



*Since 1916*

America's Cement Manufacturers™

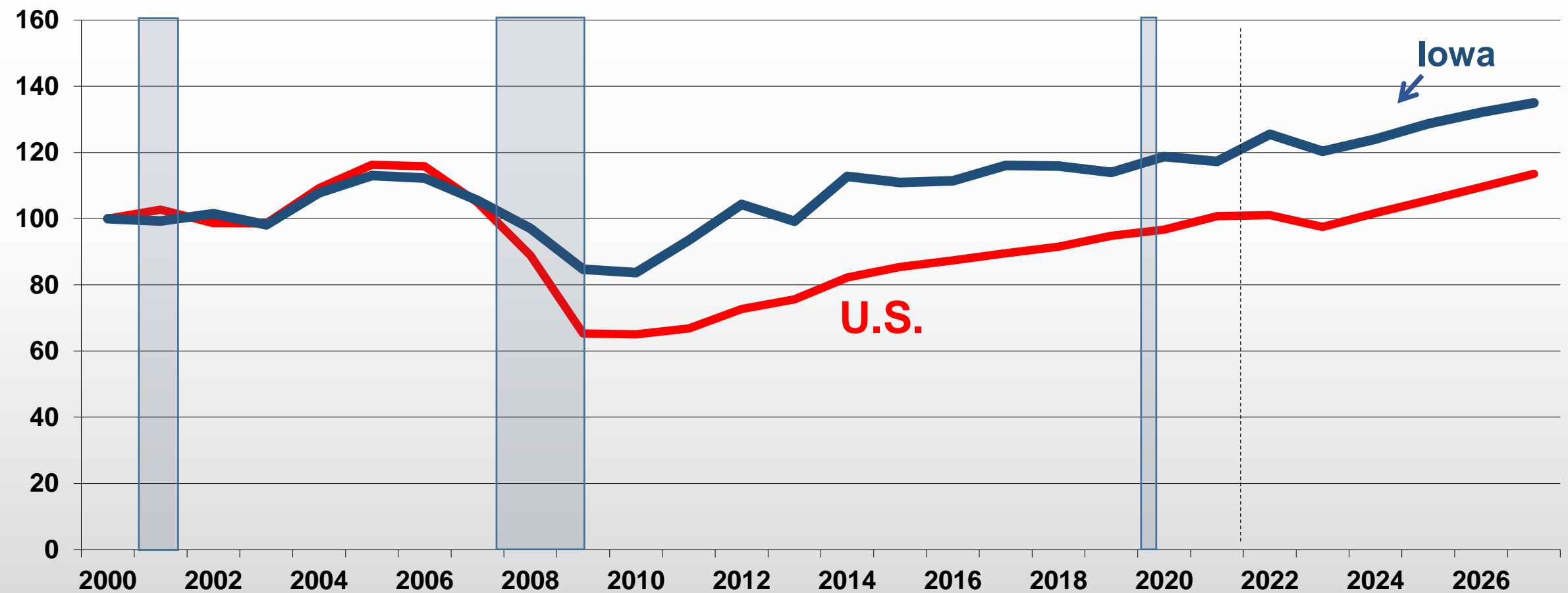
## Economic & Construction Outlook

Dave Zwicke, Sr. Director of Analytics & Regional Economist

IRMCA 74<sup>th</sup> Annual Convention: March 2023

# Total Cement Consumption

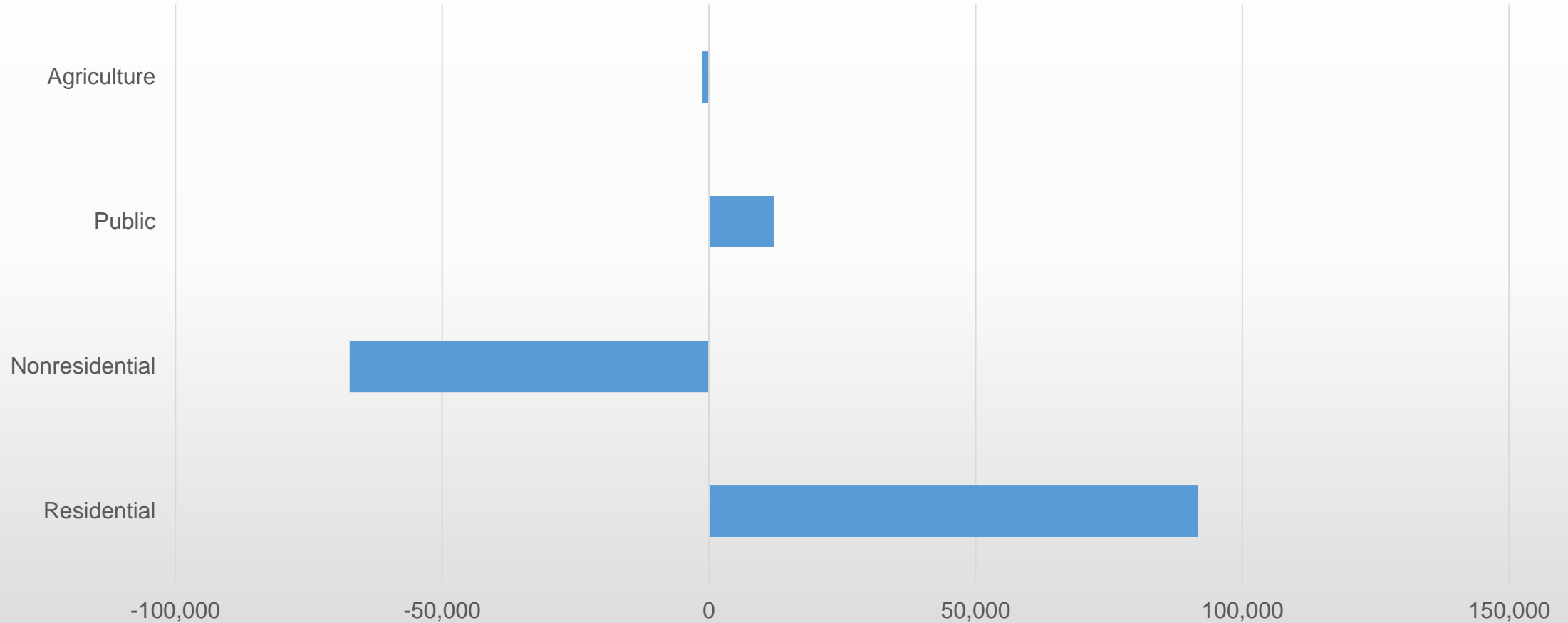
Index, 2000=100



Source: USGS, PCA

# Composition of Cement Growth: Iowa

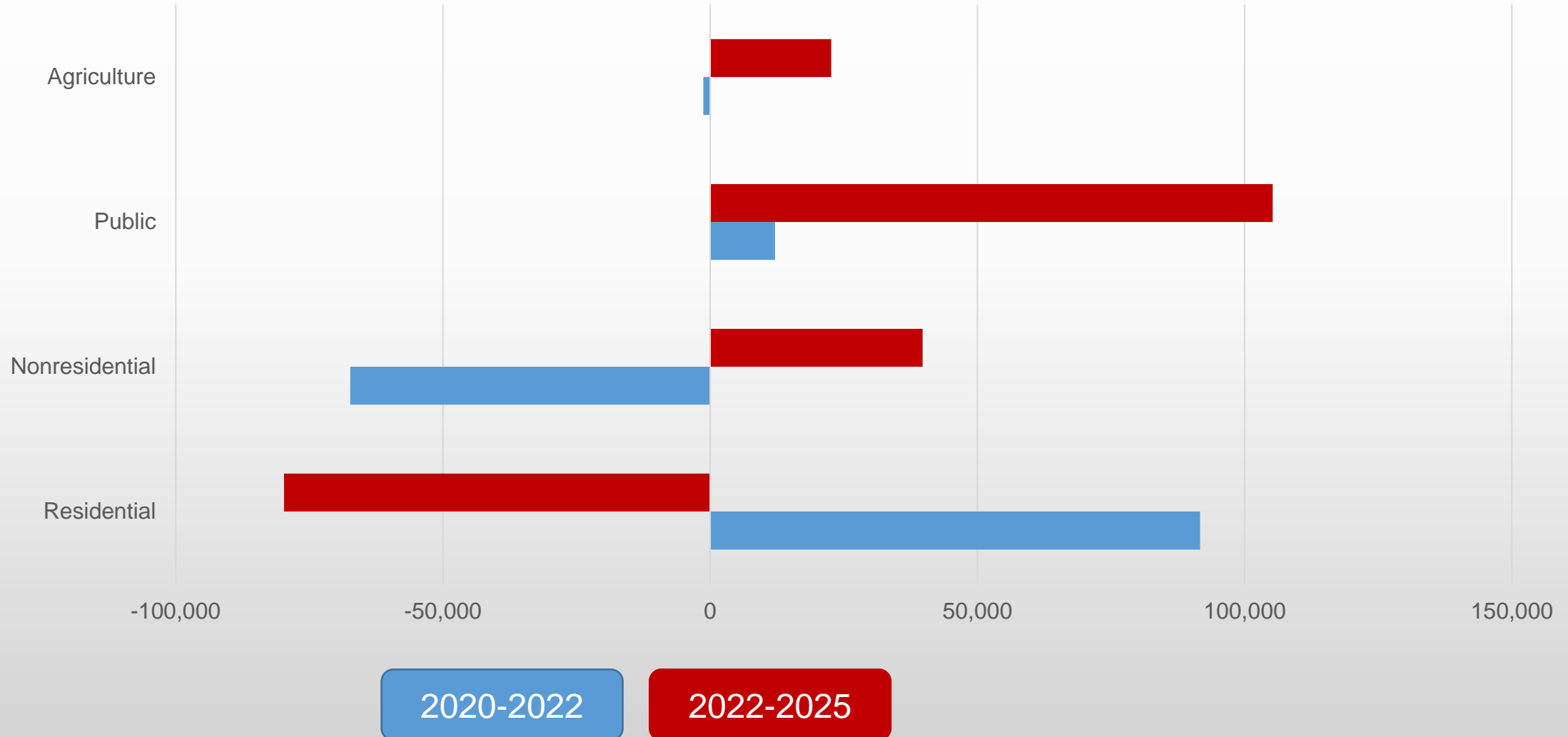
Metric Tons



2020-2022

# Composition of Cement Growth: Iowa

Metric Tons

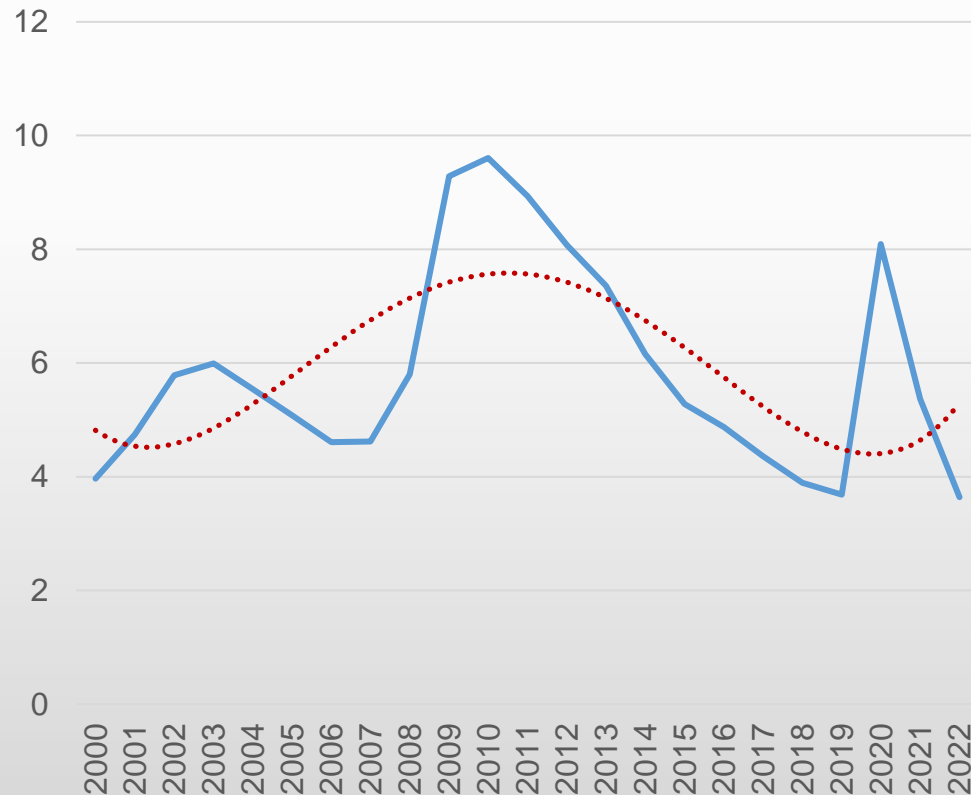


# General Economic Context

# Context: The Economy Started From Position of Strength

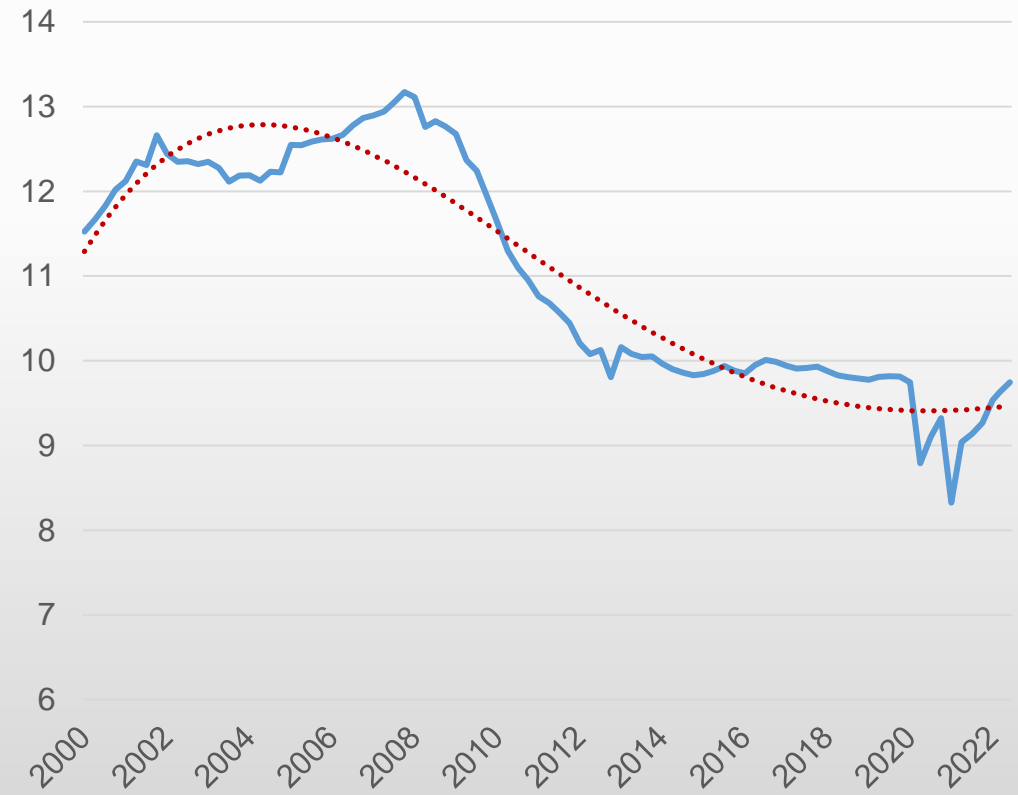
## Labor Markets Are Strong

% Unemployed



## Household Debt Service Ratio

Debt as % of Disposable Income





# Covid, Fiscal & Monetary Policies Lay the Seeds for Today

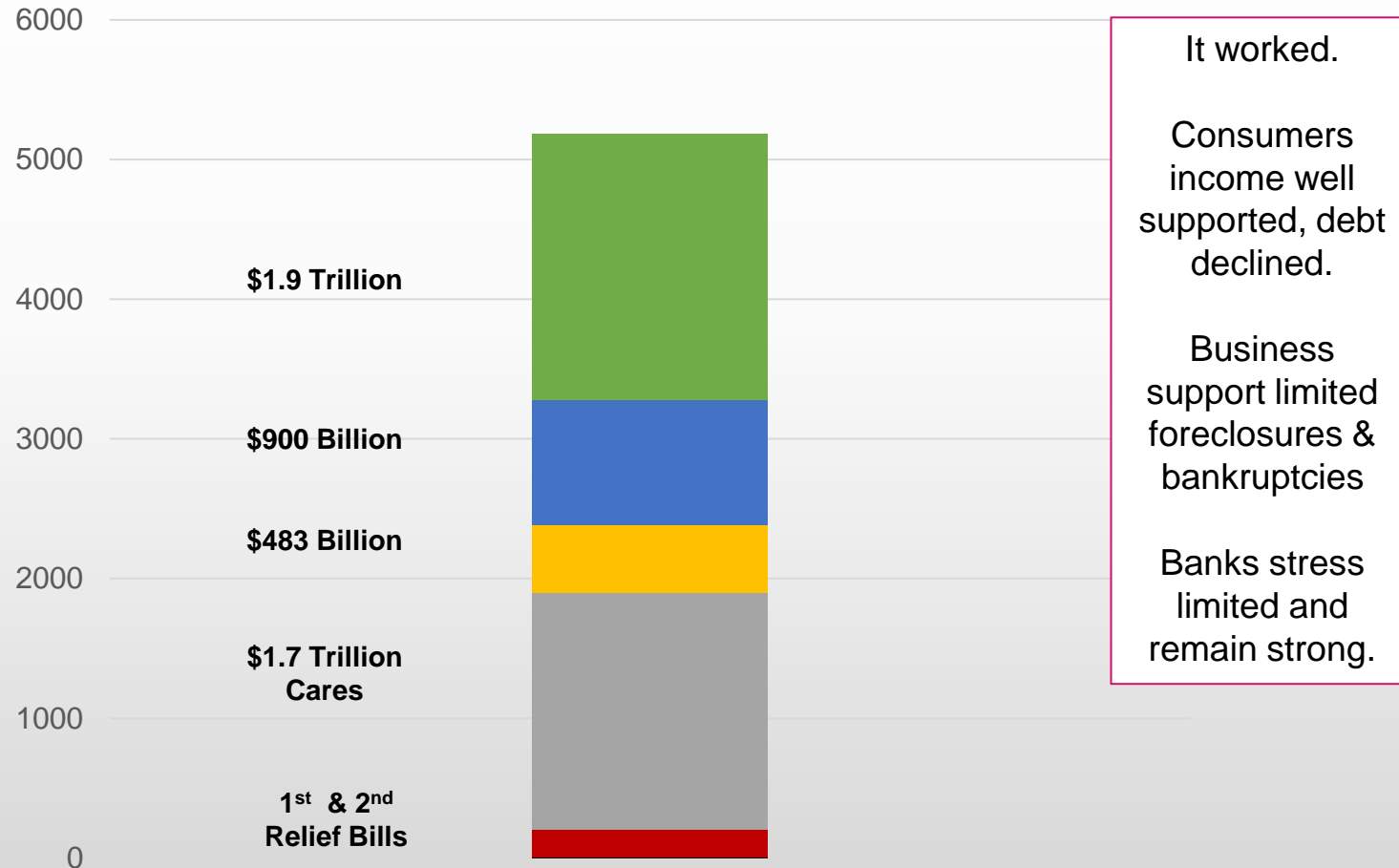
## Covid-19 Relief Spending

### In the blink of an eye

20 Million Workers  
were laid off.

Massive Bankruptcies  
Materialized.

