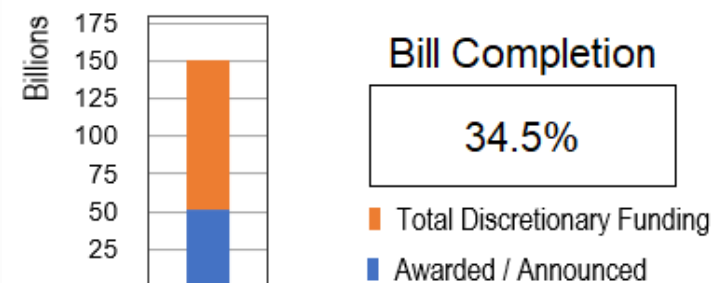
Annual Percent Change 2Q22/2Q21

Steel Tower Transmission Lines	19.8%
Laterals And Drains	18.5%
Secondary Roads	15.2%
Switchyards And Substations	14.4%
Earth Dams	14.2%
Steel Pipelines	13.3%
Primary Roads	12.6%
Canals	11.7%
Pumping Plants	11.6%
Diversion Dams	11.3%
Concrete Dams	11.0%
Concrete Pipelines	10.0%
Distribution Pipelines	9.5%
Bridges	9.3%
Wood Pole Transmission Lines	7.4%
Powerplants	7.3%

## Current Awarded & Announced Reported IJJA Funding By County

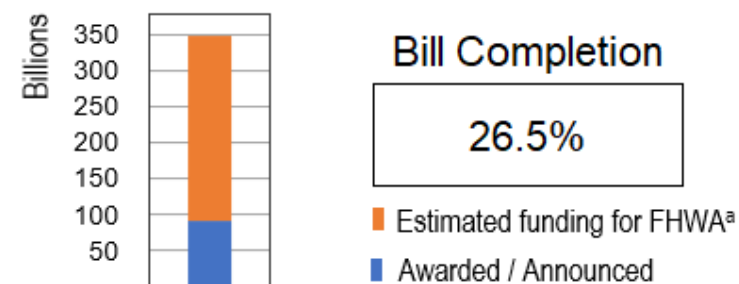


## Estimated Discretionary Tracking<sup>a</sup>



<sup>a</sup> Used as an estimate to track the completion of the 150 Billion allocated for discretionary spending.

