Wisconsin's Economic Outlook:

Navigating the Cross Trends of the 2023 Economy

Wisconsin Manufacturing Extension Partnerships Milwaukee, WI

April 27, 2023

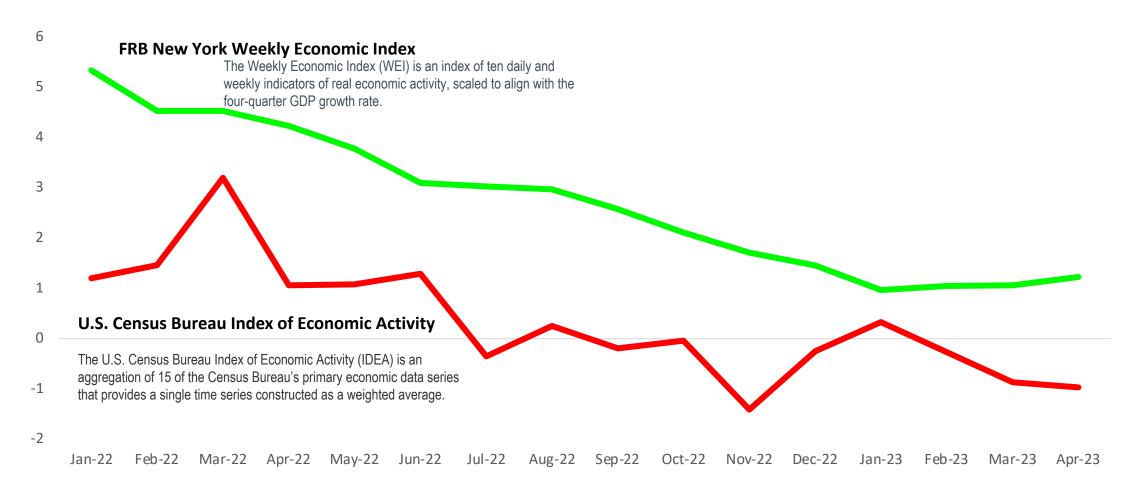
The Cognitive Dissonance Economy

- The issues confronting the U.S. and Wisconsin economies are a direct results of COVID Pandemic and the massive efforts to avoid a larger collapse
- Standing on the throttle: fiscal policy remains stimulative.
- Standing on the brake: The Federal Reserve has moved a contractionary position to combat inflation.

The Cognitive Dissonance Economy

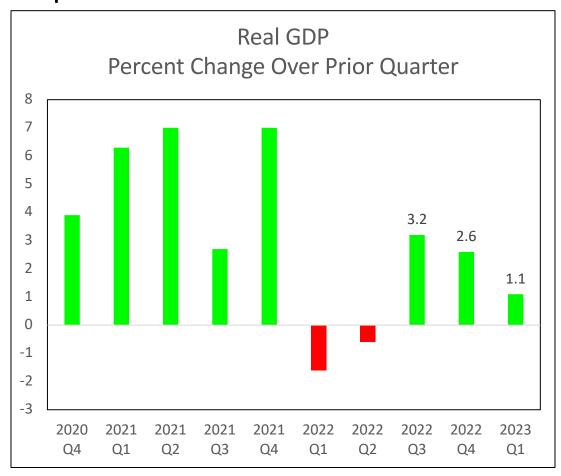
- **Result**: An economy that is solid and weak at the same time.
- Regional Variance: Different states and regions have different results.
- **Industry Variance**: Different results by industry even within the same economic sector.

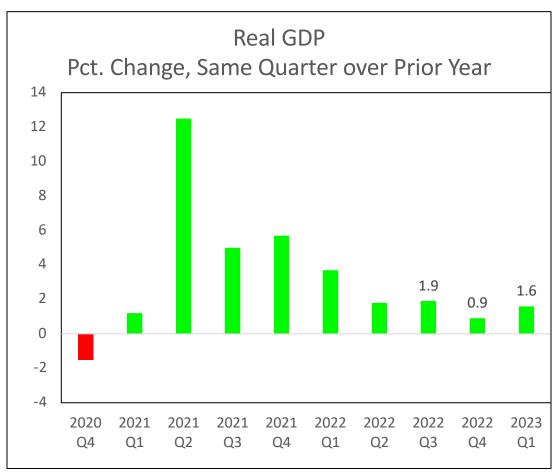
Illustrating Cognitive Dissonance Different High-Frequency Measures Give Different Readings