Covid relief aimed at  
limiting economic  
“scarring” - keeping  
the most vulnerable in  
the game so that  
when the virus  
subsided, the  
economy had the  
ability to recover.



### It worked.

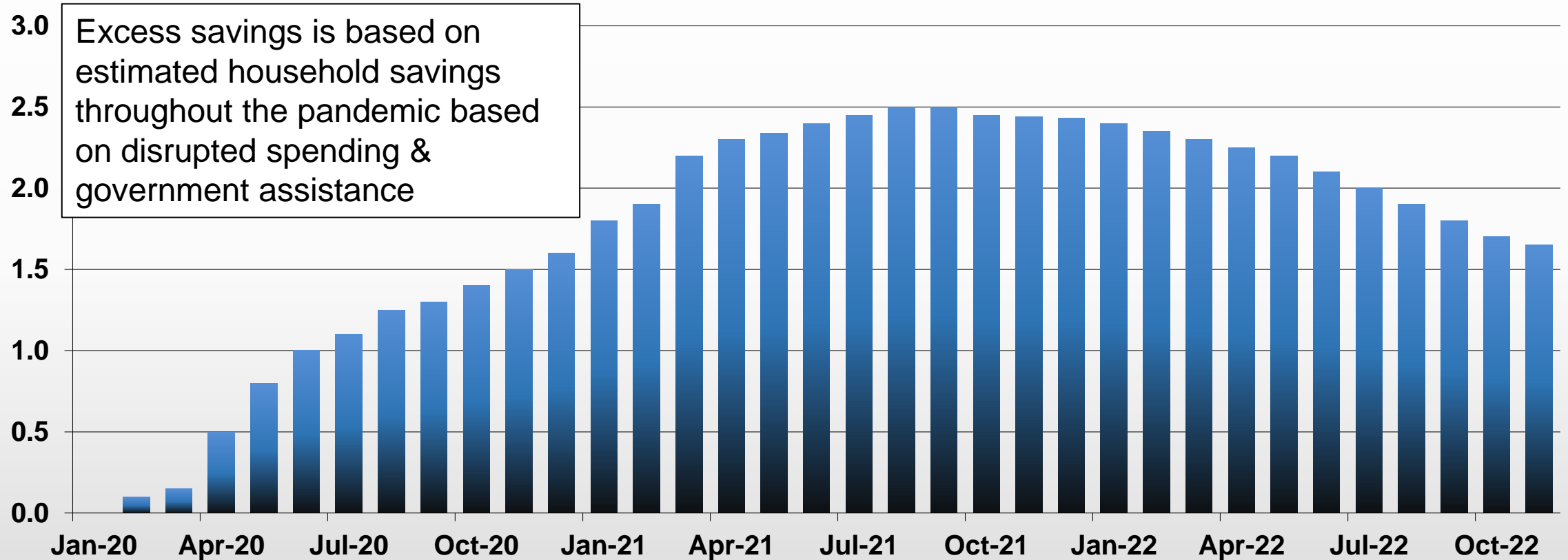
Consumers  
income well  
supported, debt  
declined.

Business  
support limited  
foreclosures &  
bankruptcies

Banks stress  
limited and  
remain strong.

# Consumers Savings from Pandemic

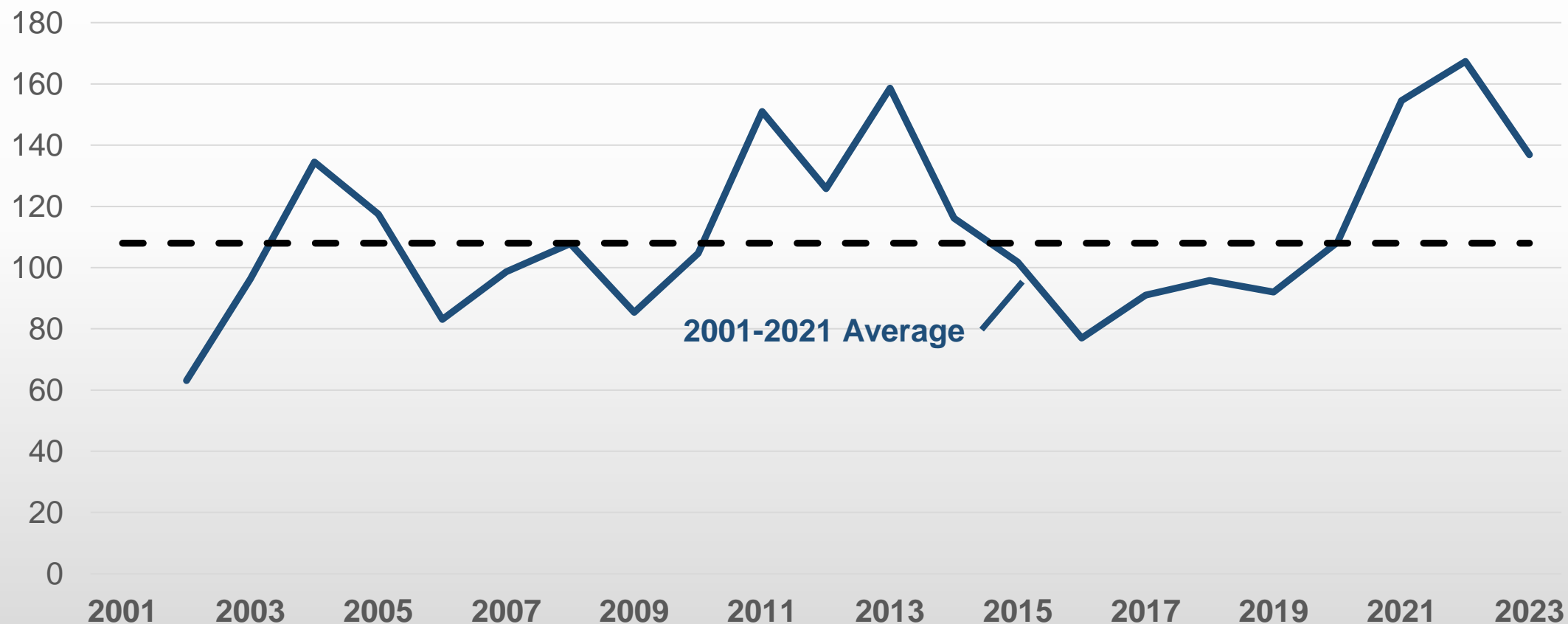
\$s, Trillion





# U.S. Net Farm Income

Real 2019 \$s, billions



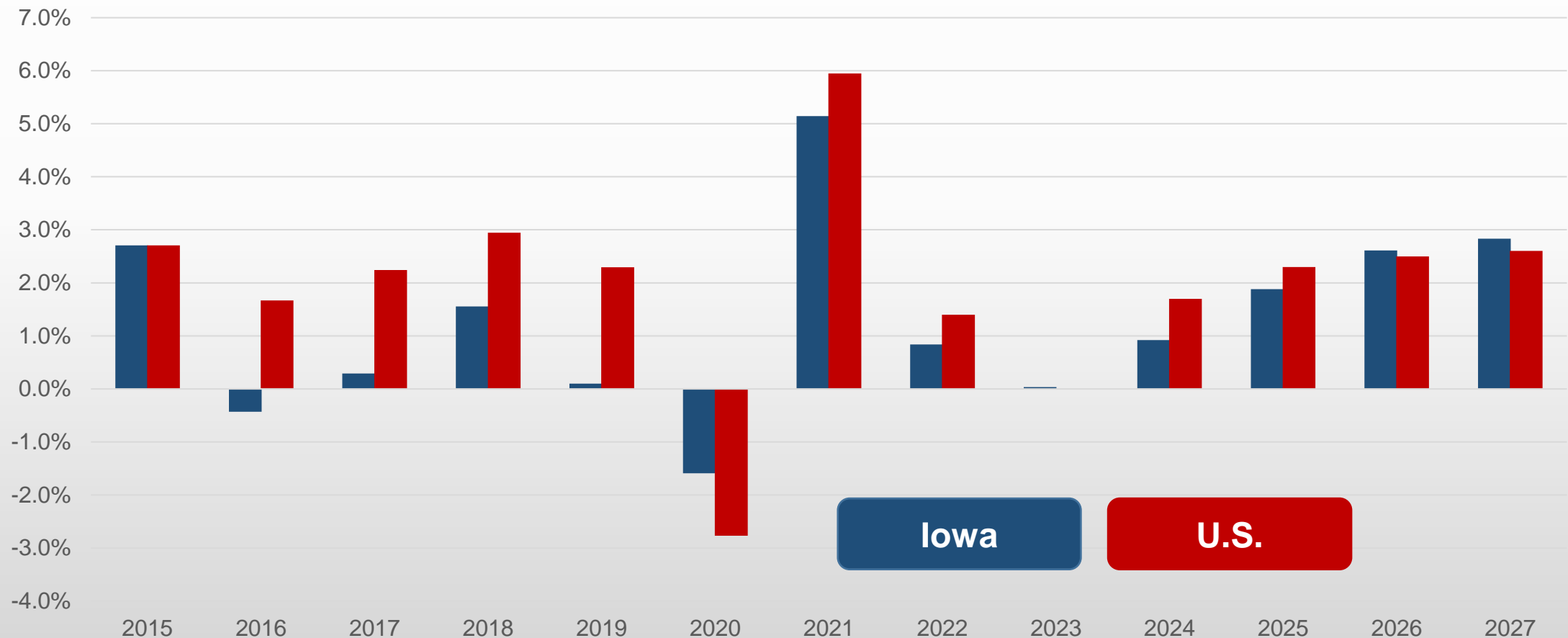
**23% decline in 2023 from  
record income levels**

# Economic Growth Outlook

## GDP/GSP Annual Change

### Key Factors Responsible for Slowdown

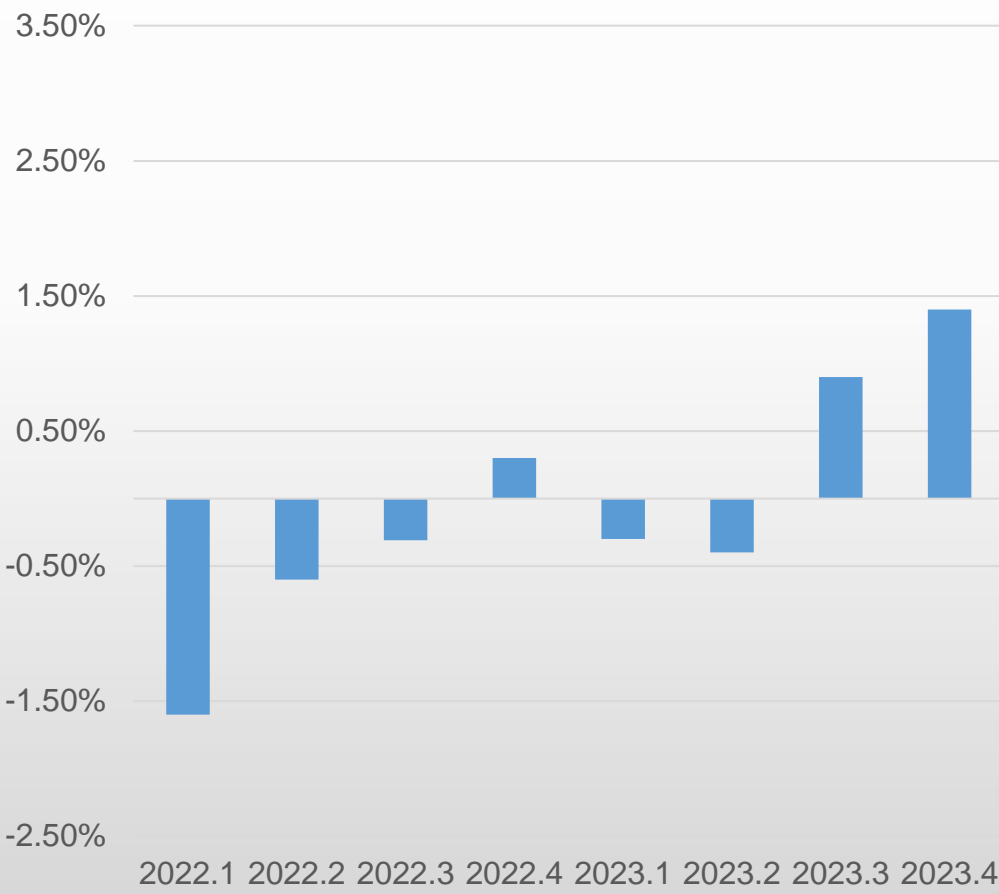
- High inflation robs spending
- Aggressive interest rate increases
- Strengthening dollar reduces exports



# The Economic Fundamentals Will Erode...

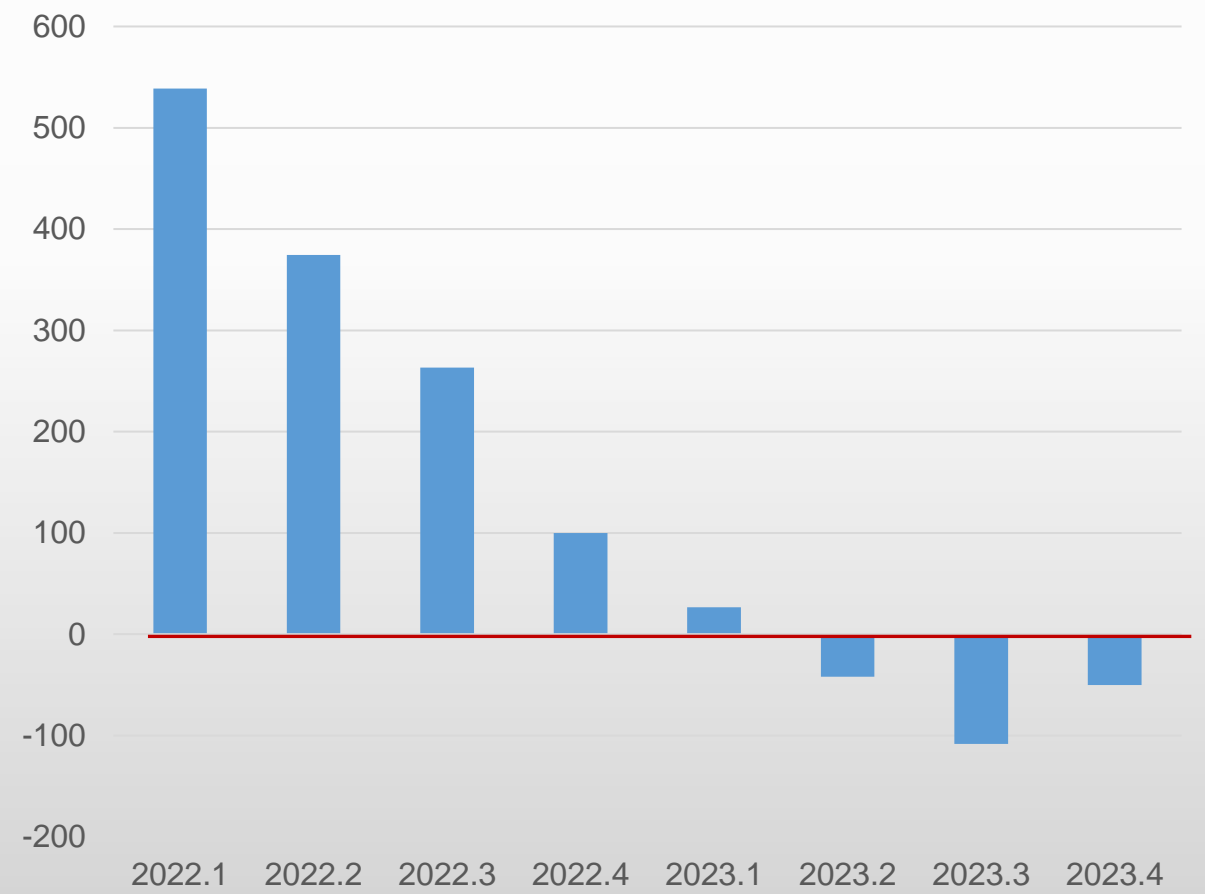
## The Economy Will Slow

GDP Growth Rate



## Job Losses Will Materialize

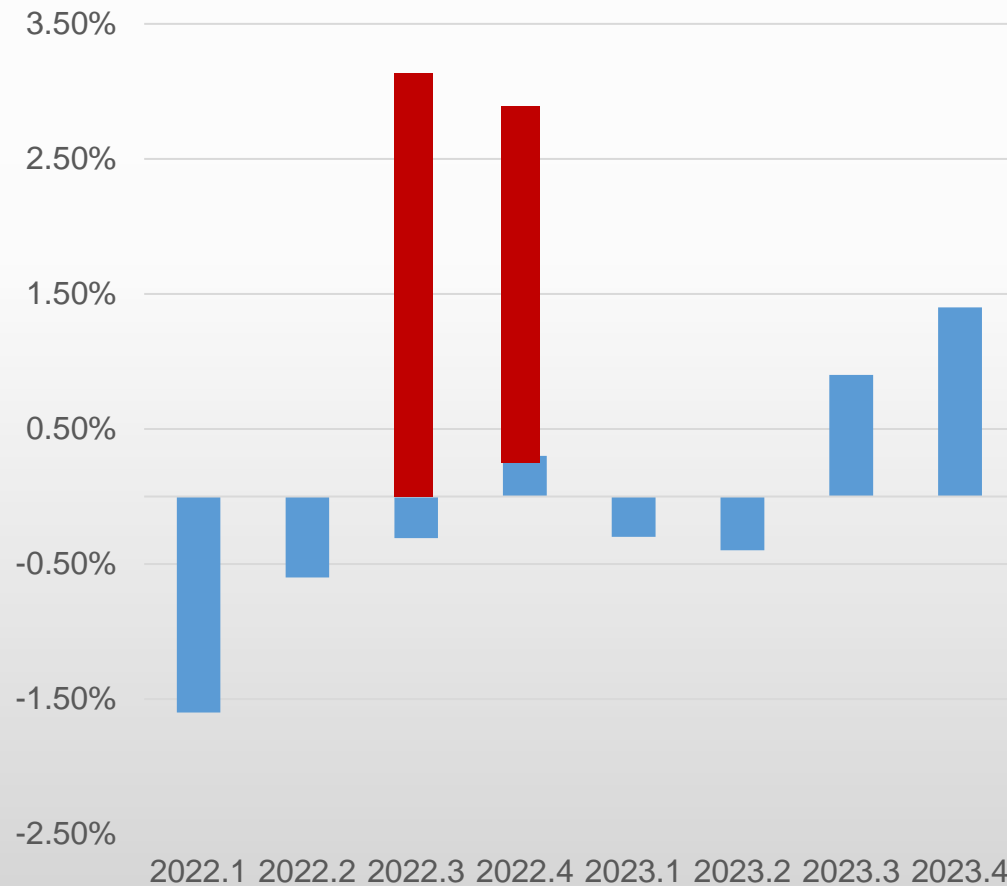
Quarterly Change in Employment, Thousands Average Monthly Rate