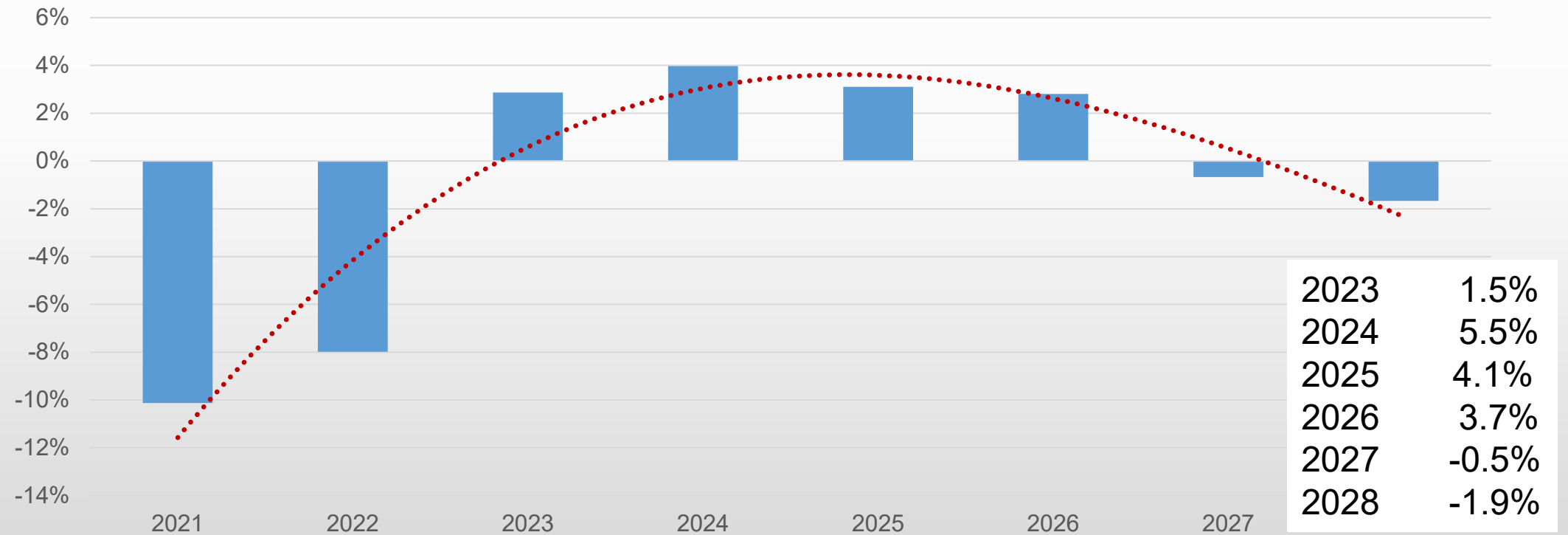
## Estimated Transportation Tracking



<sup>a</sup> Department of Transportation estimated FHWA funding FY22 - FY26

# Public Construction

Real PIP Construction

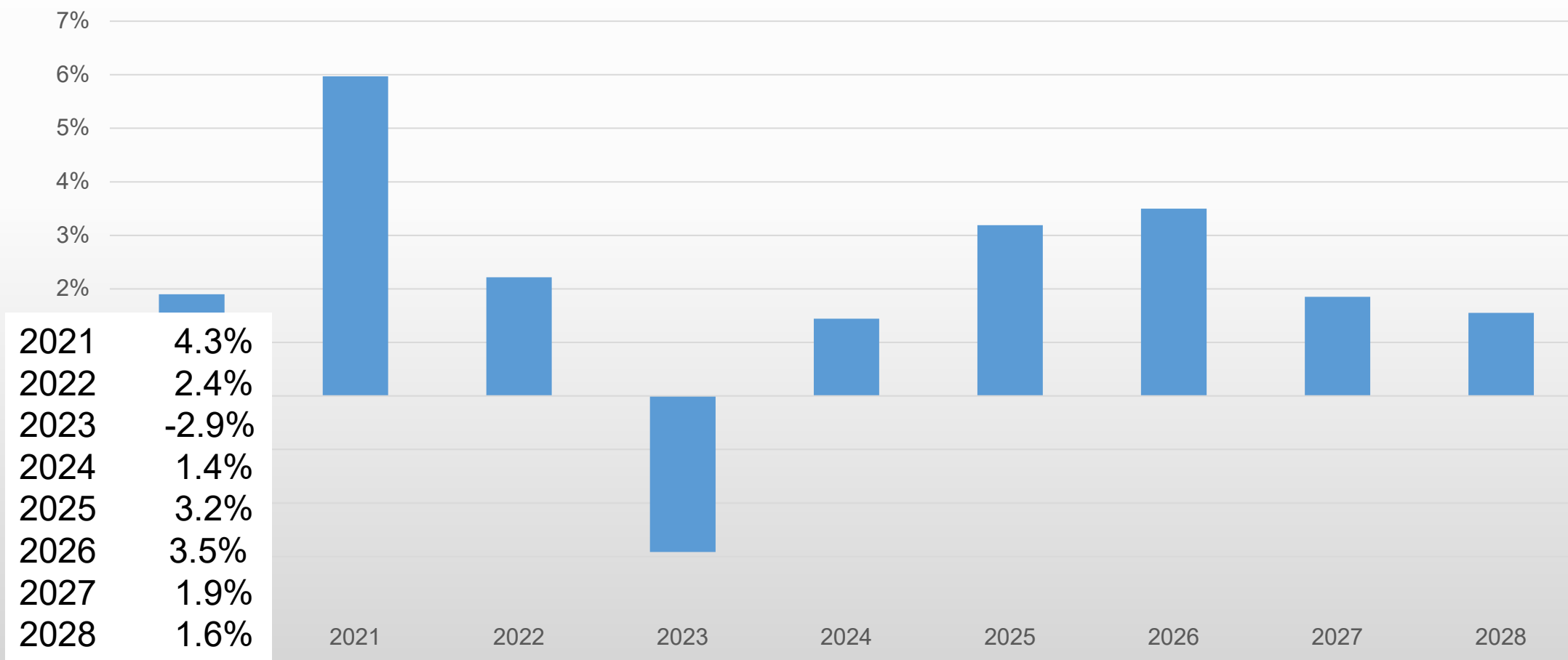