Real GDP Update

1st Quarter 2023 Up 1.1% over 4th Quarter 2023 Up 1.6% 2023 Q1 over 2022 Q1



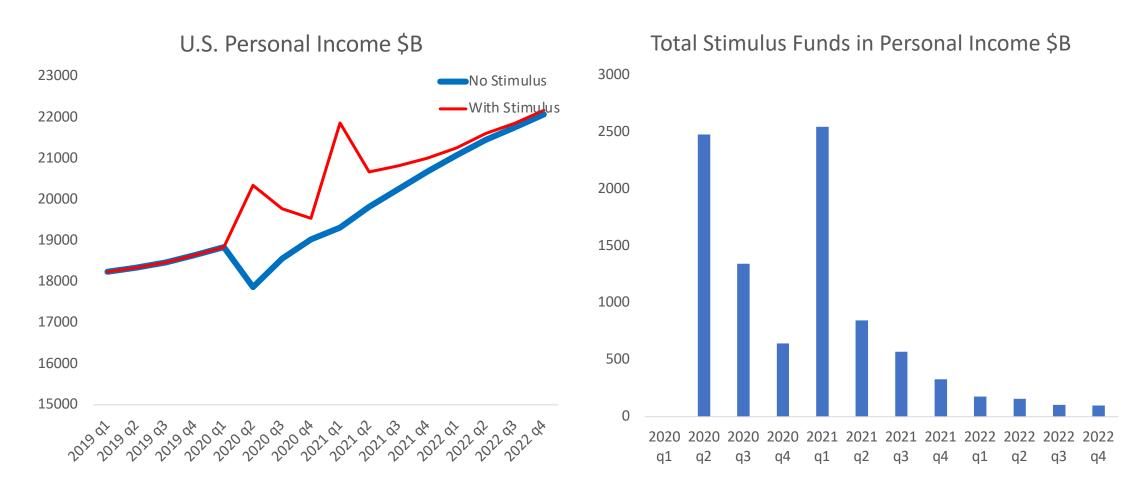


Source: U.S. Bureau of Economic Analysis, Release Date: April 27, 2023

Standing on the Throttle

Past efforts to Relieve Pandemic Still Reverberate in the Economy

Stimulus Funds Lifted U.S. Personal Income



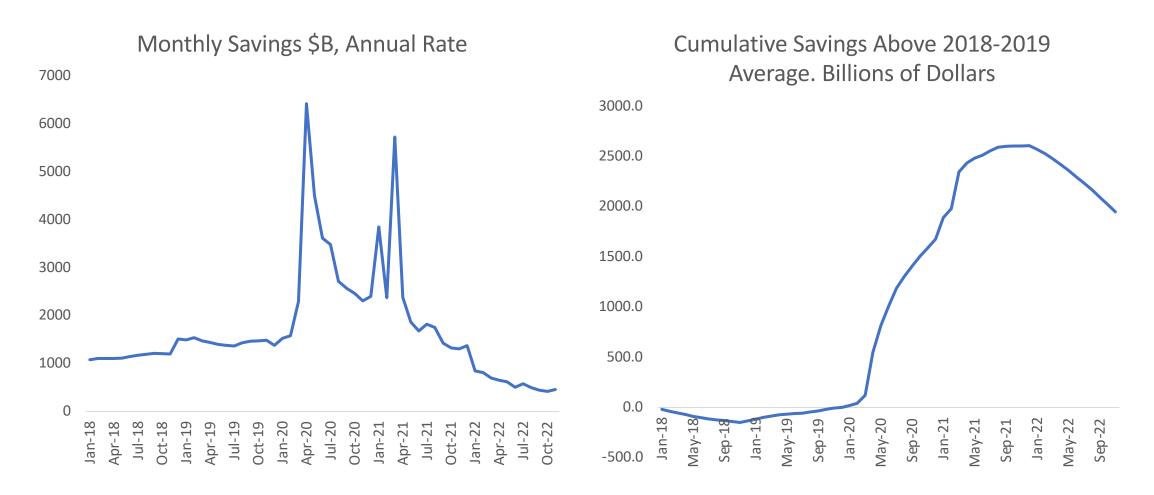
Biggest Share of Stimulus Checks Went to Savings or Debt Reduction

How Households Use Their Stimulus Checks

Stimulus Round	1	2	3
Reporting Month	June	January	March
Percent spent	29.2	25.5	24.7
Percent saved	36.4	37.1	41.6
Percent toward debt	34.5	37.4	33.7

Source: New York Federal Reserve Bank Survey of Consumer Expectations

By Using Excess Savings, Consumer Spending Sustained in the Near-Term

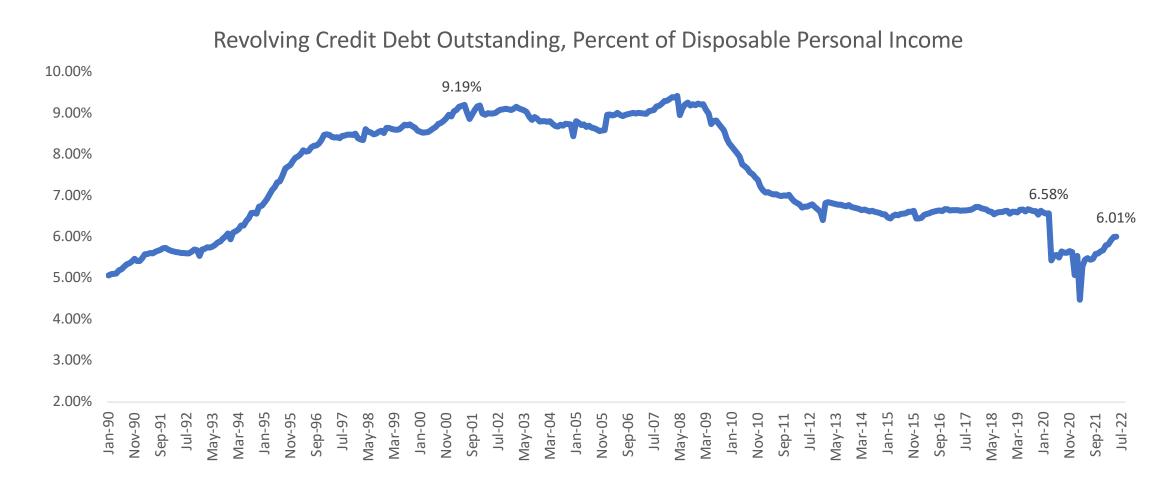


Household Debt Service Remains Below Pre-Pandemic Levels

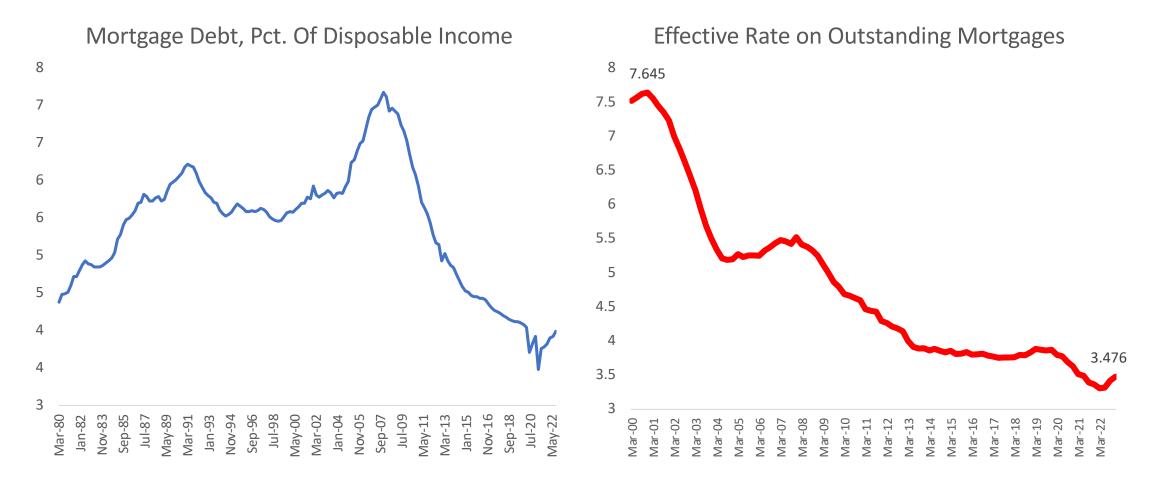
Household Debt Service, Percent of Disposable Personal Income