# But...The Erosion Likely Occurs Later Than Thought

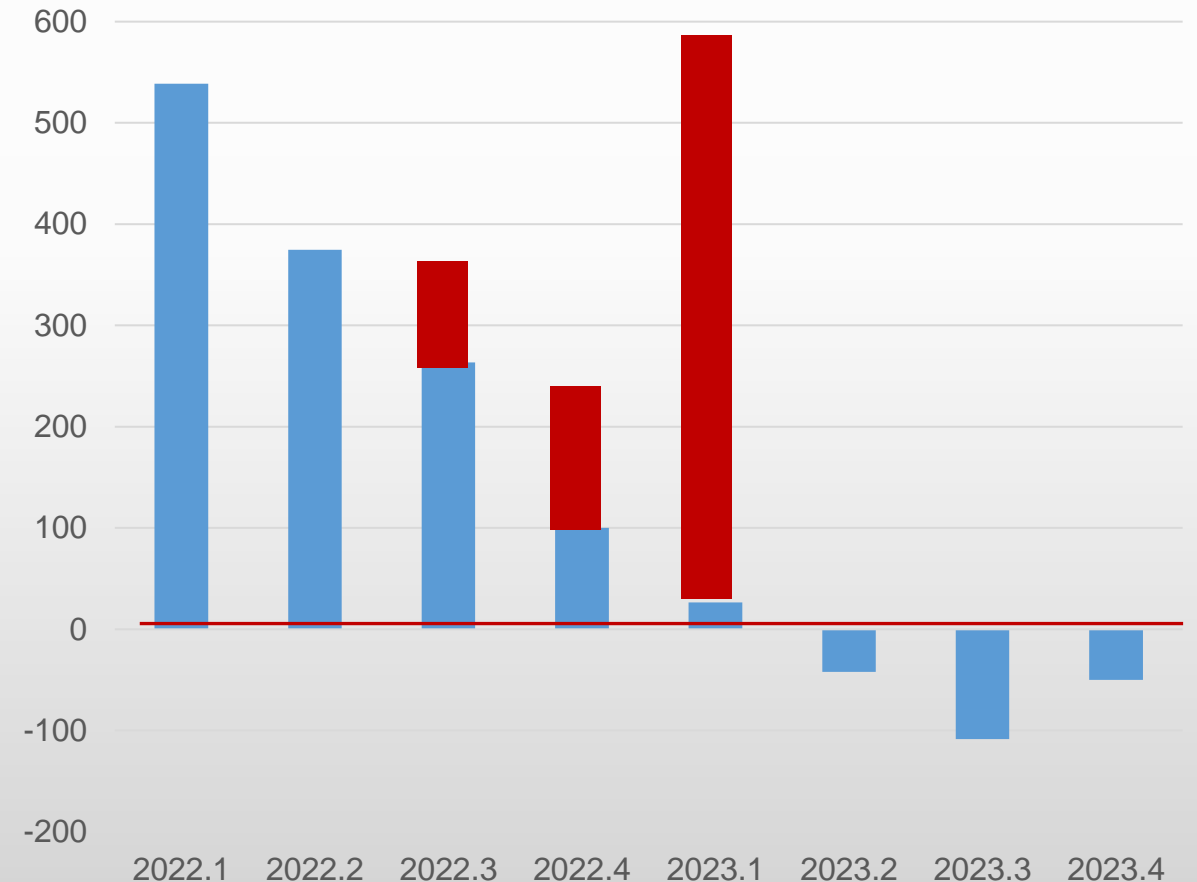
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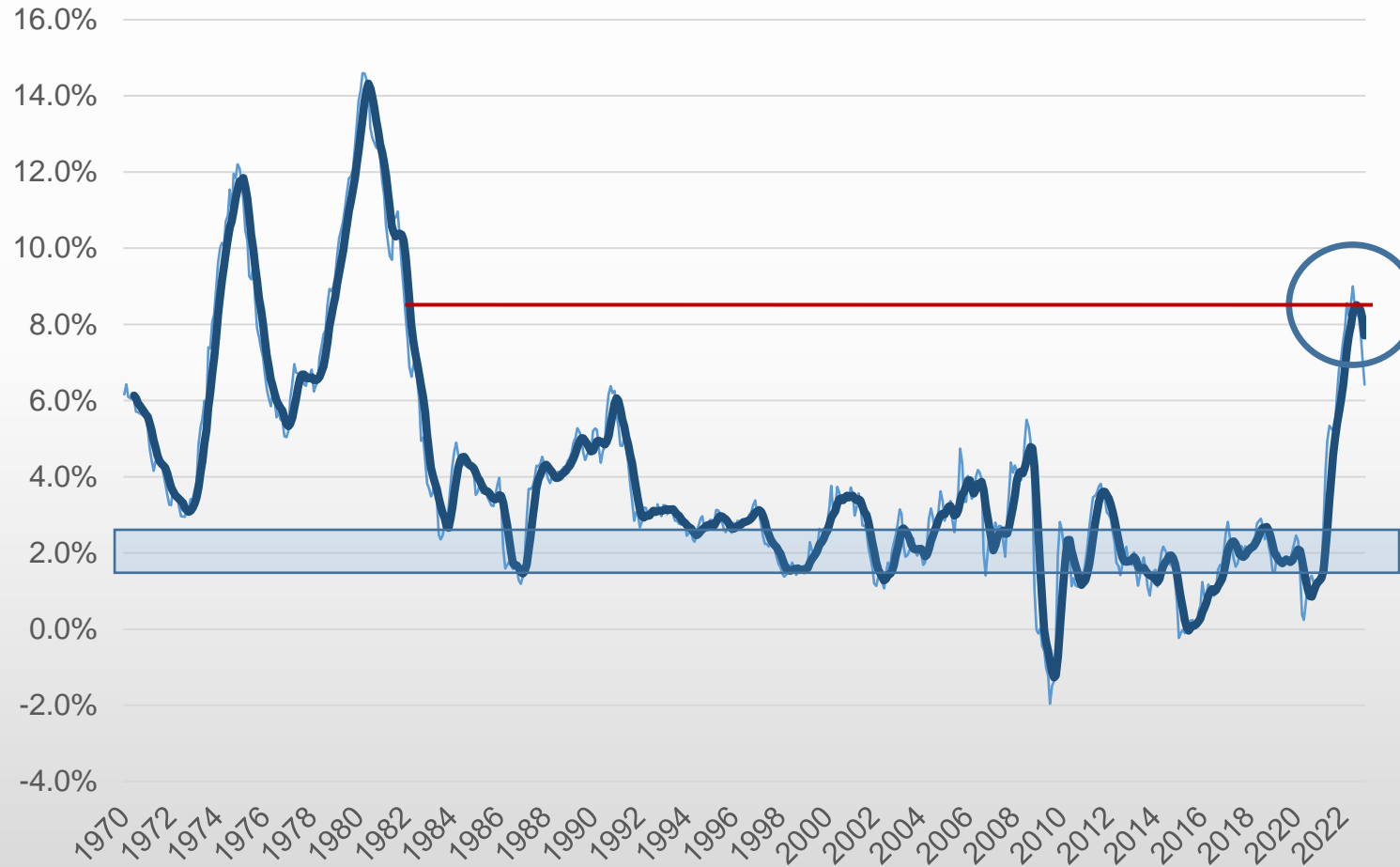
Quarterly Change in Employment, Thousands Average Monthly Rate



# Inflation

# Inflation

CPIU, % Change, Monthly



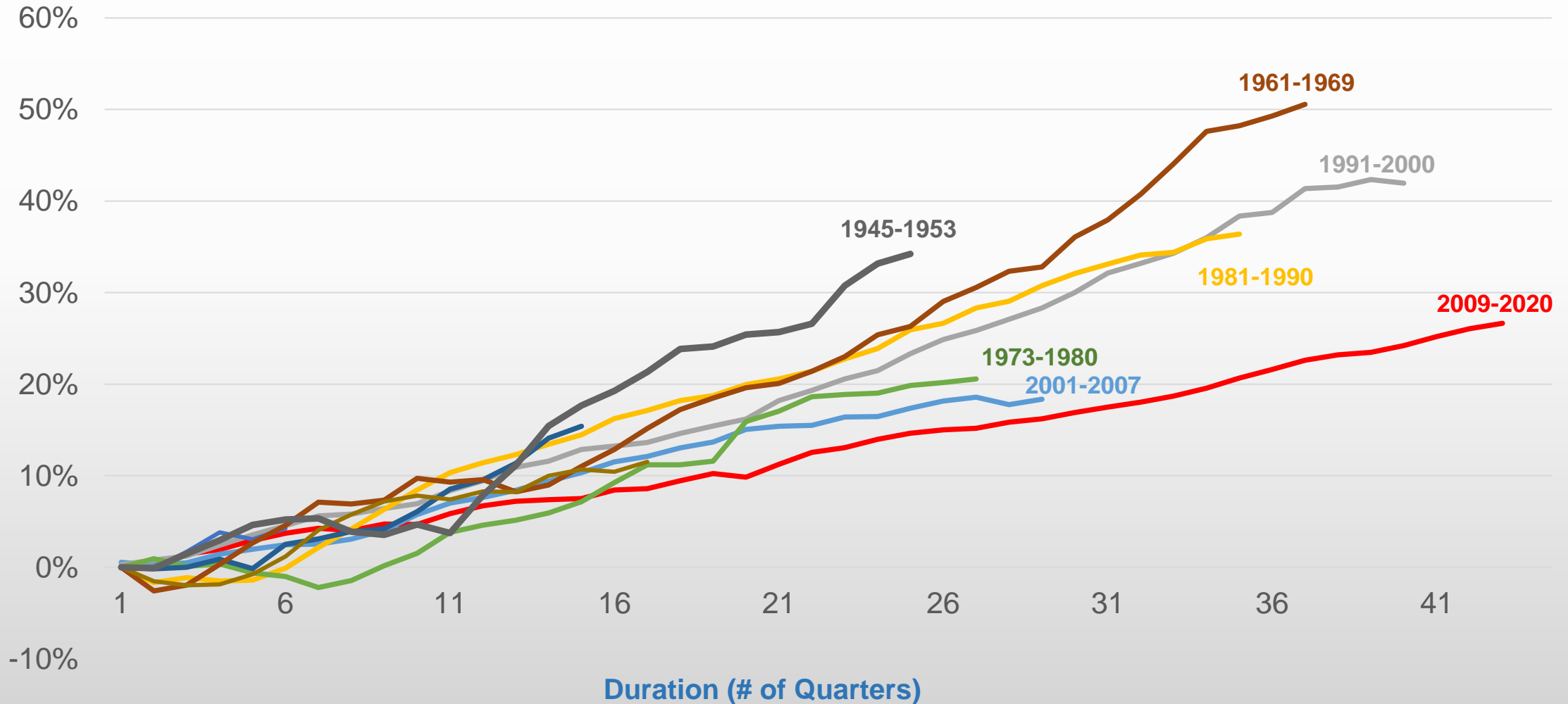
**Demand-Side and Supply-Side factors are resulting in 40 year high inflation rates.**

- Wage inflation brought on by reduced labor participation, health concerns due to Covid, child care, heightened unemployment & Covid relief benefits, & retirements.
- Global supply chain disruptions.
- Logistic disruptions ship, truck & rail.

*The longer these trends are in place, the more likely higher inflation becomes “embedded” and implies a longevity for higher than desired inflation rates.*

# Strength & Duration of U.S. Recoveries

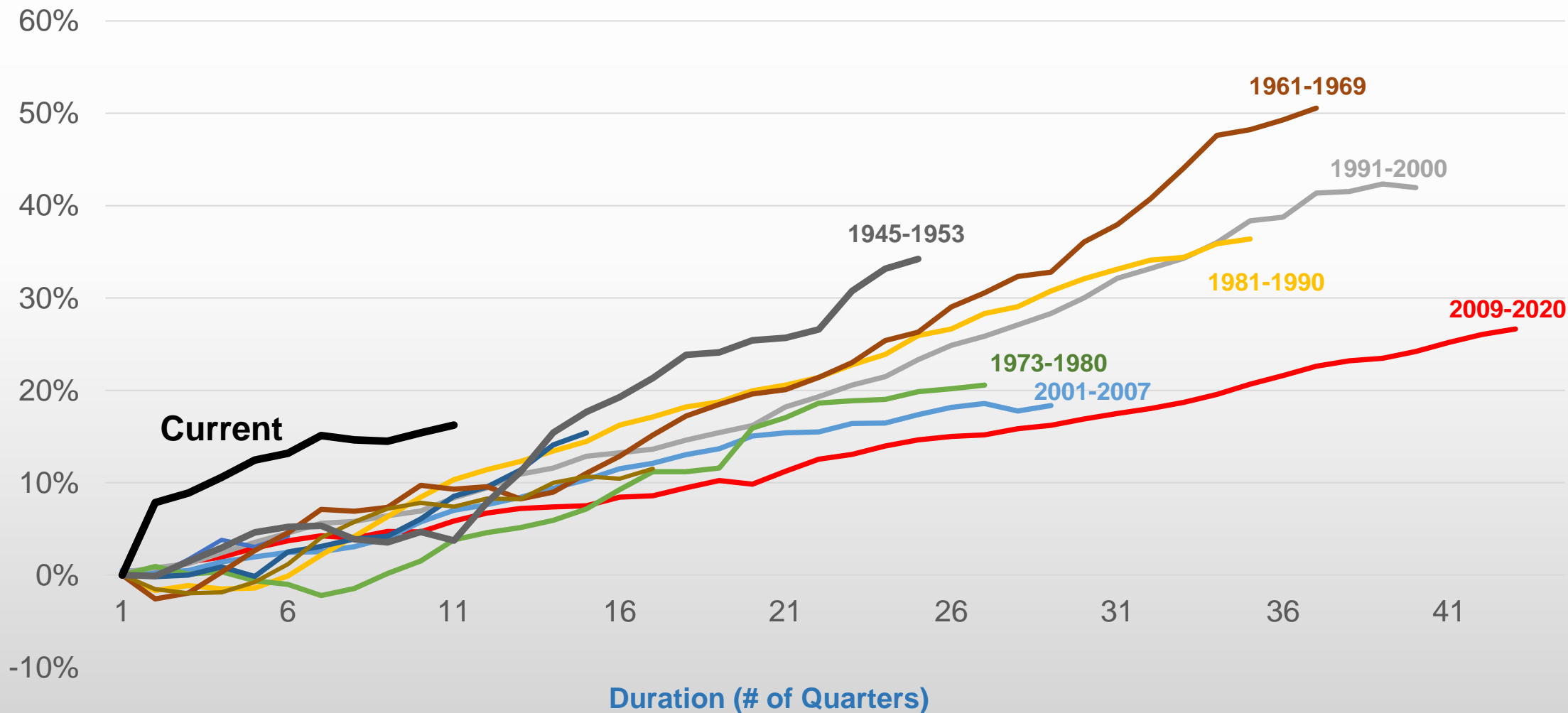
Real GDP Percentage Growth From Previous Trough





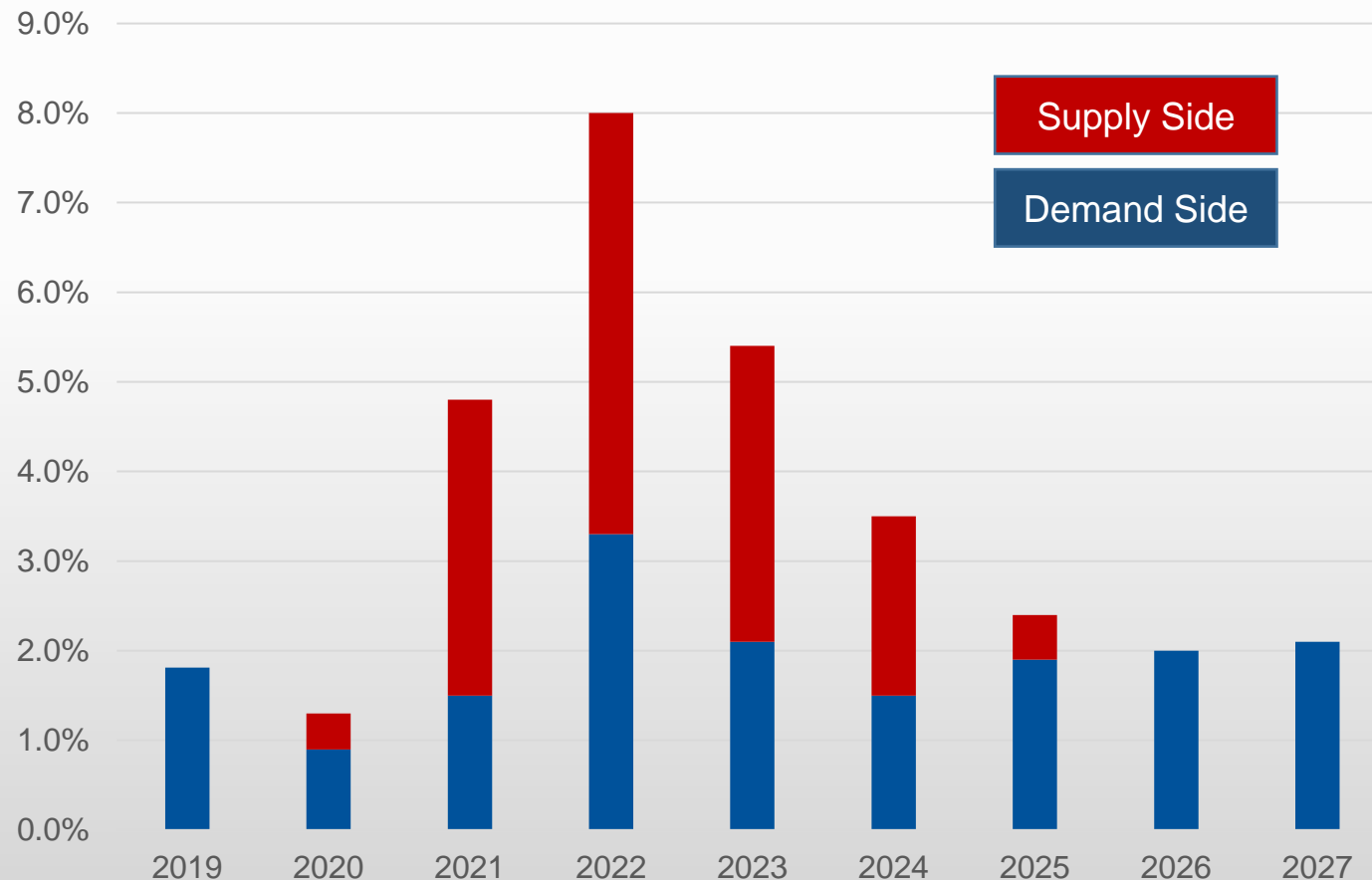
# Strength & Duration of U.S. Recoveries