# Summary



# Baseline US Cement Consumption Outlook

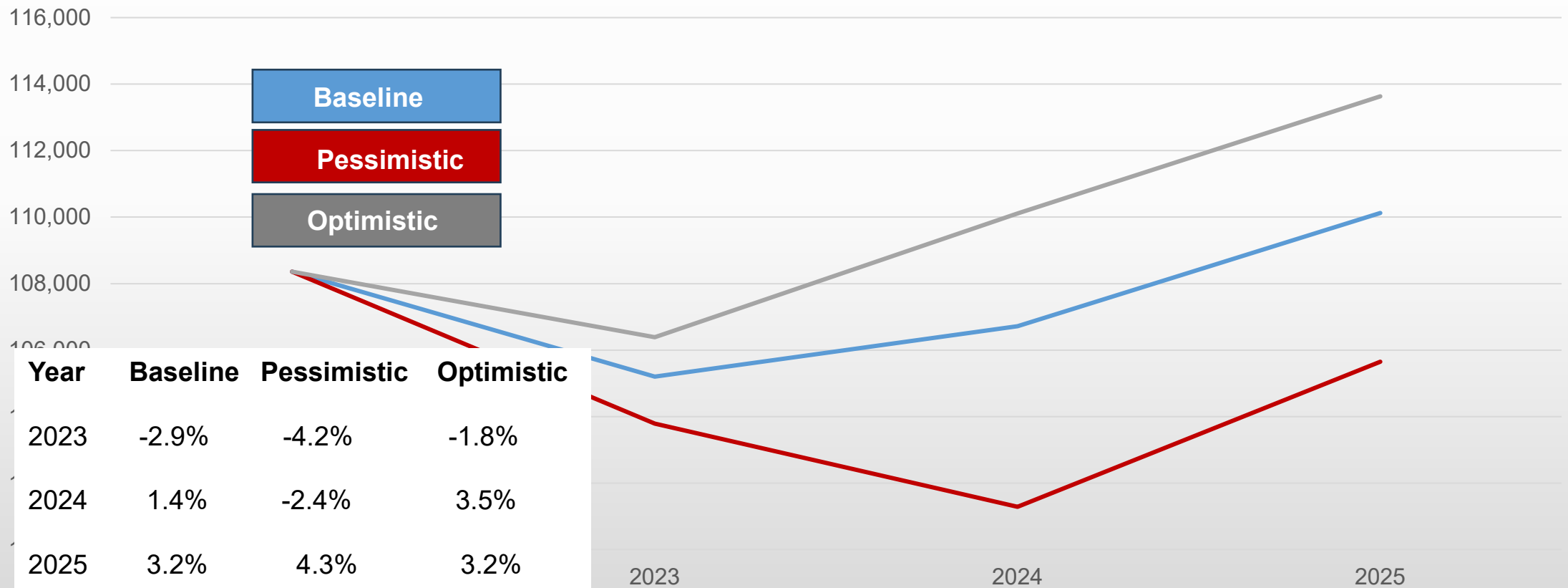
## Baseline Annual % Growth



# Alternatives

# Alternative US Cement Consumption Outlooks

Thousand Metric Tons





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