Consumer Revolving Credit Remains Below Pre-Pandemic Levels



During Low Interest Rates, Homeowners Reset their Mortgages to Lower Rates



Consumer Finances Student Loan Stimulus: Forbearance Continues

Forbearance authorized by CARES Act

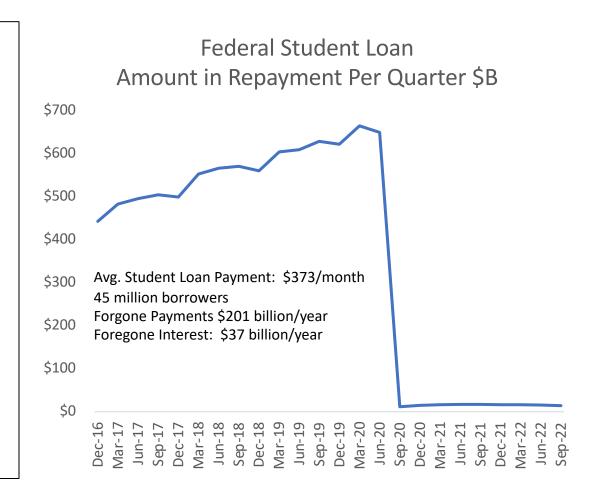
Forbearance Start Date: March 2020

Forbearance End Dates:

Original: September 30, 2020 (CARES Act)

Extensions

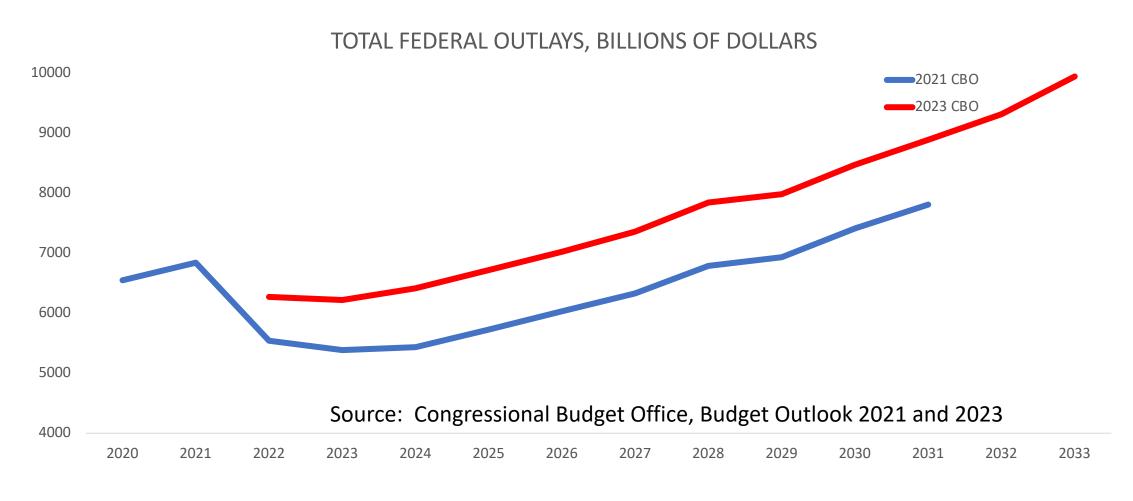
- 1) Jan. 31, 2021, Trump Executive Order
- 2) Sep. 30, 2021, Biden Executive Order
- 3) Jan. 31, 2022, Biden Executive Order
- 4) May 1, 2022, Biden Executive Order
- 5) Aug. 31, 2022, Biden Executive Order
- 6) Dec. 31, 2022, Biden Executive Order
- 7) Jun. 30, 2023, Biden Executive Order