Real GDP Percentage Growth From Previous Trough



# Inflation Outlook

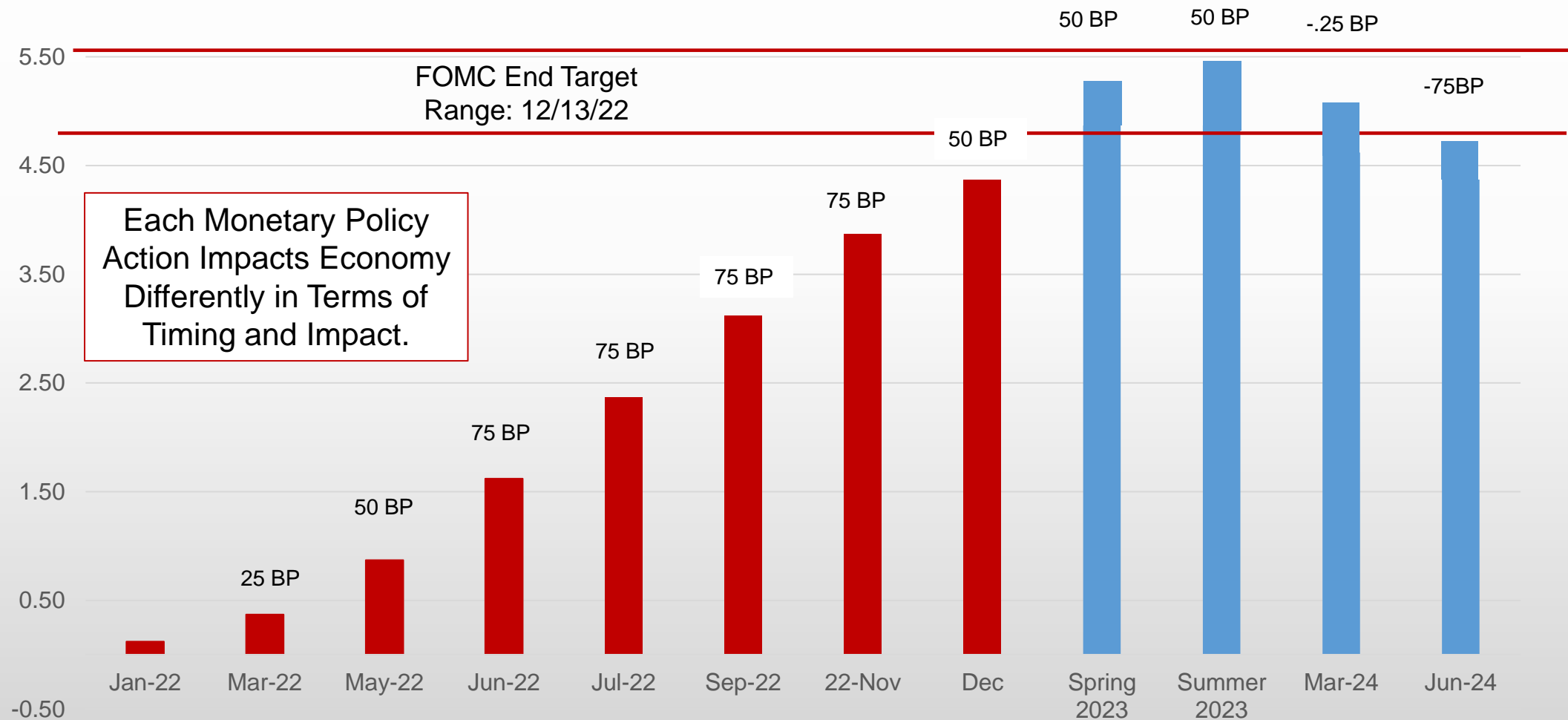
## CPIU % Change



- Inflation Peaked Mid-Year and has declined 6 straight months (9.1% to 6.5%)
- **Supply-Chain Disruption Ease Slowly**
  - Initially thought to be “Transitory”
  - More stubborn than expected.
    - IHME China Covid projections
    - Strong labor markets
- *Fed Policy has no direct impact on Supply-Side of Economy.*
- *Monetary Policy focused on Demand-Side.*
- Sustained modest improvement through 2023.
- Final leg to 2% more difficult to achieve.
  - Will the target change?
- Moderate recession changes everything.

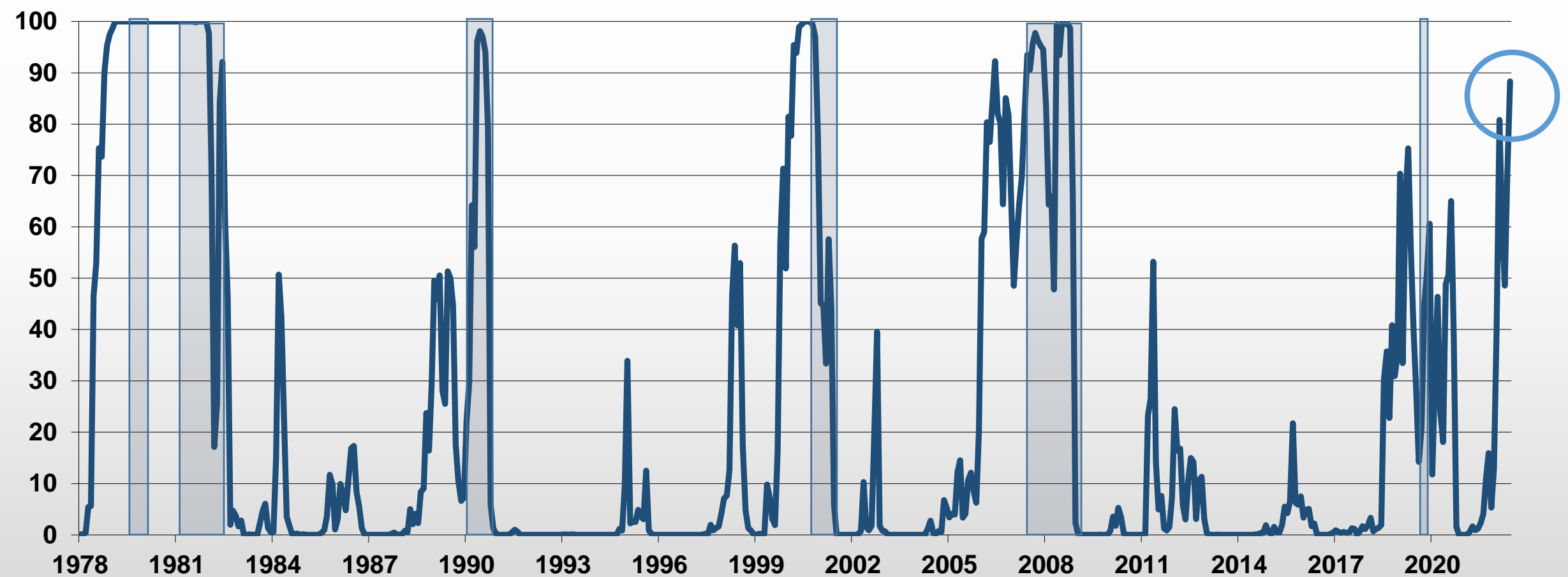
# Federal Funds Outlook: Adjusted

## PCA Outlook Fed Funds



# Recession Risk

Probability of a Recession in 12 months

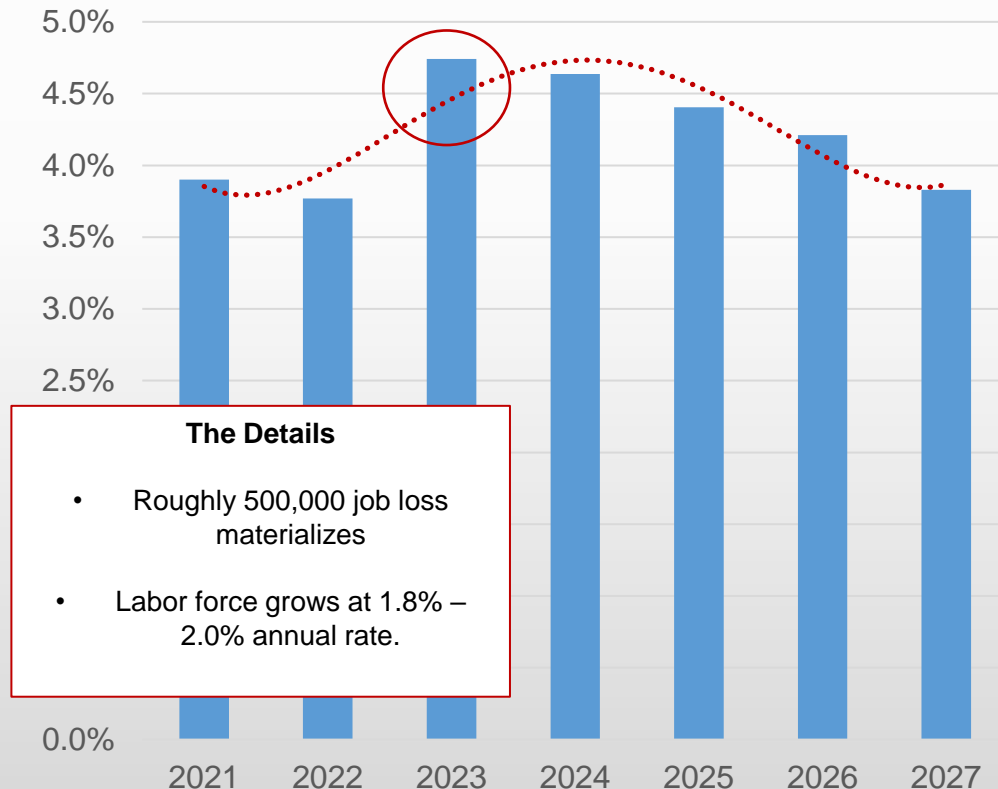


Source: Moody's Analytics

# What is the Threshold of “Official” Recession

## Unemployment Will Increase

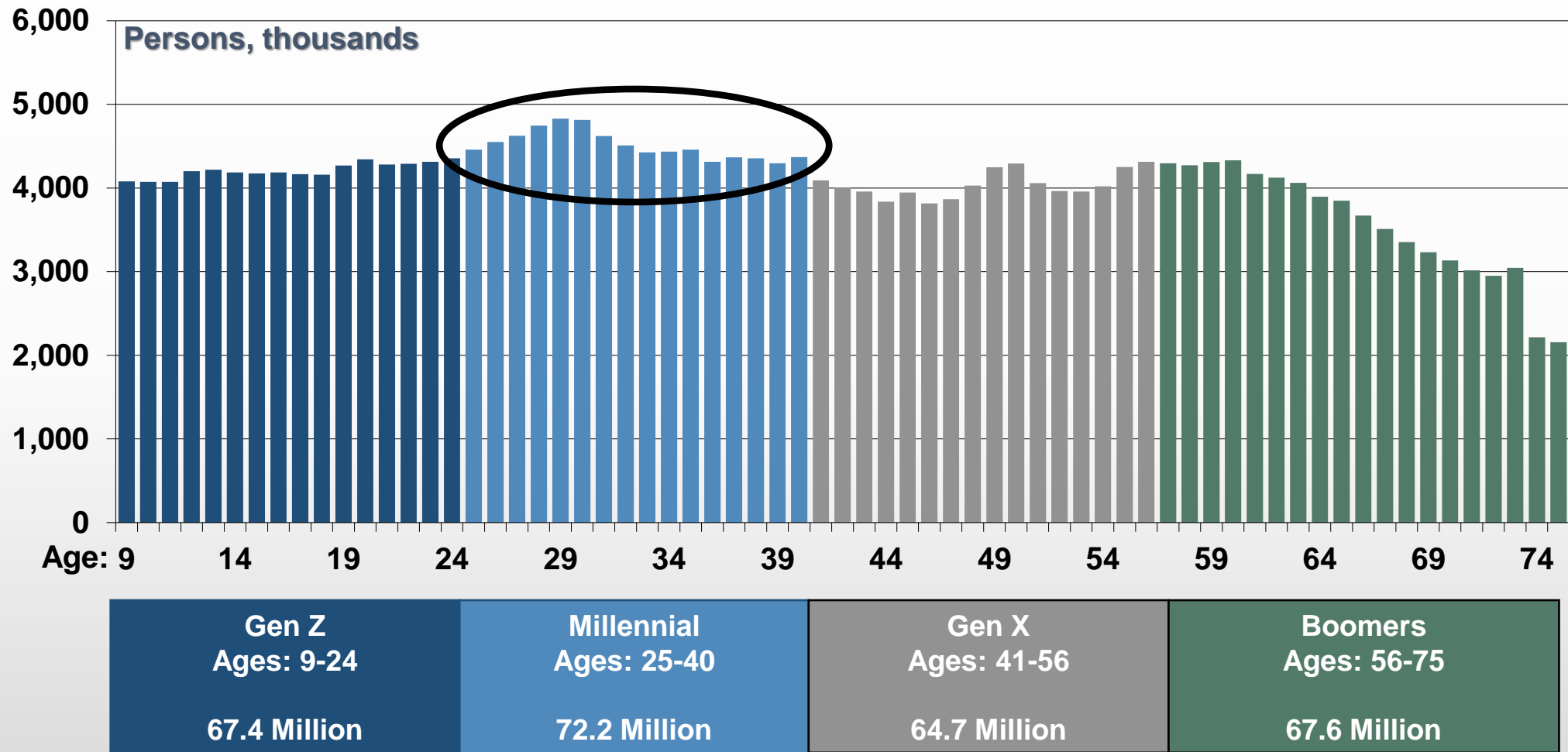
% Unemployed



Year	Month's Duration	Peak UNE Rate
1960	10	7.1%
1970	11	6.1%
1973-75	15	9.0%
1980-82	16	10.8%
1990-91	9	7.8%
2001	8	6.3%
2008-09	30	10.0%
2020	6	14.7%
Average	12.8	9.0%