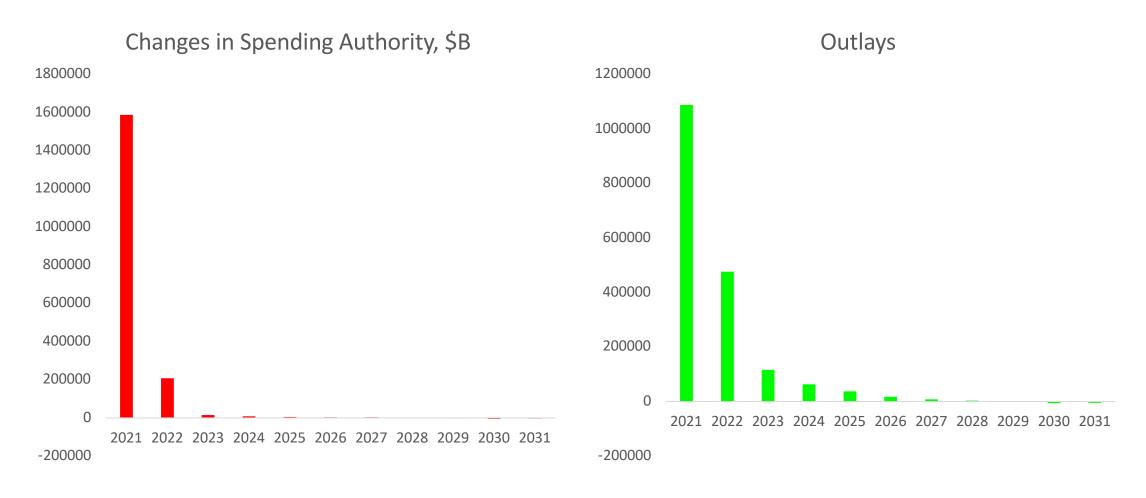
Standing on the Throttle

Federal Fiscal Policy Still Stimulative

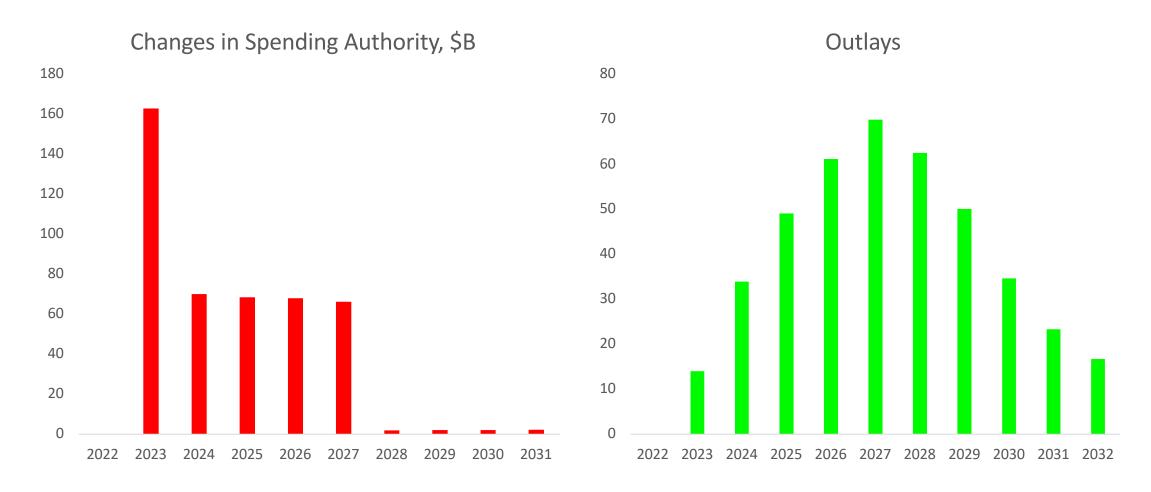
2023 Federal Spending Up \$1 Trillion Annually Compared to 2021



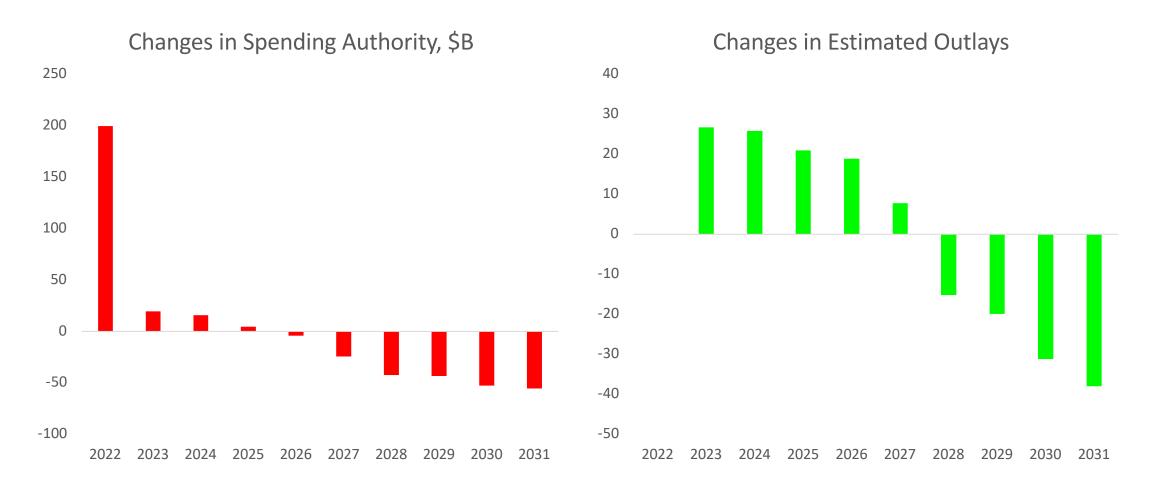
More Federal Fiscal Stimulus in the Pipeline American Rescue Plan Act Bill



More Federal Fiscal Stimulus in the Pipeline Infrastructure Bill



More Federal Fiscal Stimulus in the Pipeline Inflation Reduction Act Through 2027

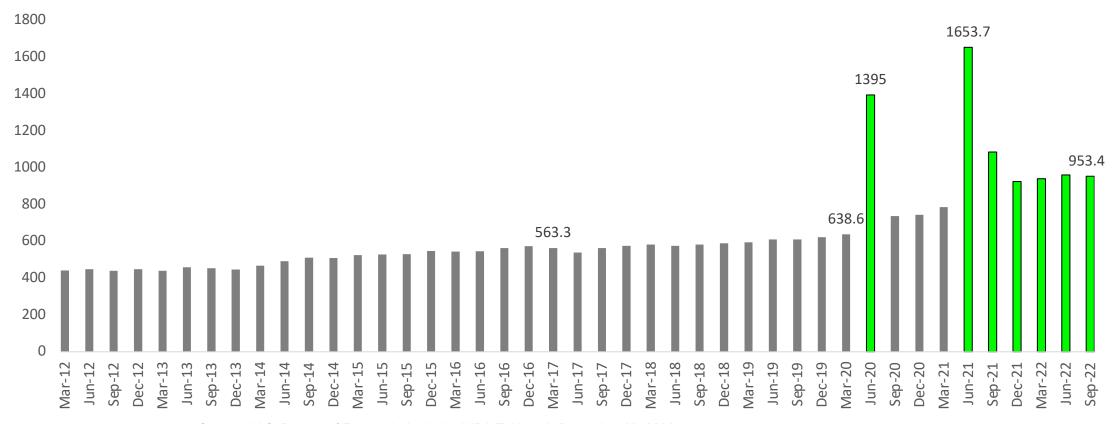


Standing on the Throttle

Stealth Stimulus
State and Local Governments Cash
Holdings

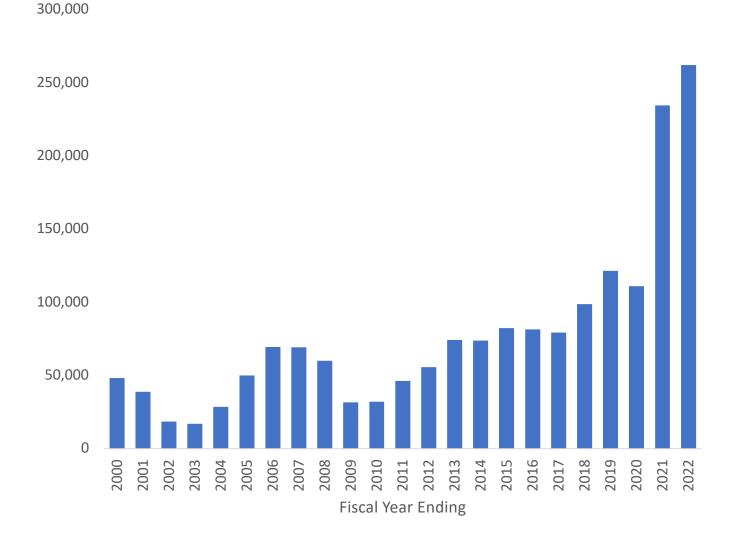
Safety Valve: State & Local Government Finances Stimulus Packages Provided Record High Funding for State & Local Government

Federal Grants in Aid to State and Local Government, Billions of Dollars



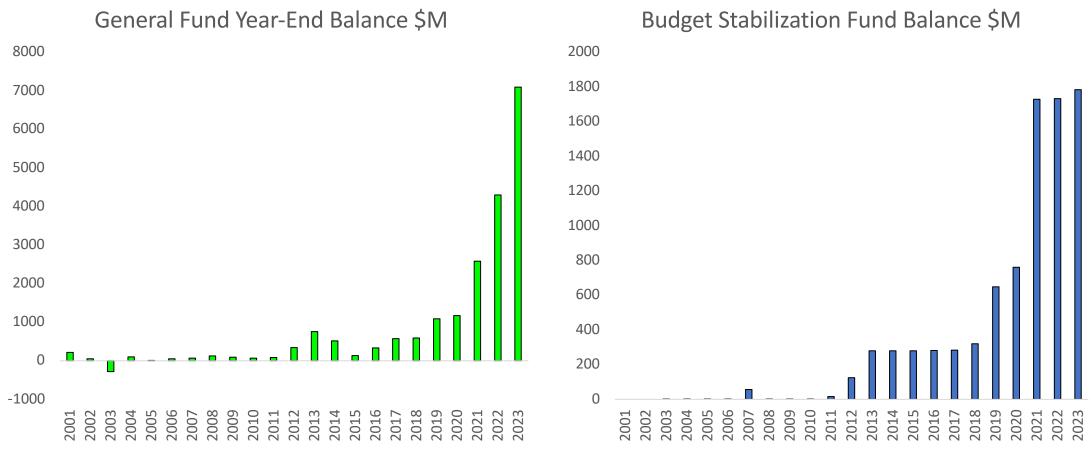
State Government General Fund Balances Plentiful





Sources: Rew Center for the Study of the States

Safety Valve: State & Local Government Finances Wisconsin State Budget Balances All-Time High



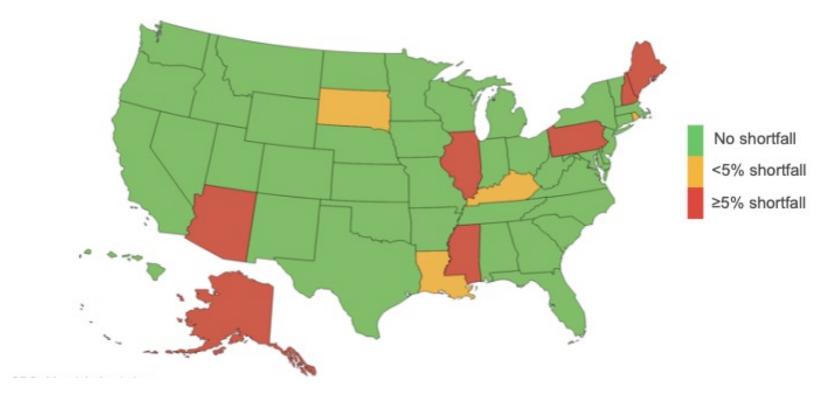
Source: Wisconsin Legislative Fiscal Bureau, Wisconsin Department of Administration

Regional Differences

Most
States
Prepared for a
Moderate
Recession

Stress Test Results Cash Balances After Moderate Recession

State shortfalls net of cash balances, % of FY 2021 general fund revenue



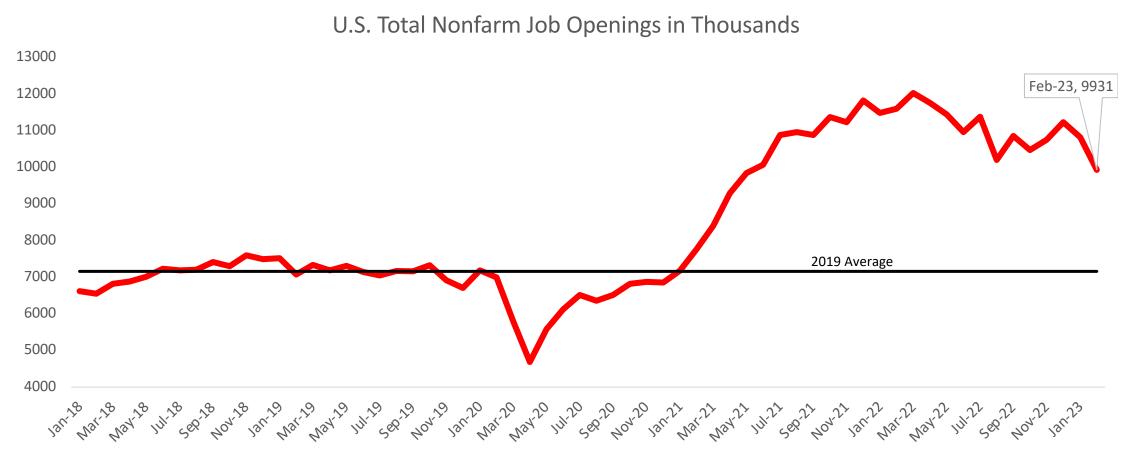
Source: National Association of State Budget Offices, Moody's Analytics