# Residential

# Demographics By Generation

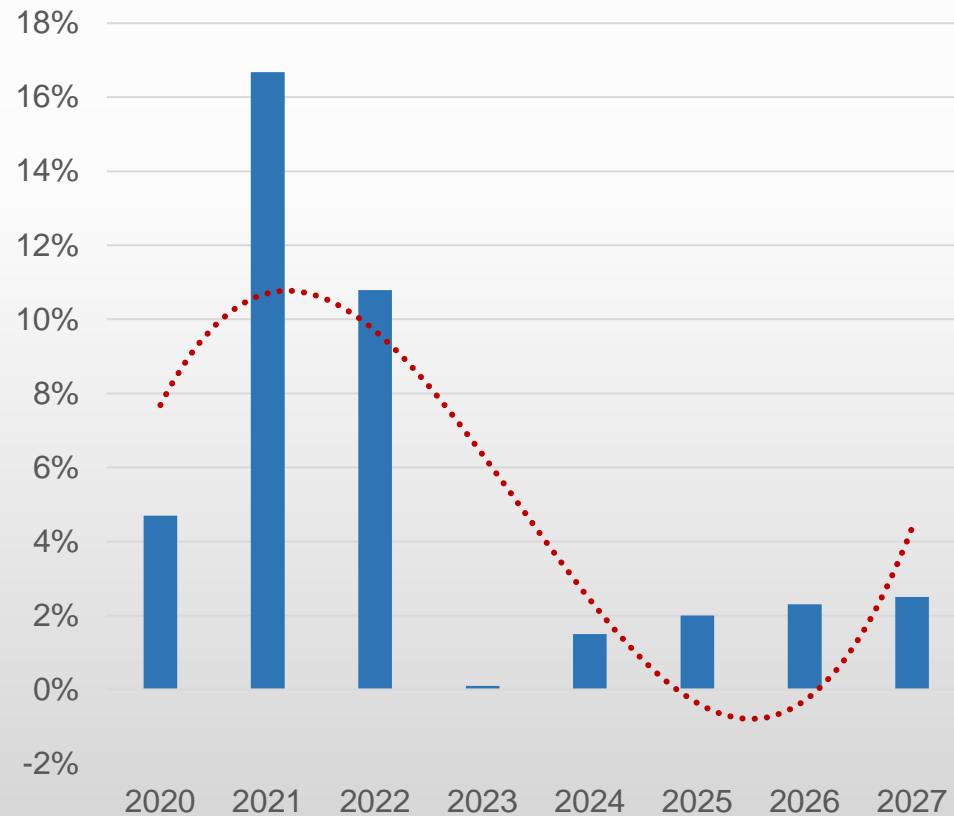




# New Home Affordability

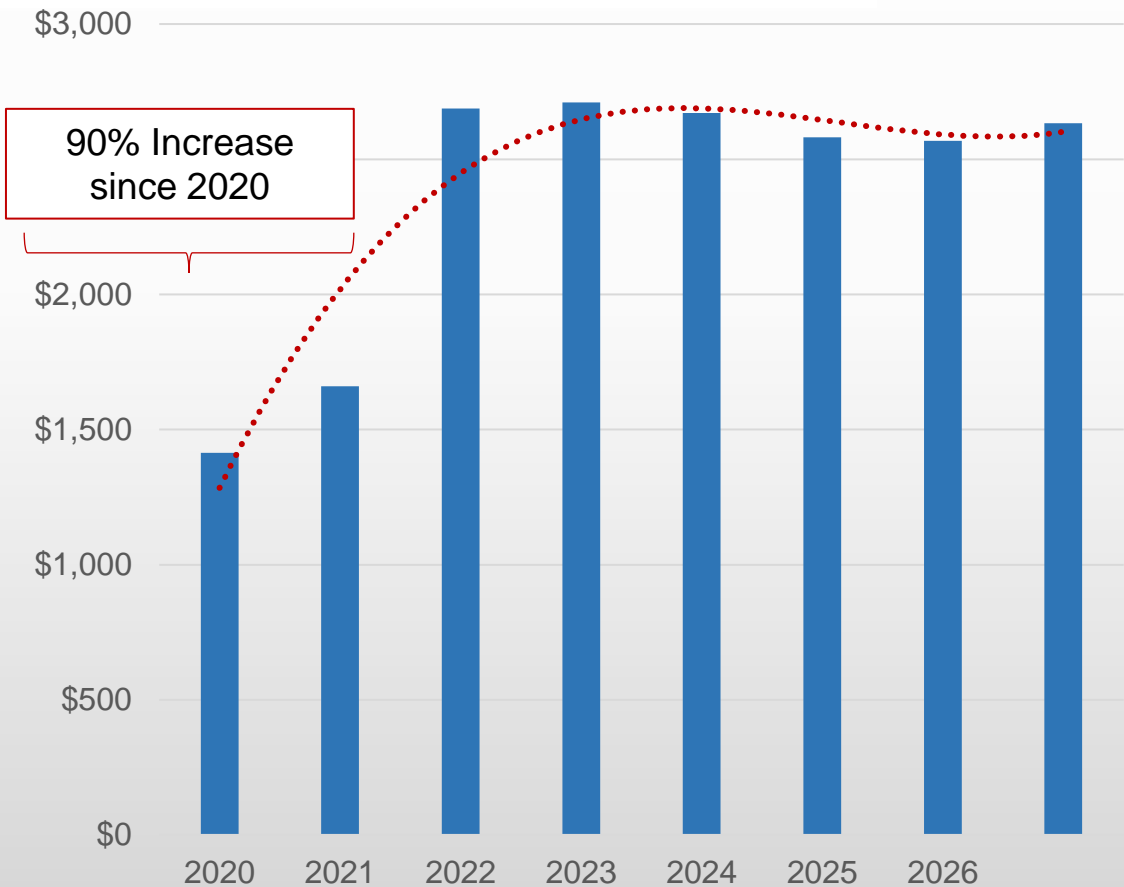
## New Home Price Outlook

Annual % Growth



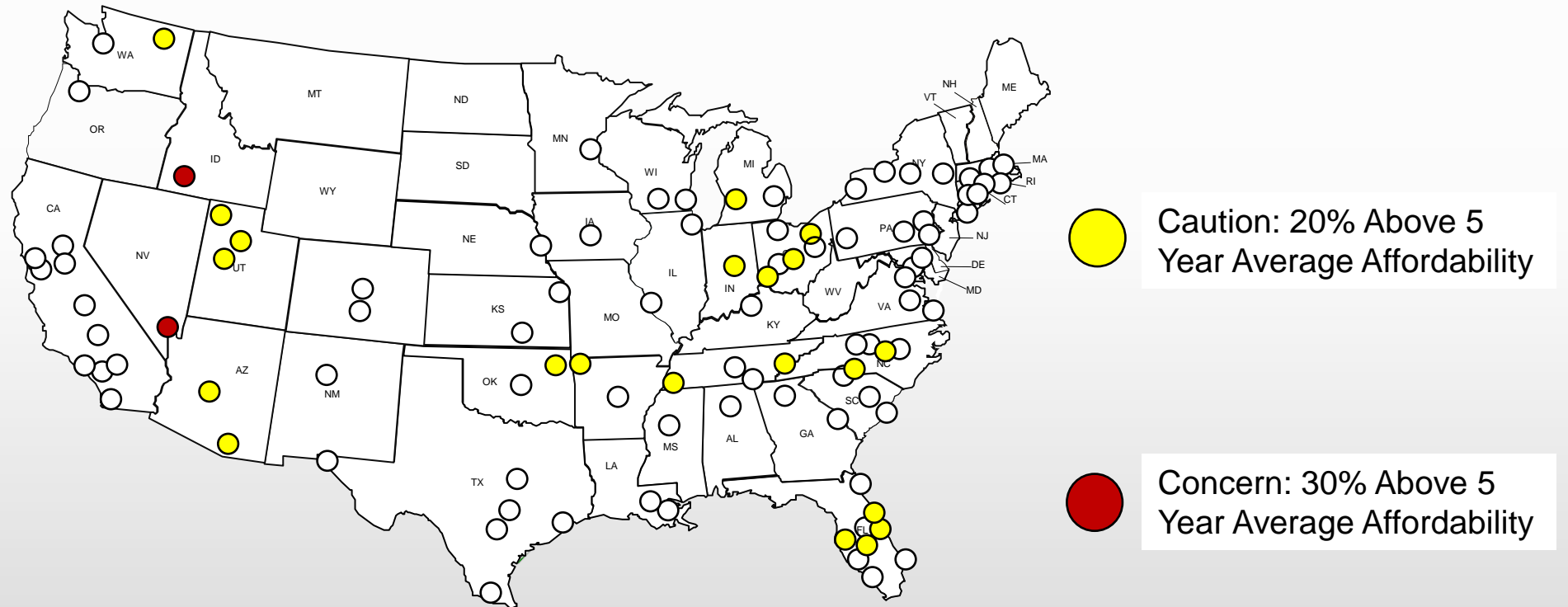
## Monthly Payment

Annual % Growth



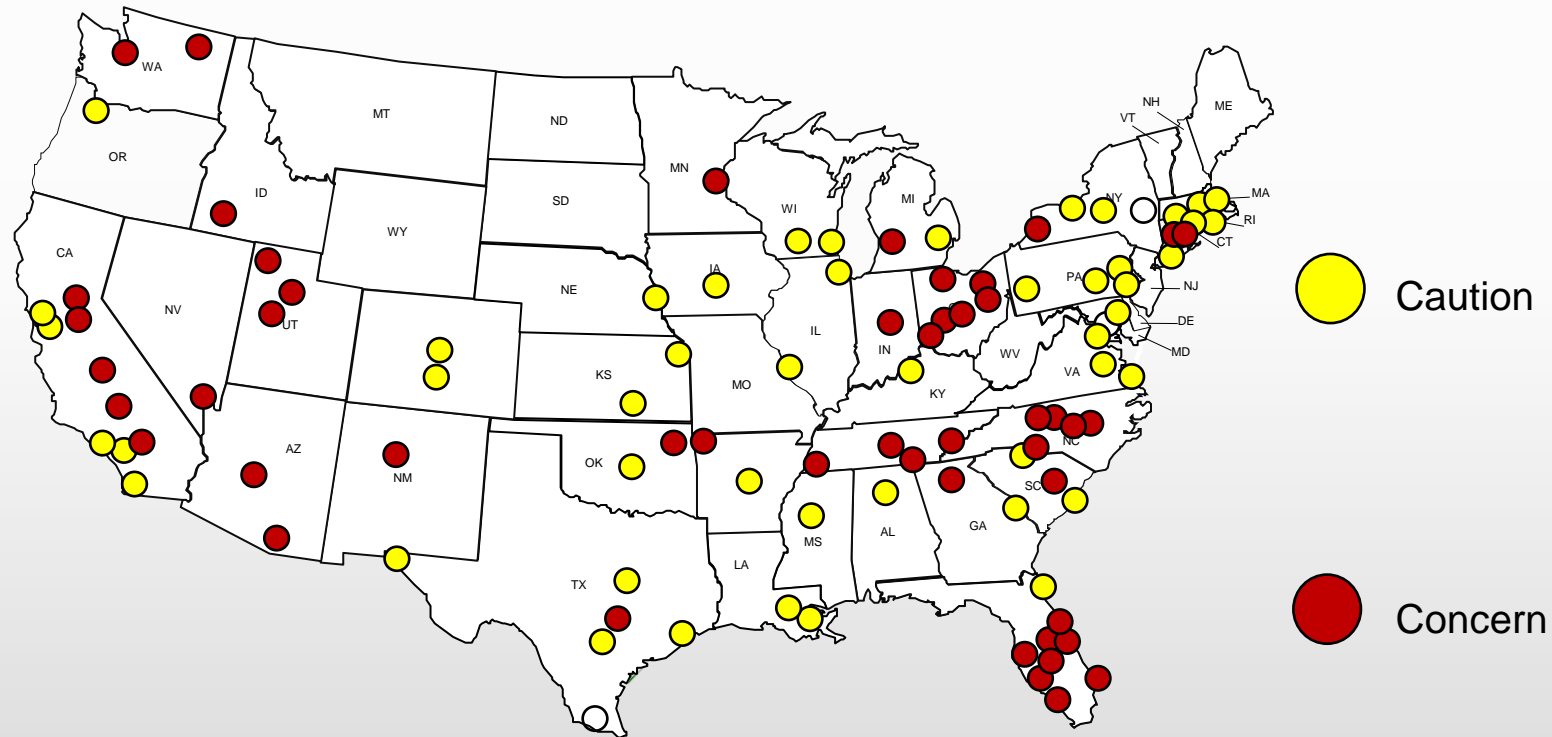
# Rising Mortgage Rate Impact on Affordability- 2021 (Conventional, 30 Year Fixed 3.4%)

Mortgage Payment Relative to Household Income (Top 100 MSAs)



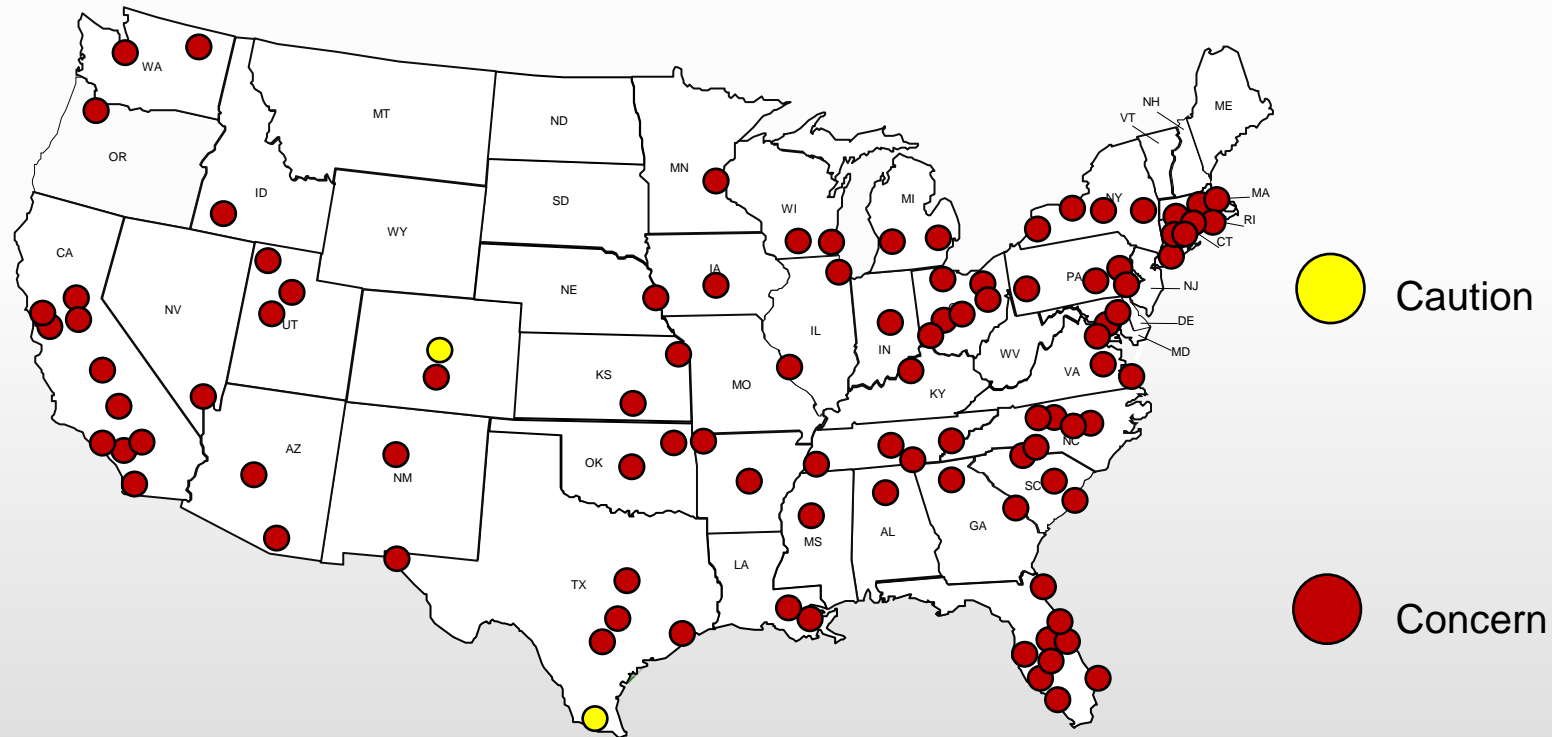
# Rising Mortgage Rate Impact on Affordability- 2022 (first half) (Conventional, 30 Year Fixed 4.6%)

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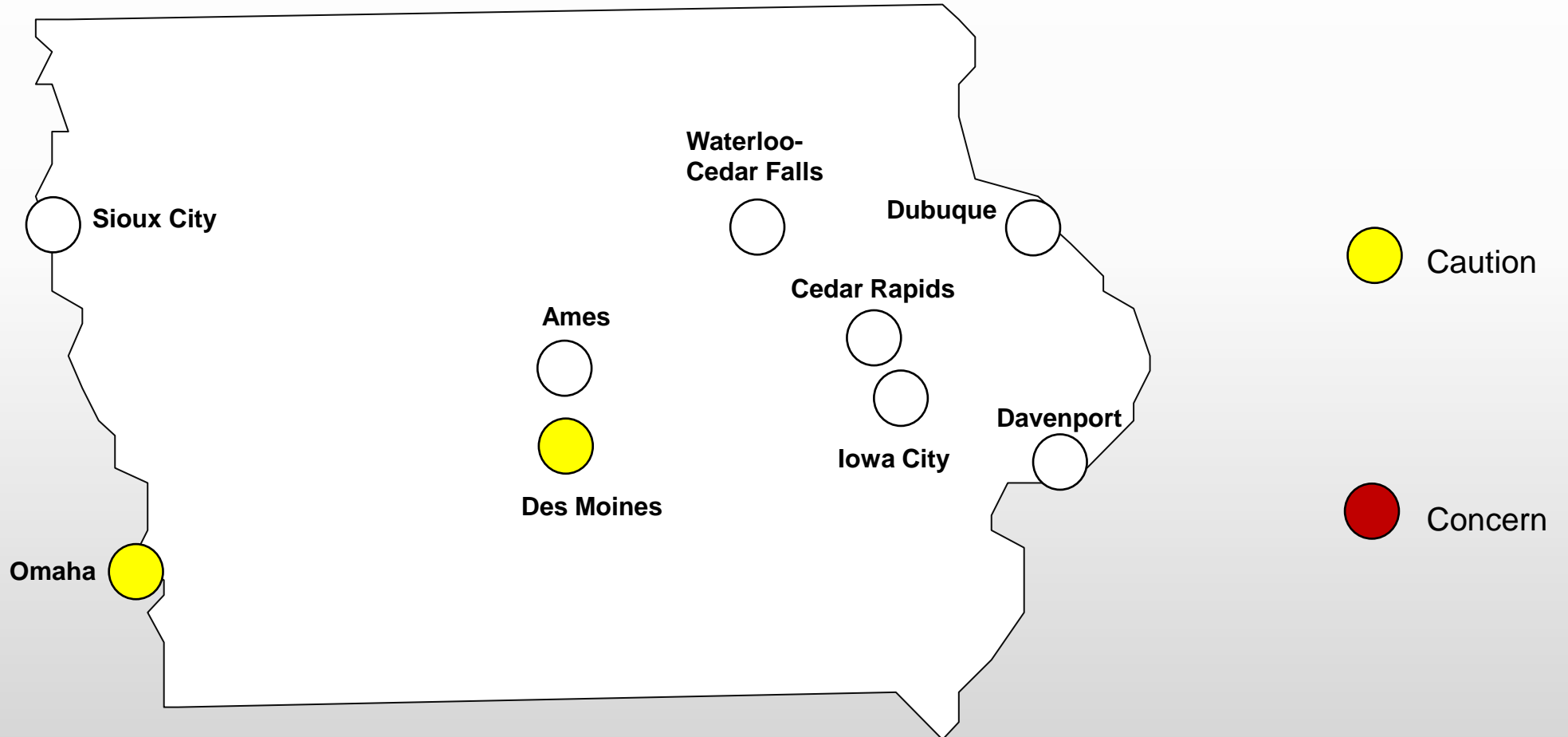


# Rising Mortgage Rate Impact on Affordability- 2023 (Conventional, 30 Year Fixed 6.5%)

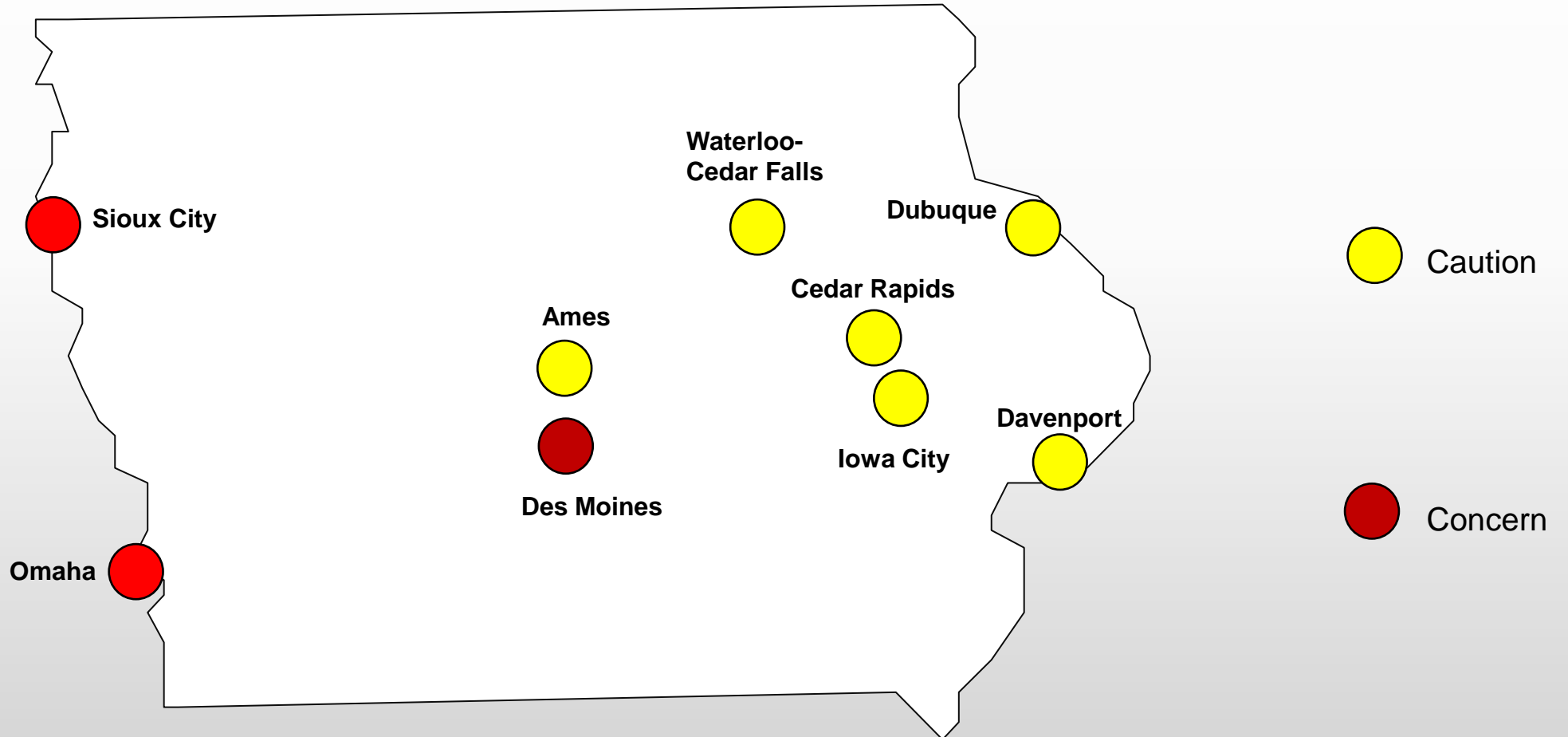
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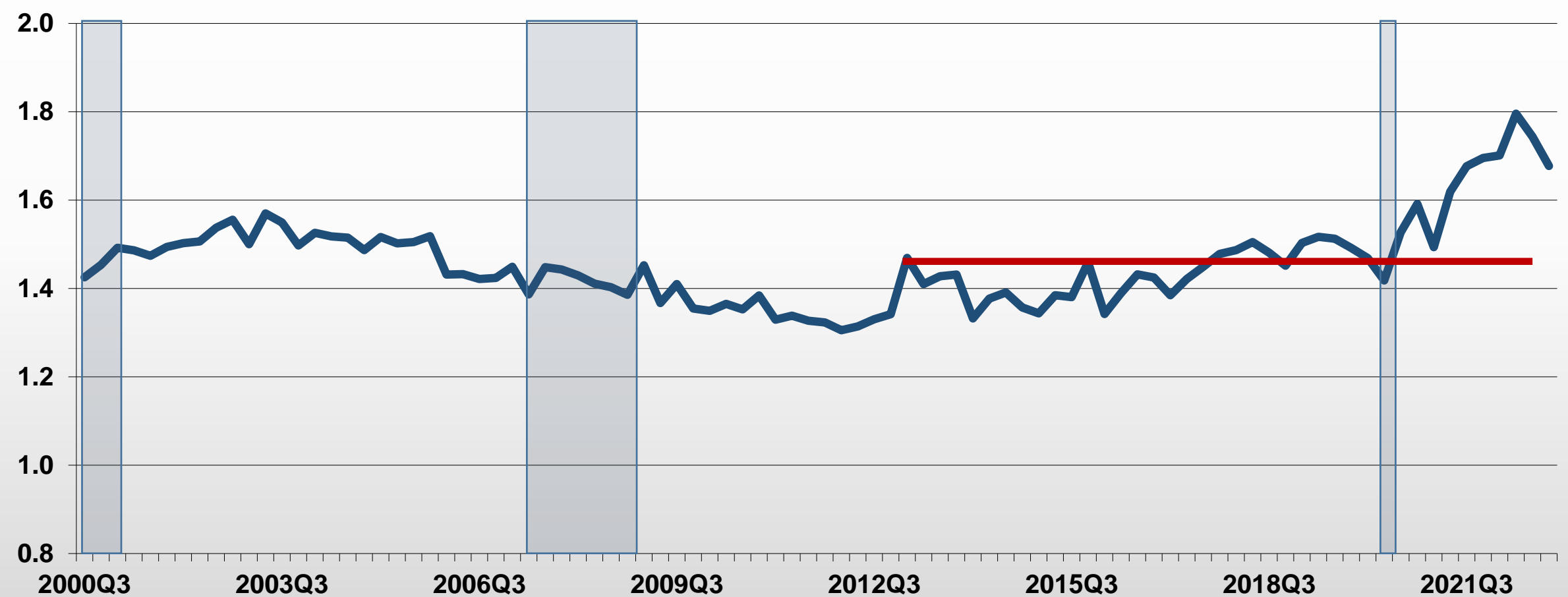