Standing on the Throttle

Labor Markets Remain Tight

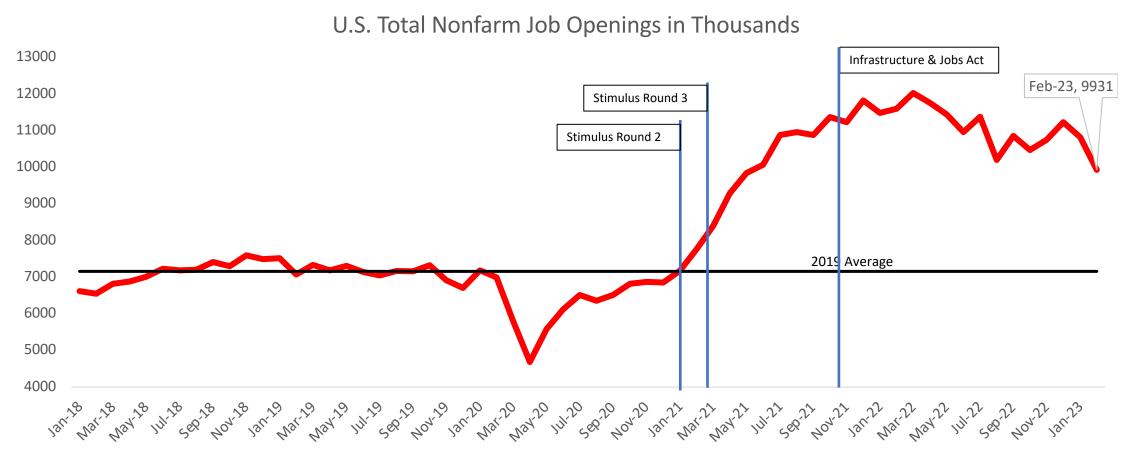
Job Openings

Total U.S. Job Openings Exceed 9 Million Since April 2021



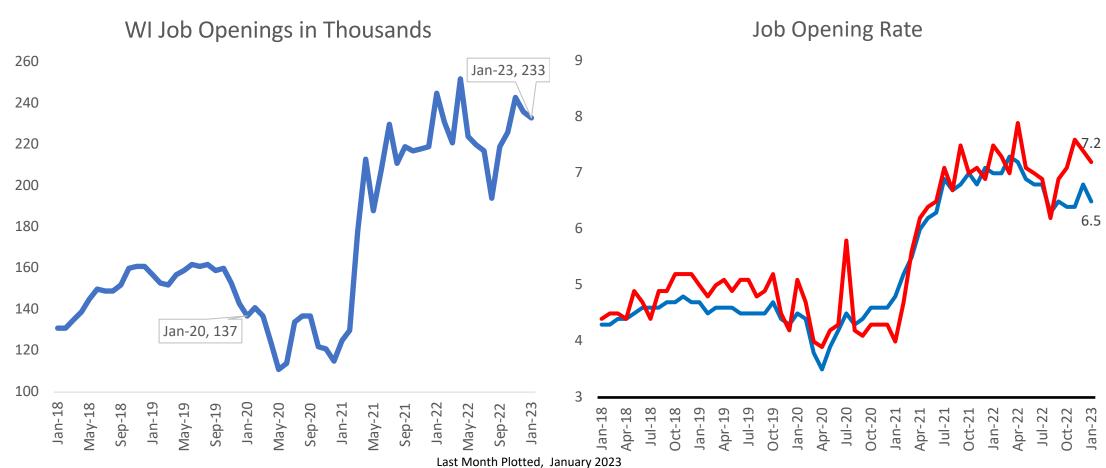
Source: U.S. Bureau of Labor Statistics, Job Opening and Labor Turnover Survey

Total U.S. Job Openings Exceed 9 Million Since April 2021



Source: U.S. Bureau of Labor Statistics, Job Opening and Labor Turnover Survey

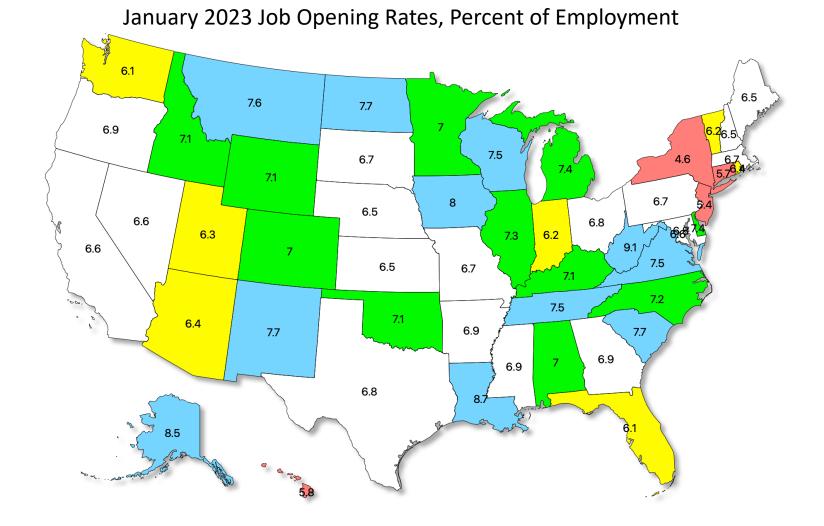
Wisconsin Job Openings: Over 230,000 Running Ahead of U.S. Average