## Rising Mortgage Rate Impact on Affordability- 2023 (Conventional, 30 Year Fixed 6.5%)



# Home Price Growth has Exceeded Income Growth: IA

Ratio Existing Home Prices Relative to Household Income



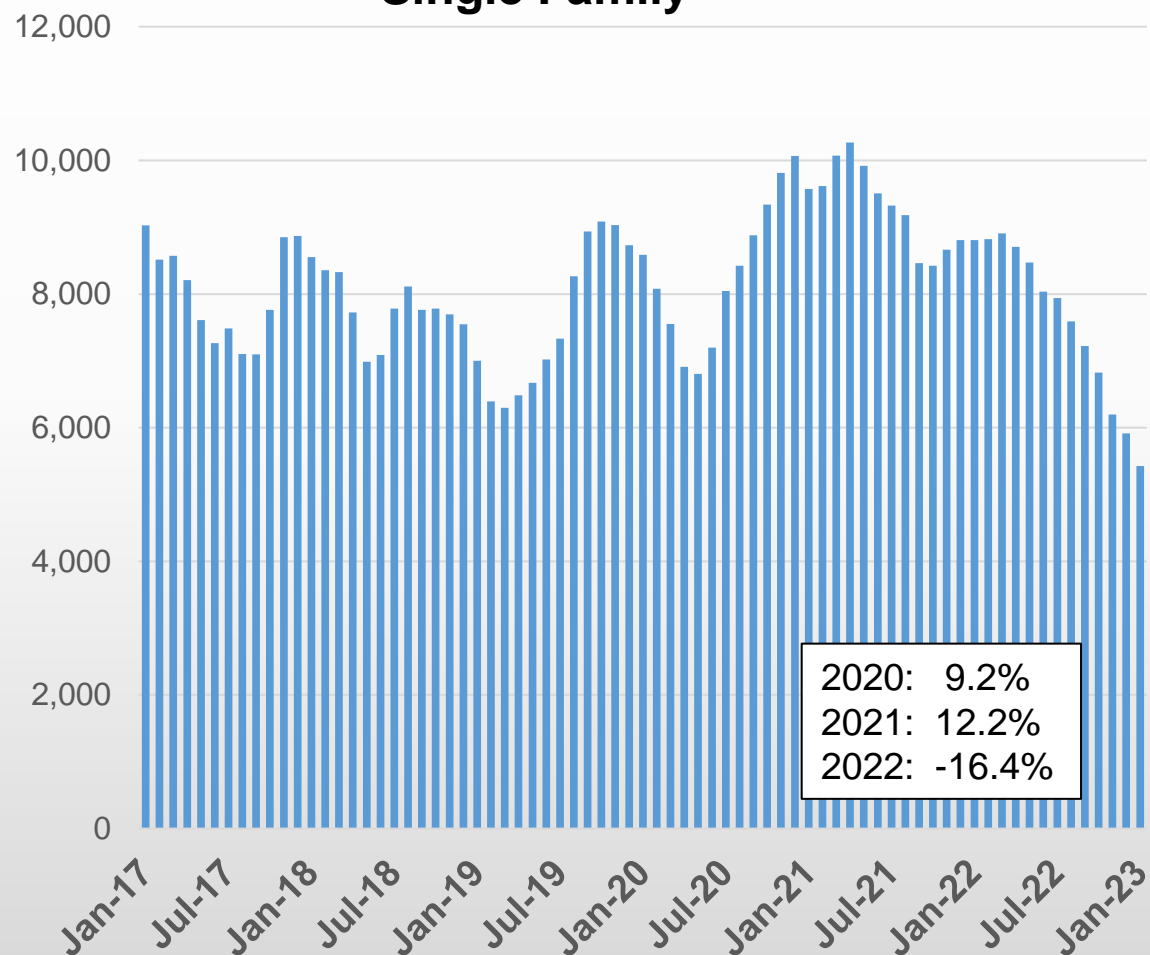
Source: NAR, Census, PCA



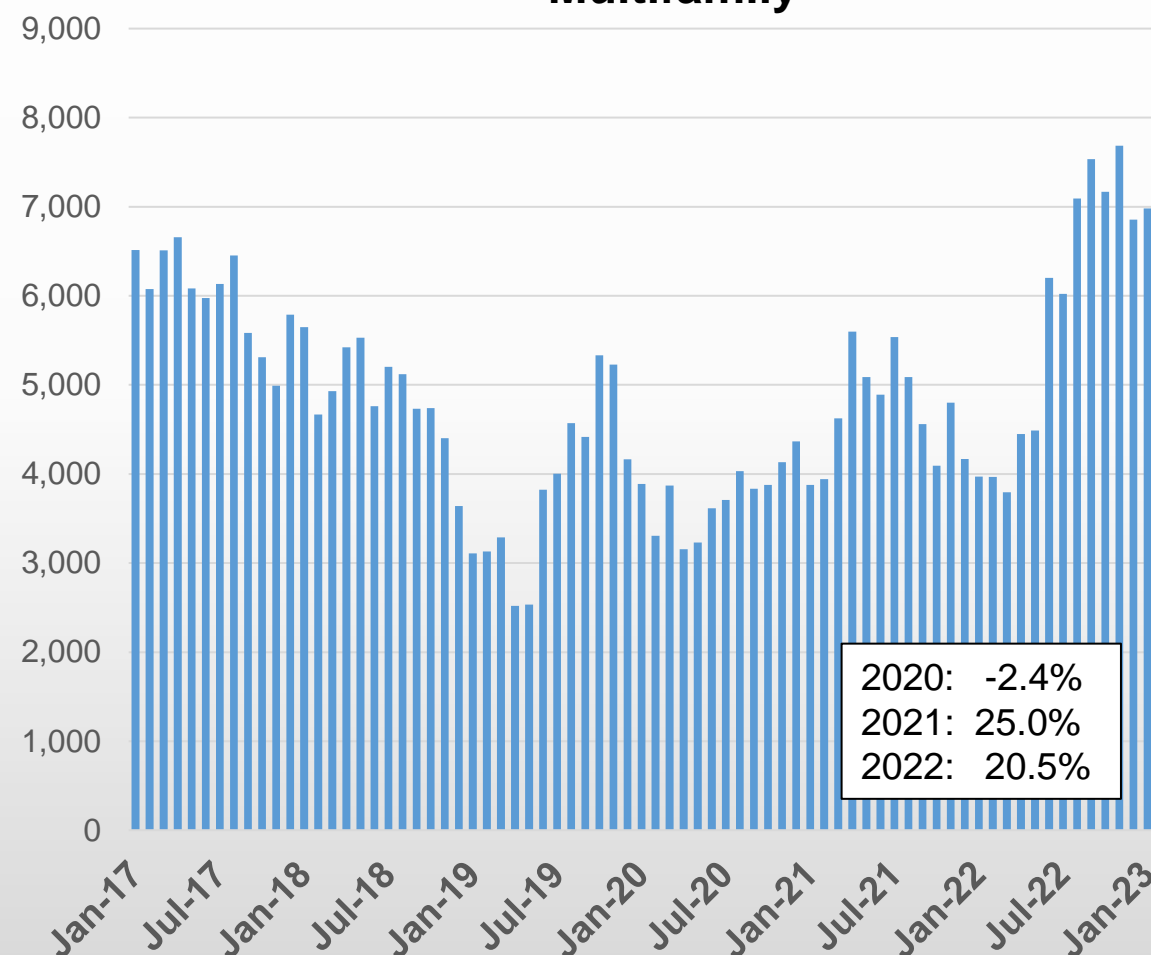
# IA Housing Permits

SAAR, 6MMA

## Single Family



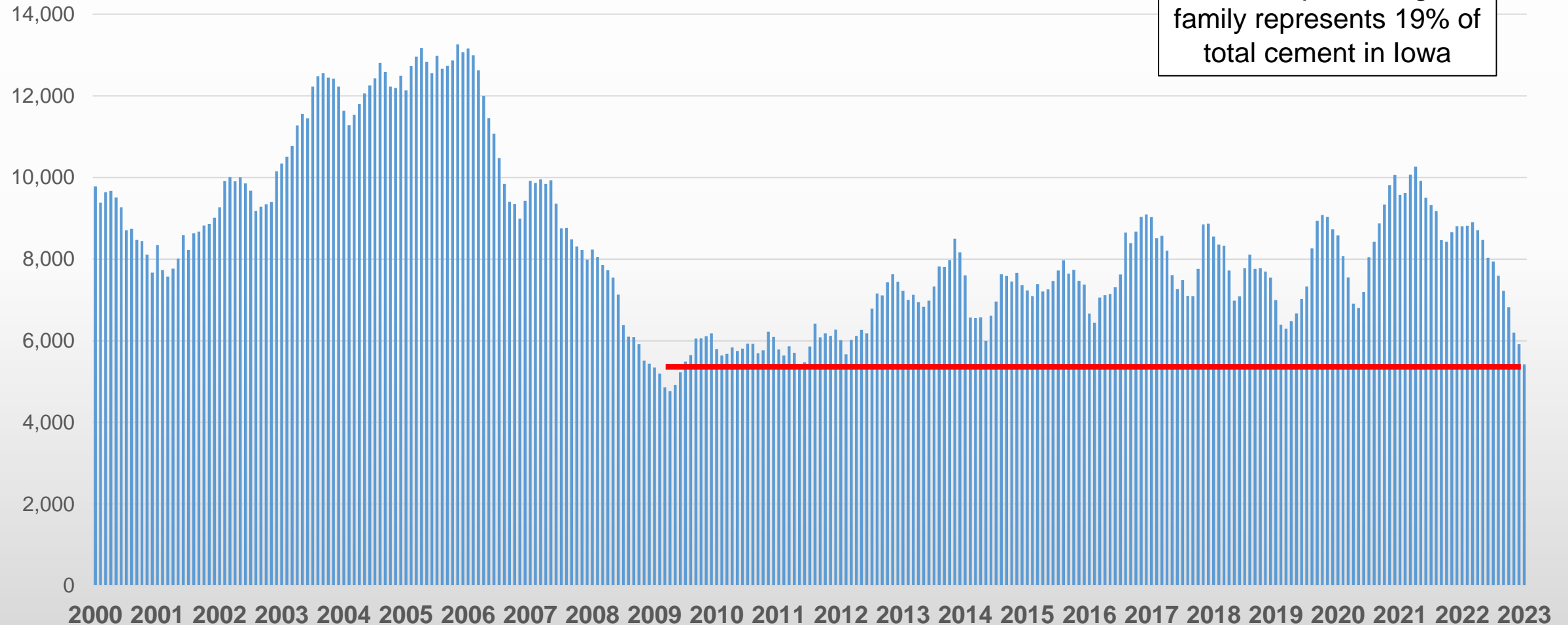
## Multifamily



Source: Census

# IA Single Family Housing Permits

Units SAAR, 6MMA



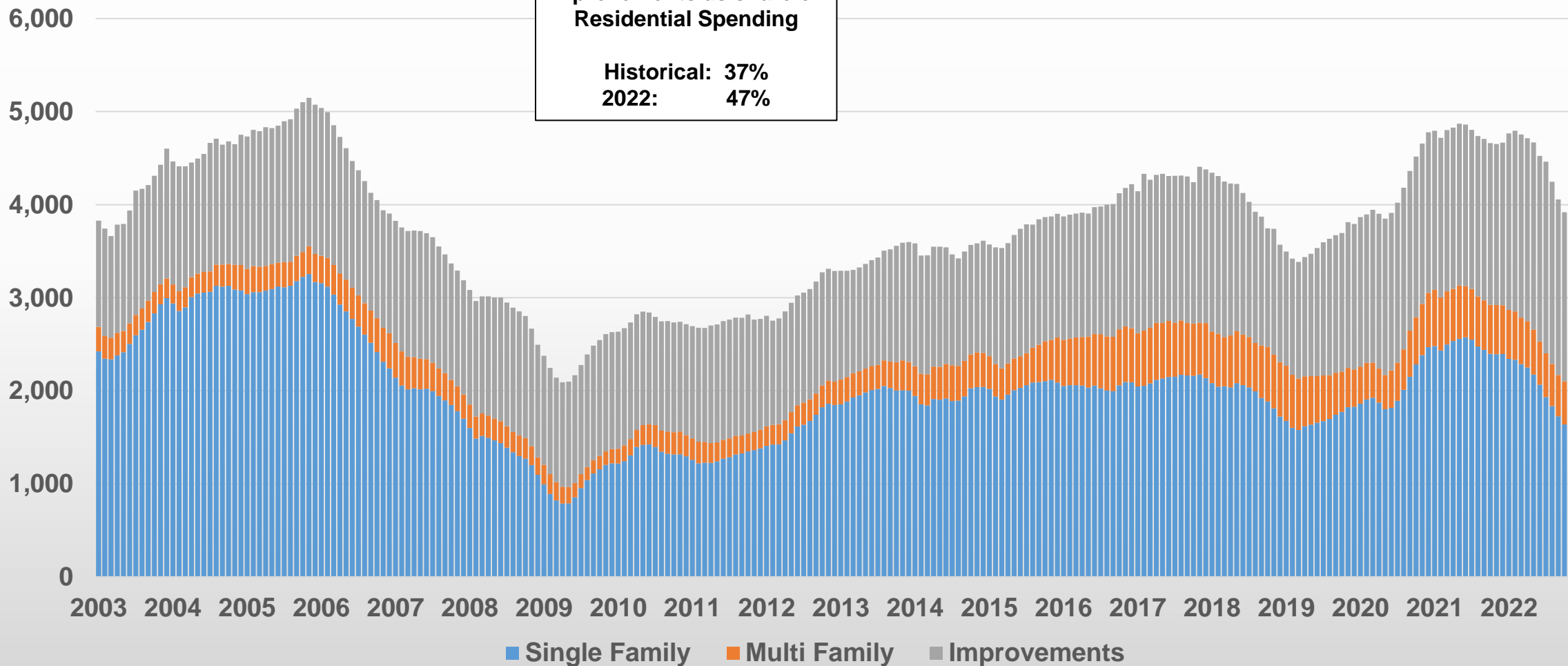
In terms of cement consumption, single family represents 19% of total cement in Iowa

# Residential Construction Spending: Iowa

\$2009, Thousands, SAAR

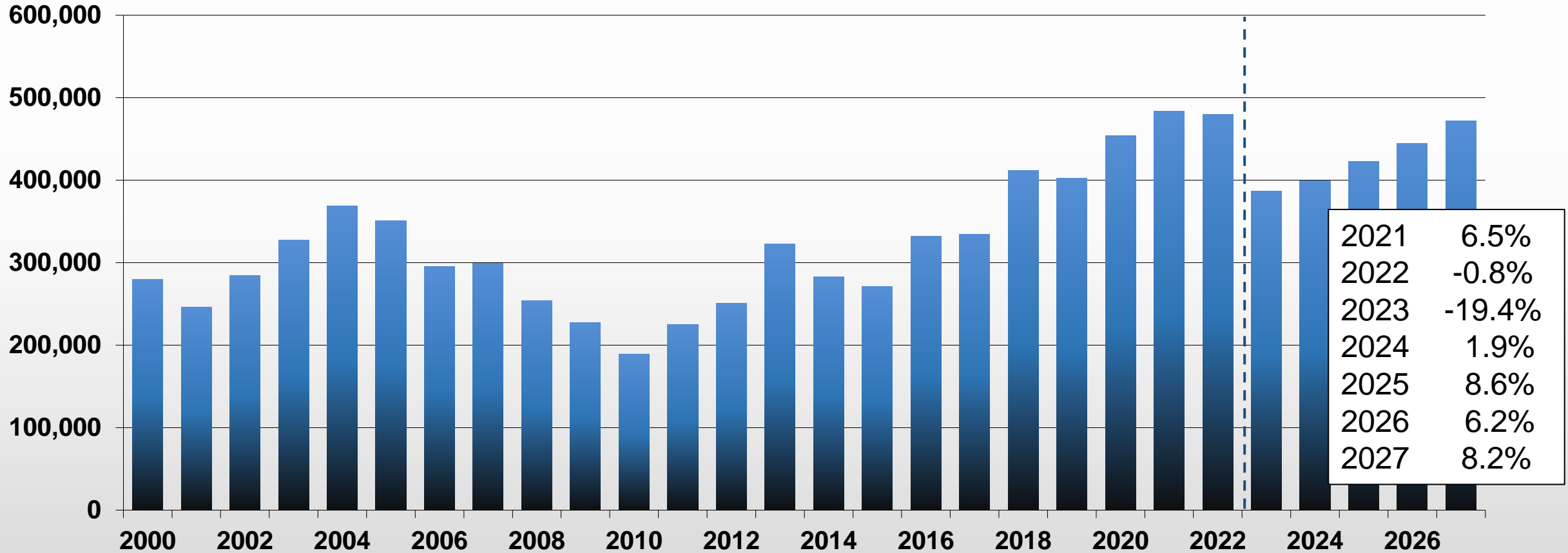
Improvements as share of  
Residential Spending