Regional Differences

State Job Opening Rates

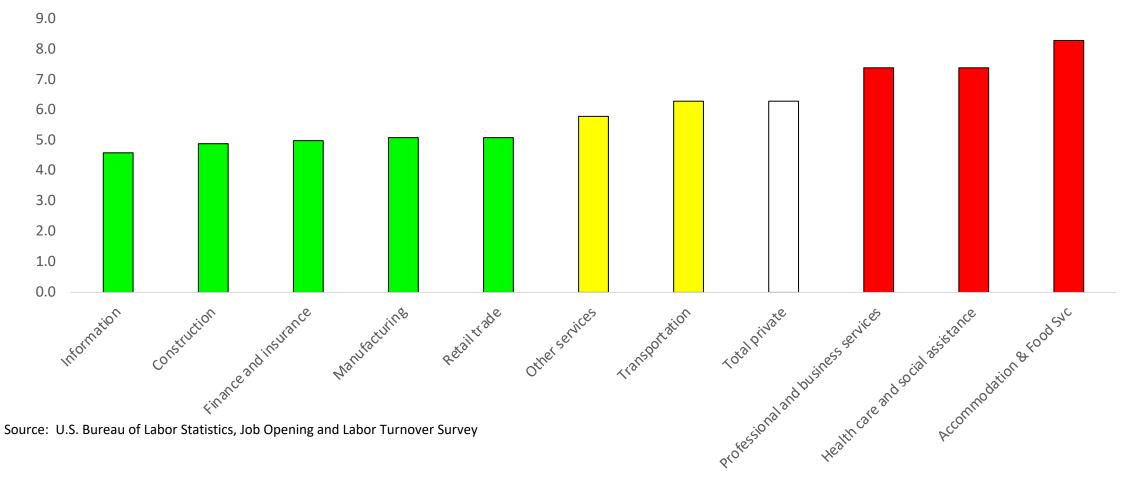
Wisconsin, 9th
Highest in the
Nation



Source: U.S. Bureau of Labor Statistics, Job Opening and Labor Turnover Survey

U.S. Job Shortages Acute in Health Care and Leisure and Hospitality

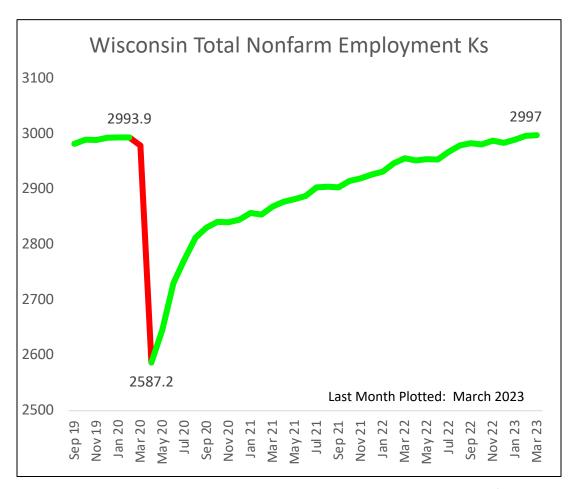
Job Openings by Industry, Percent of Employment, February 2023