Historical: 37%  
2022: 47%



# Residential Cement Consumption— Iowa

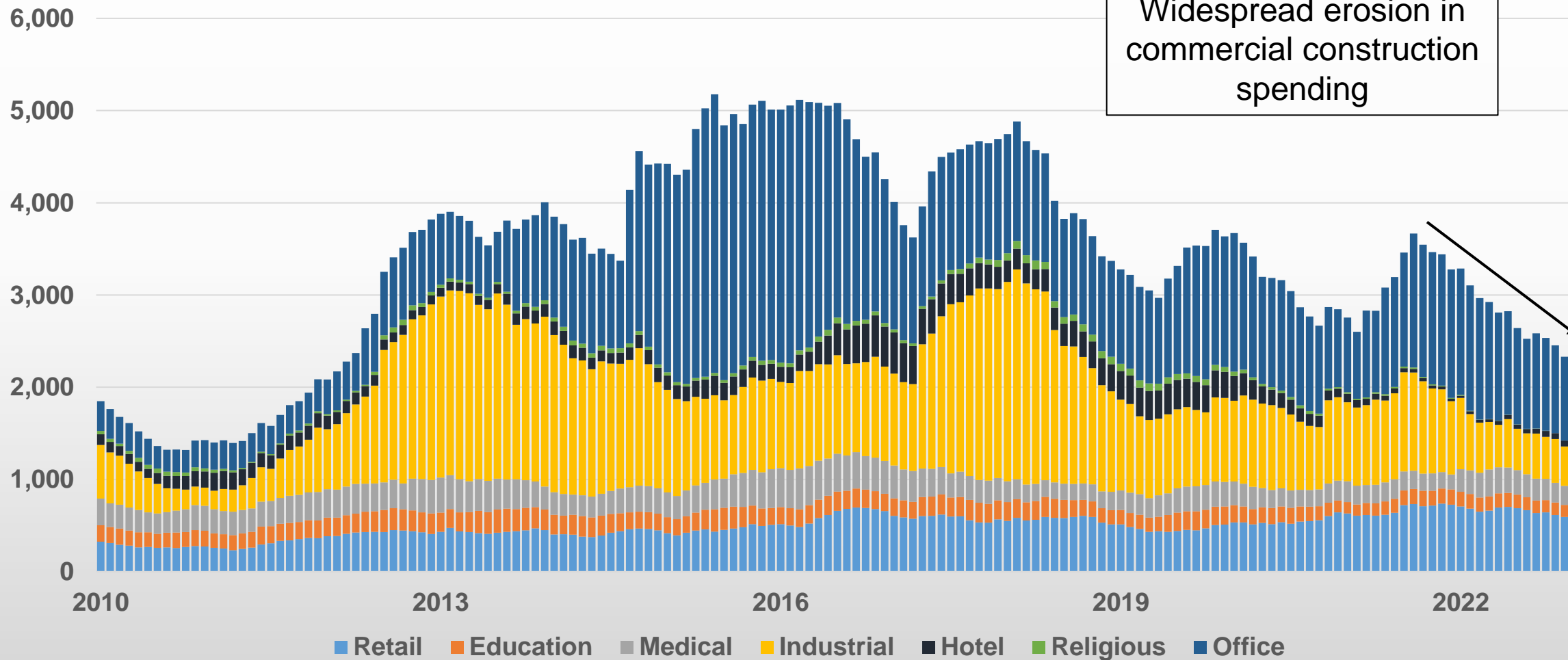
Metric Tons



# Nonresidential

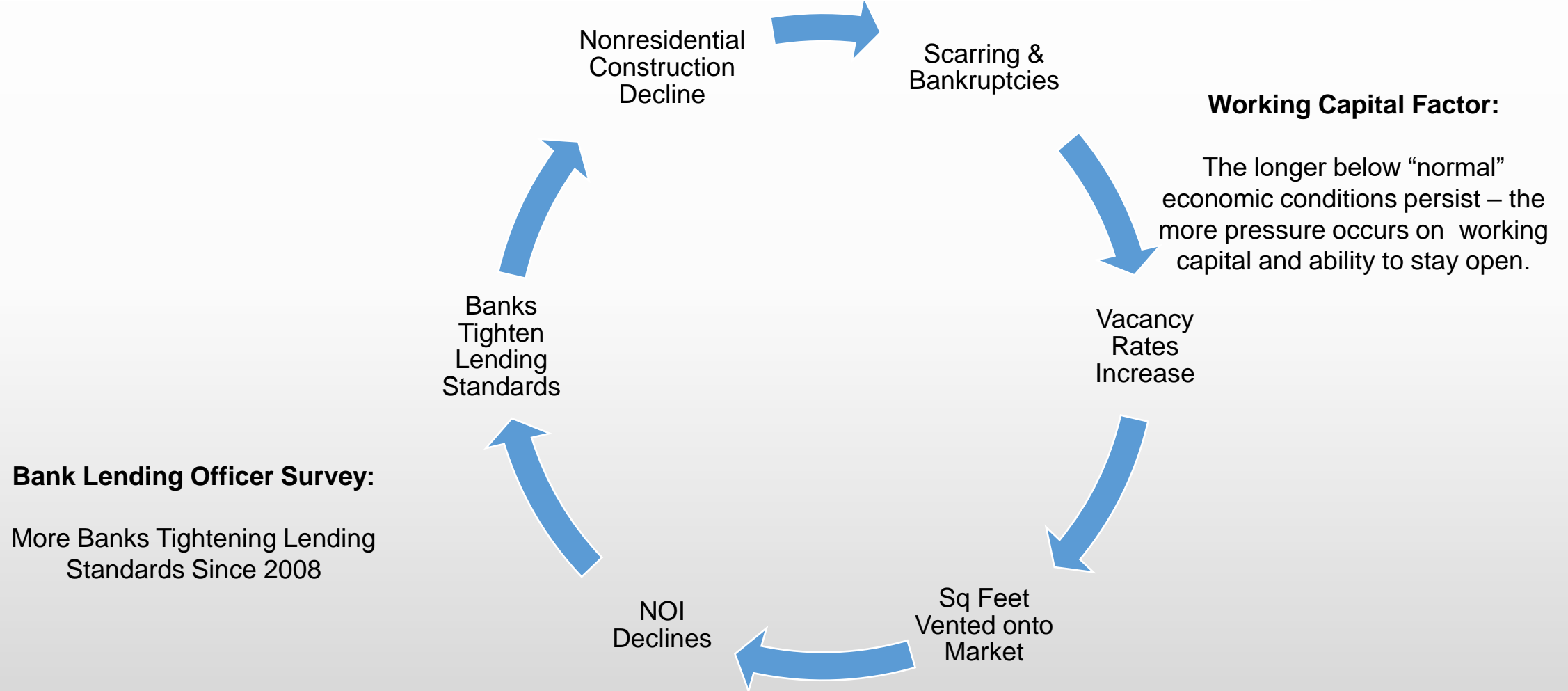
# Commercial Construction Spending

\$2009, Thousands, SAAR



Source: Census, Dodge, PCA

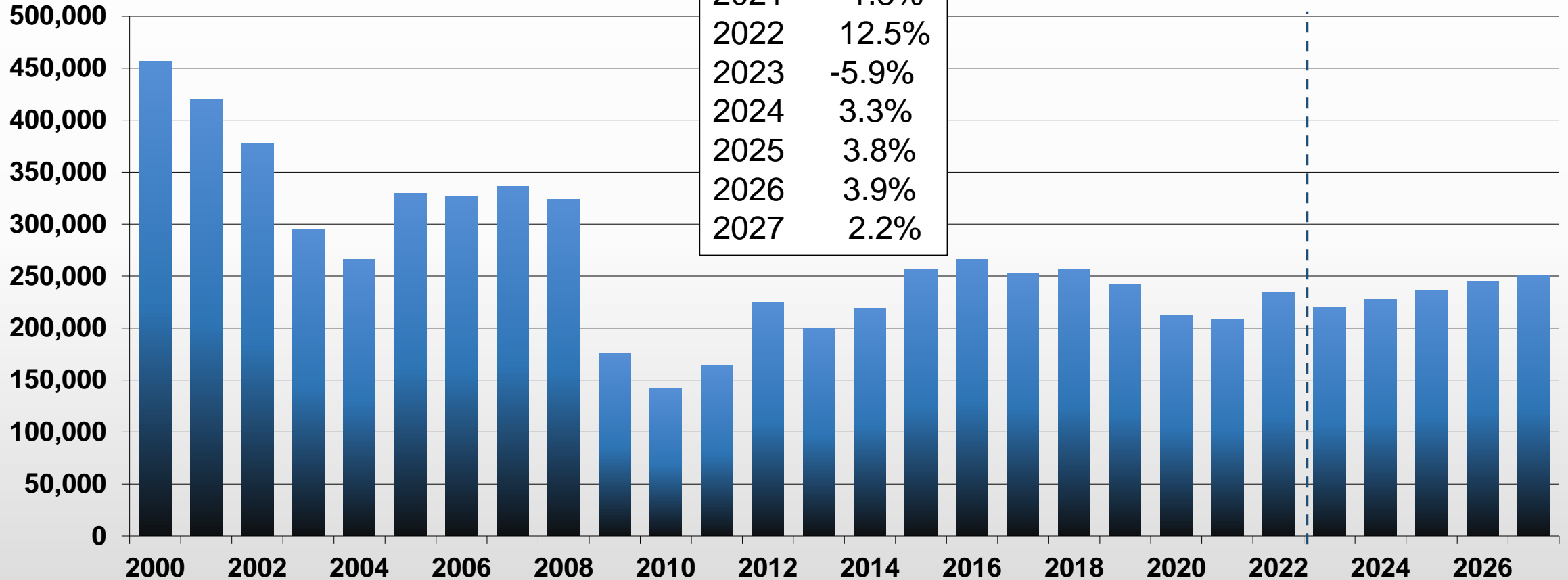
# Nonresidential Cyclical Recovery Process



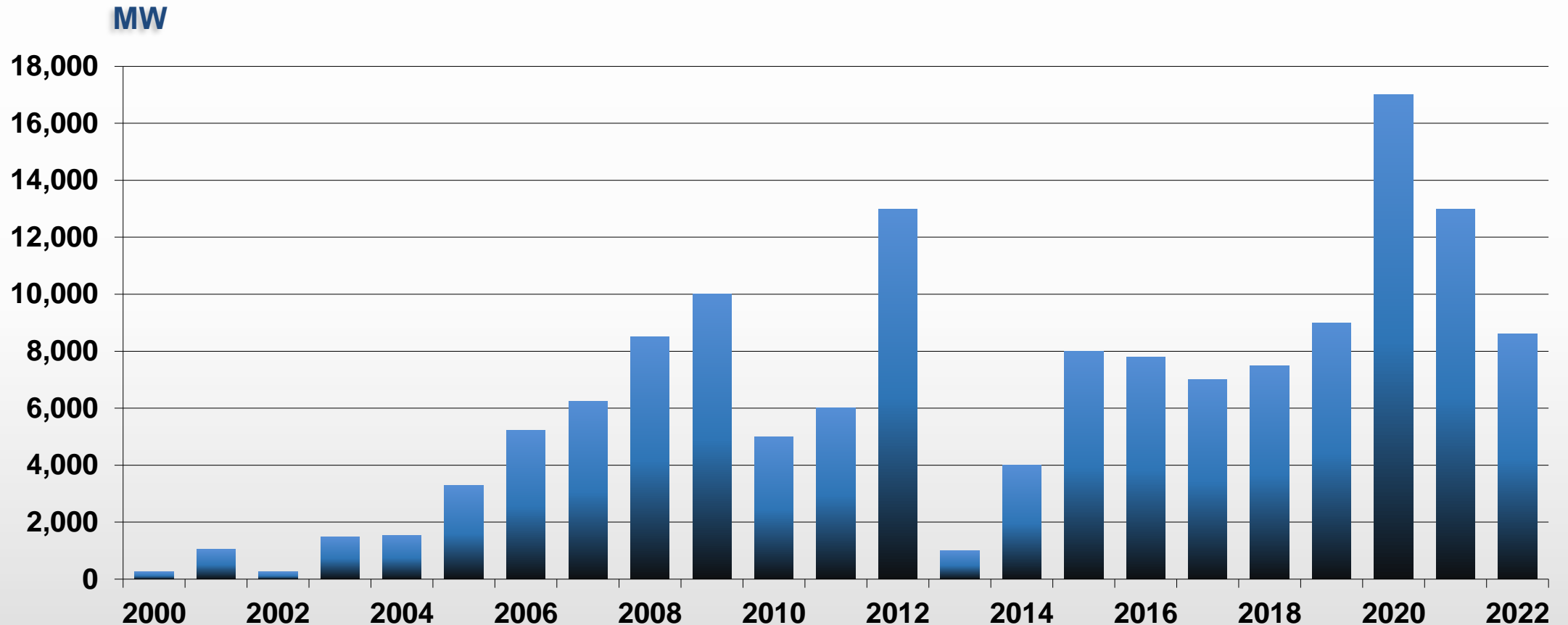


# Commercial Cement Consumption— Iowa

Metric Tons



# Annual Wind Power Capacity Additions: U.S.

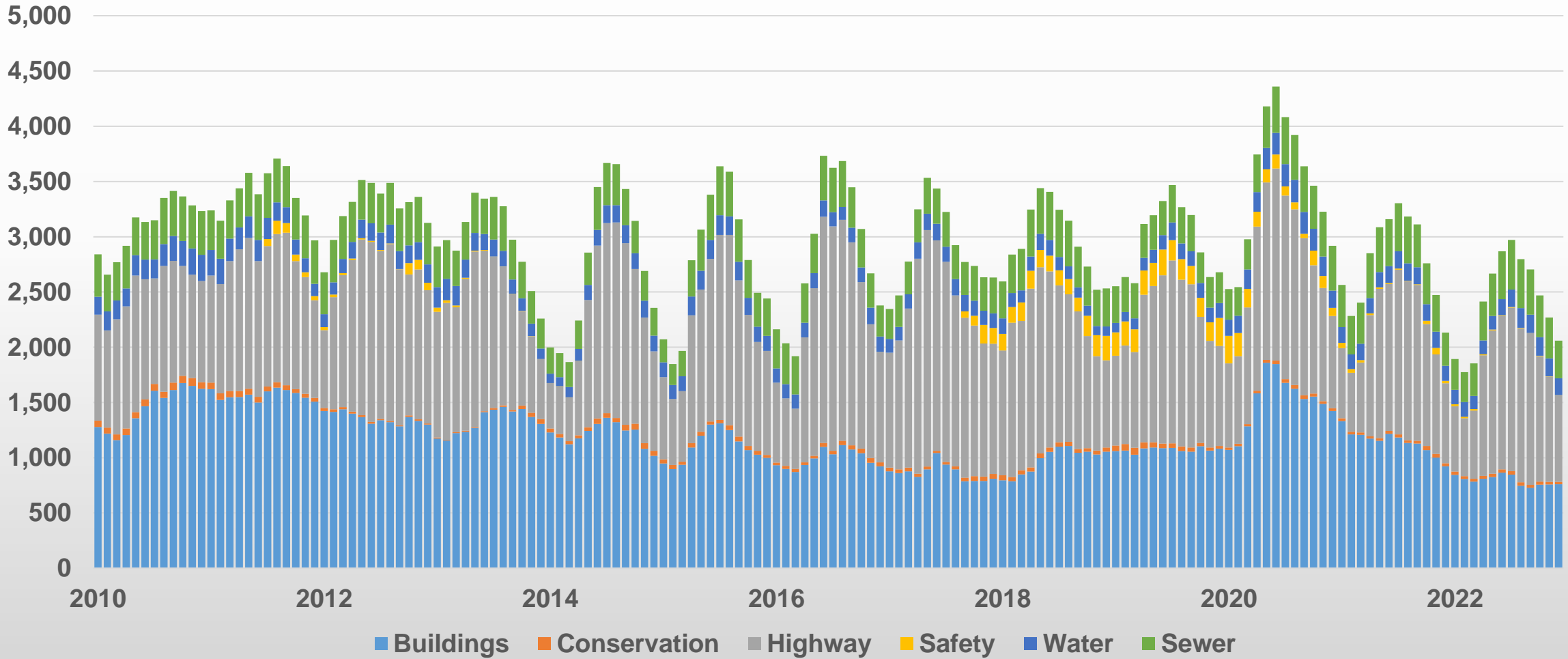


# Public

# Public Construction Spending: Iowa

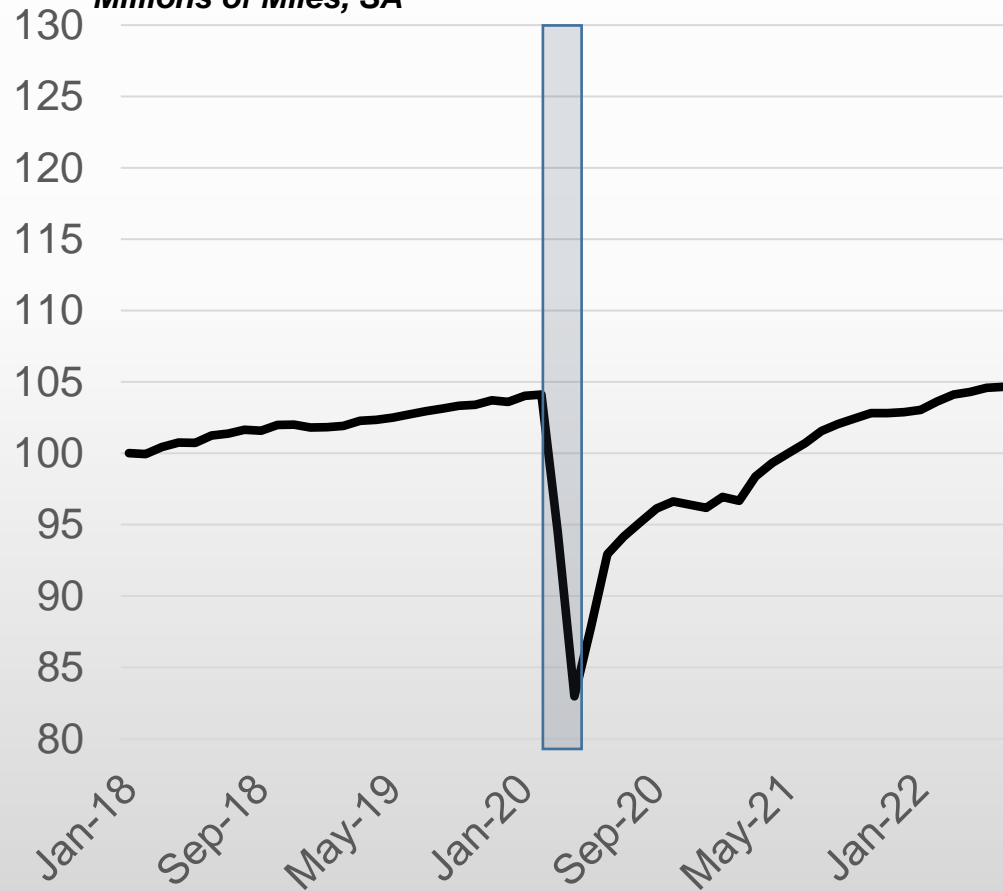
\$2009, Thousands, SAAR

Public markets are poised to benefit from federal Infrastructure and Jobs Act (IIJA) spending.



## Reduced Mobility Likely Negatively Impacting Fuel Tax Revenues

**Vehicle Miles Traveled**  
*Millions of Miles, SA*

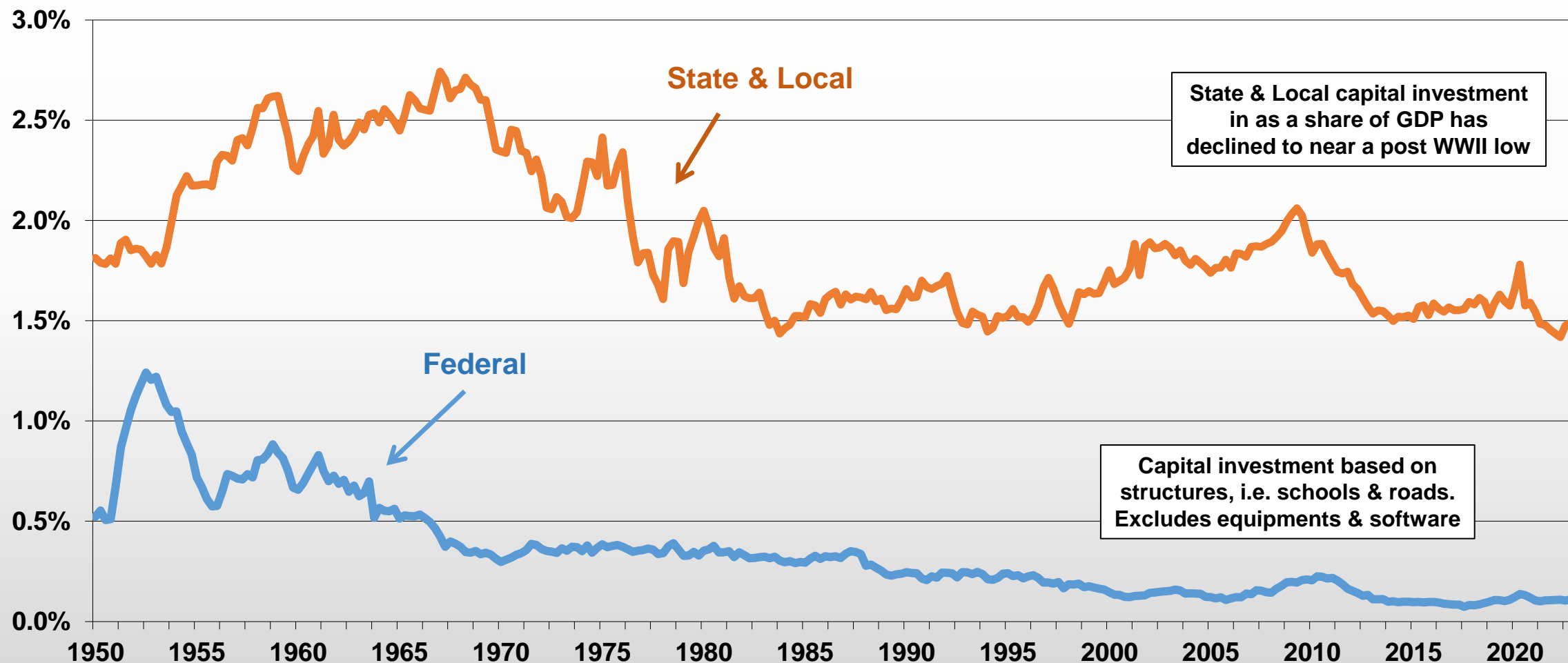


**Highway Put-in-Place Construction Spending**  
*Millions, 2009 \$s*



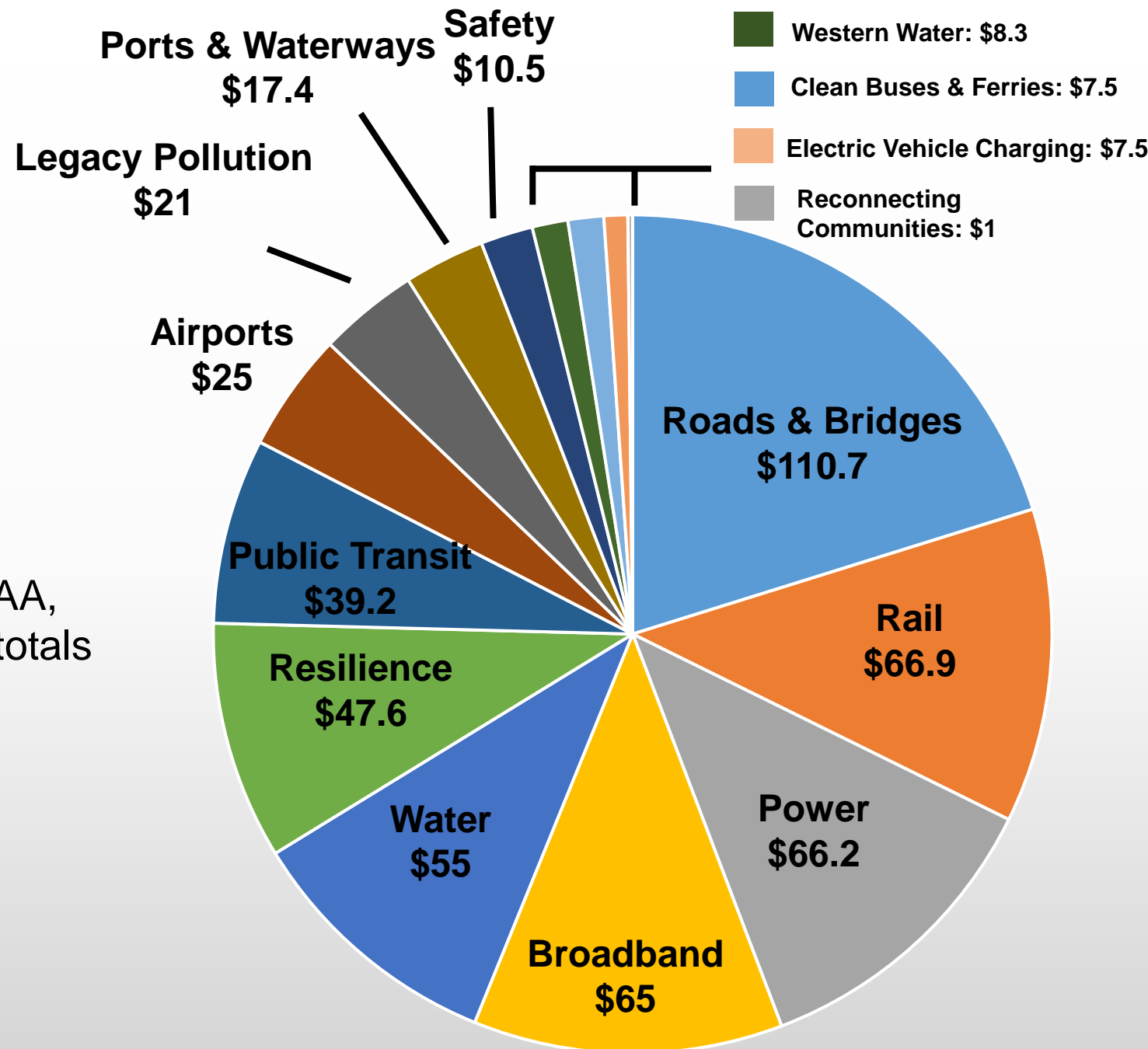
Source: FHWA, Census, PCA

# Public Capital Investment Share of GDP



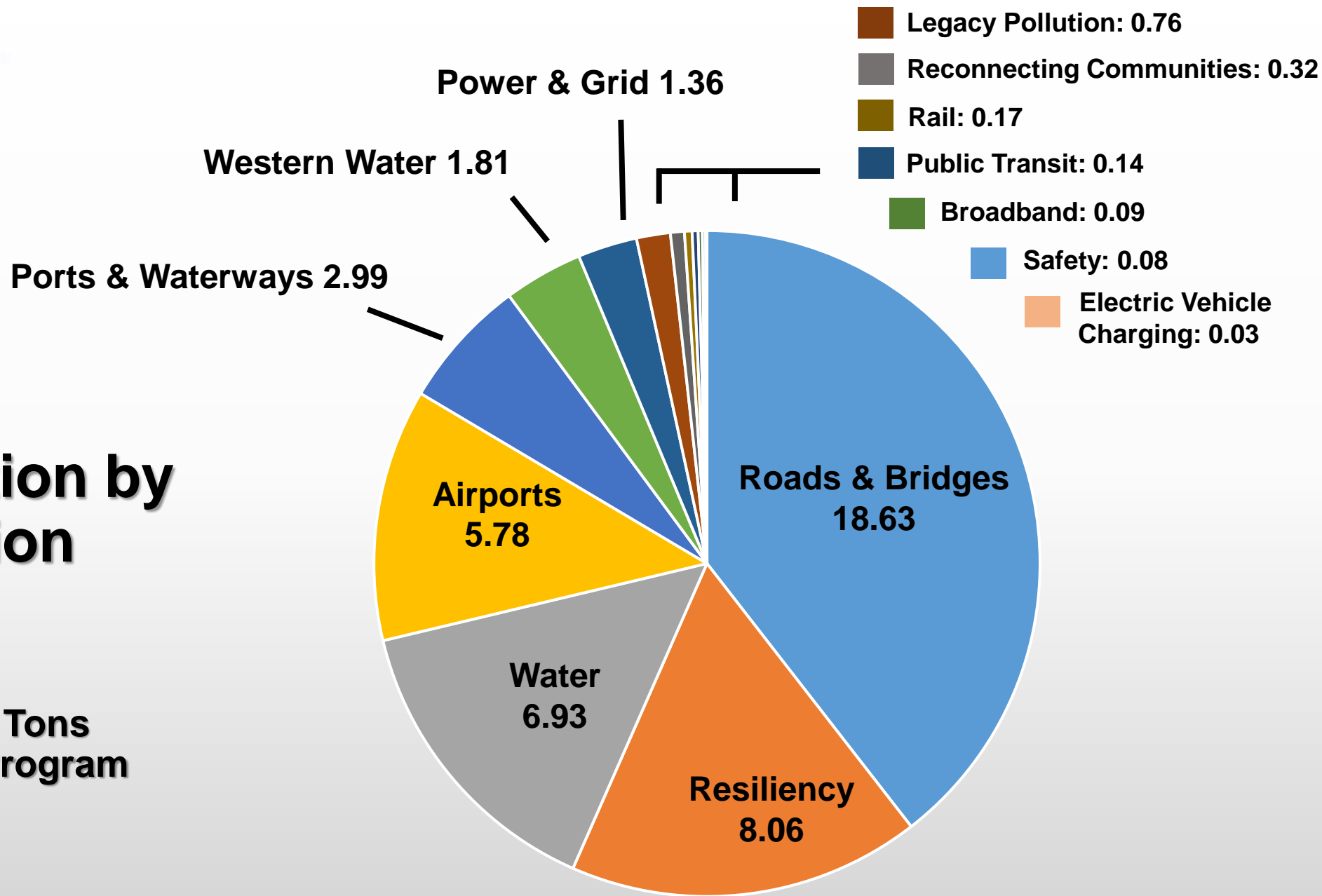
# Infrastructure Package U.S.

- Represents \$545 billion in **net new** spending
- Bill reauthorizes current surface transportation bills (FAST Act, WRDA, FAA, etc.) at current levels for 5 years, which totals \$1.2 trillion
- Much less in dollar size than previous proposals but heavier emphasis on traditional infrastructure



# Cement Consumption by Construction Sector

46 Million Metric Tons  
Over Five-Year Program





# There Will Be a Wait for Pouring to Begin

Small volumes of cement consumption associated with the program materialize in second half 2022.

April

Six Months

One Year

Eighteen Months

4-9 Months

Federal & State Paperwork

4-12 Months

Roughly 38% occurs through competitive grants.

Bid Letting & Review

6-15 Months

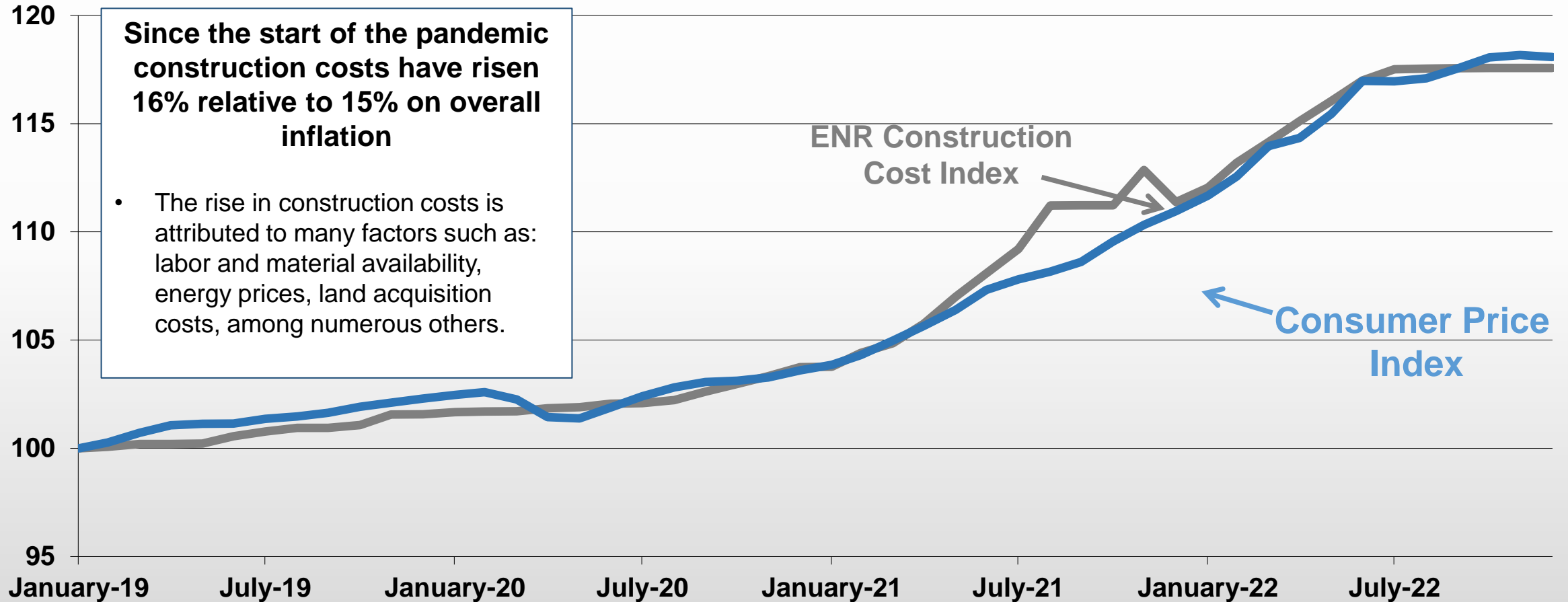
Contract Award to Construction

6-21 Months

Average Construction Start: **Early/Mid-2023**

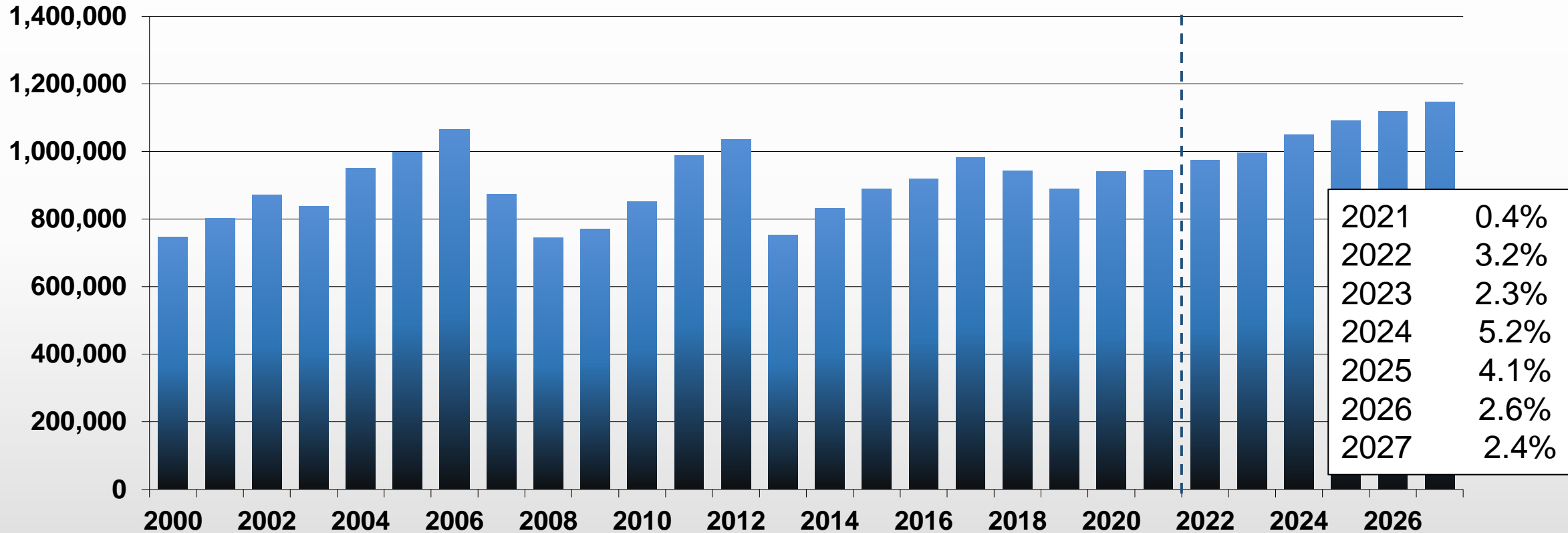
# Construction Costs Relative to Overall Inflation

Index, January 2019=100



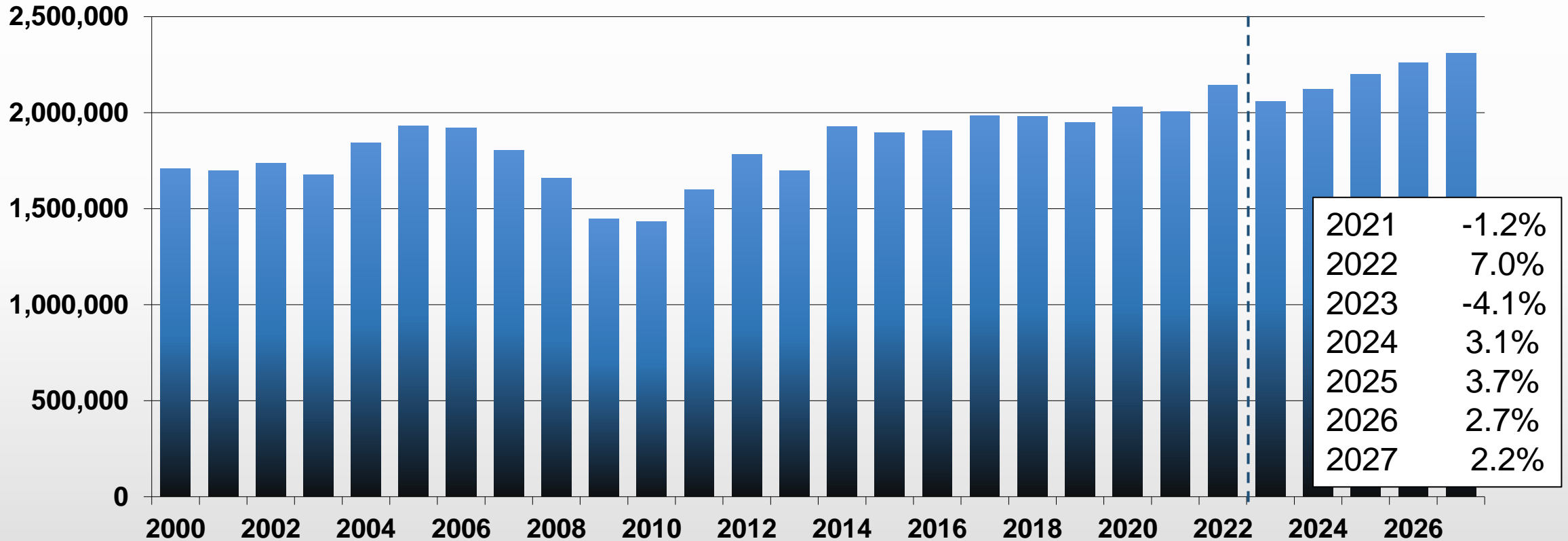
# Public Cement Consumption – Iowa

Metric Tons



# Total Cement Consumption – Iowa

Metric Tons, Thousands







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