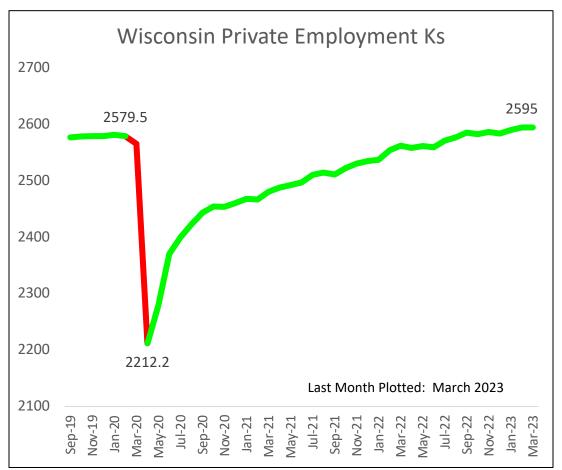


Labor Demand

Wisconsin Employment at Record High

Establishment Survey: Wisconsin Recovered 410,000 Jobs Since April 2020

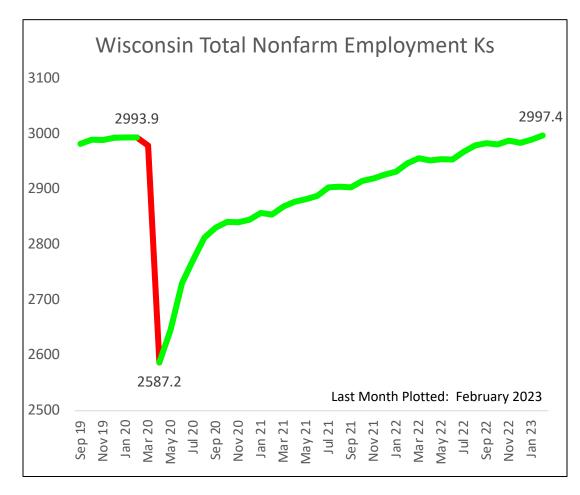


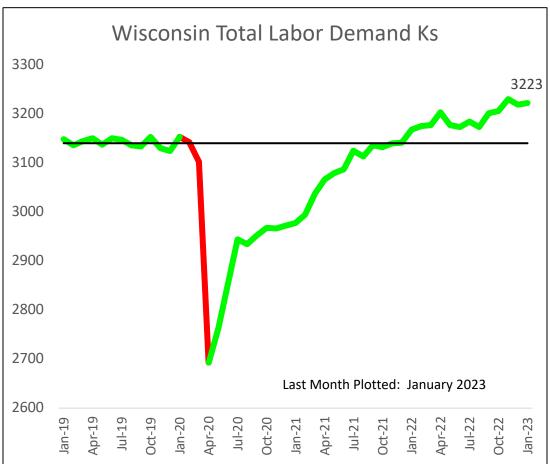


32

April 27, 2023 Wisconsin Department of Revenue

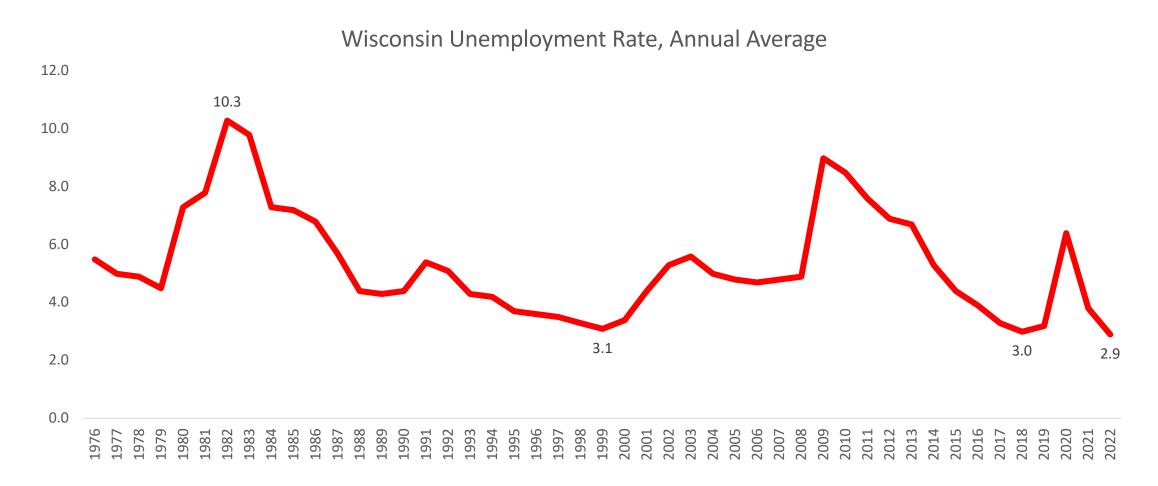
Demand For Labor: Proxy for Total Demand = Jobs + Openings Labor Demand Exceeded Pre-Contraction Levels Since December 2021 Total Demand Up 81,000 Over 2019 Levels



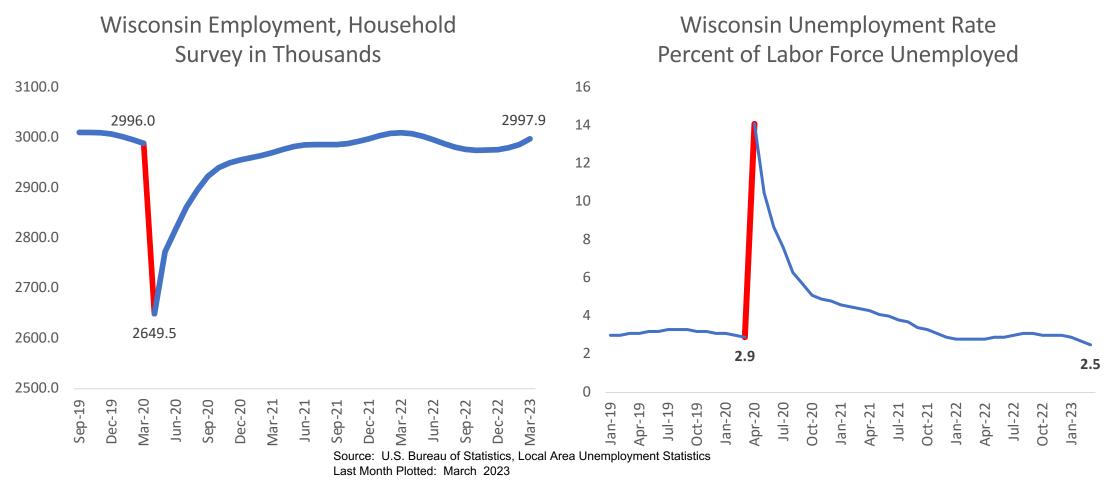


Labor Shortage

In 2022, Wisconsin Set New Record Low for Annual Unemployment Rate



By Household Survey, Unemployment Rate Reaches New Record Low March 2023

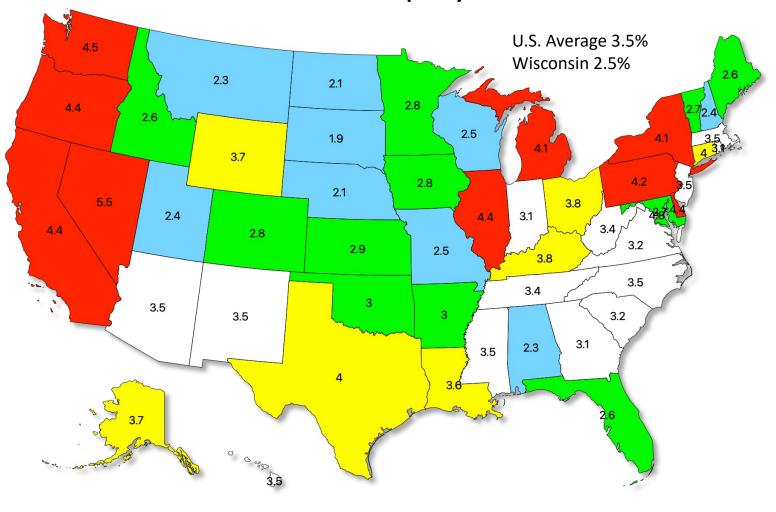


Wisconsin Unemployment Rate

8th Lowest in the U.S.

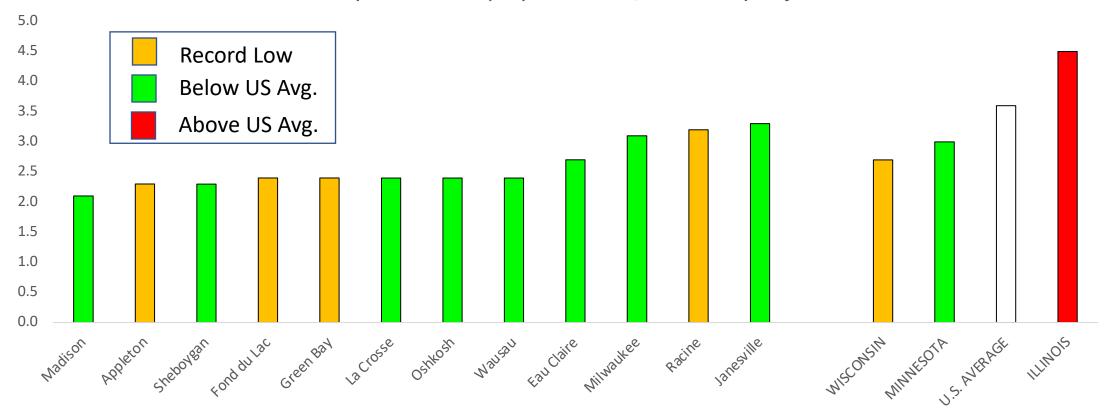
2.5% or less 2.6% to 3.0% 3.1% to 3.5% 3.6% to 4.0% Over 4.0%

March 2023 Unemployment Rates



Every Wisconsin Metro Area Unemployment Rate Below the U.S. Average

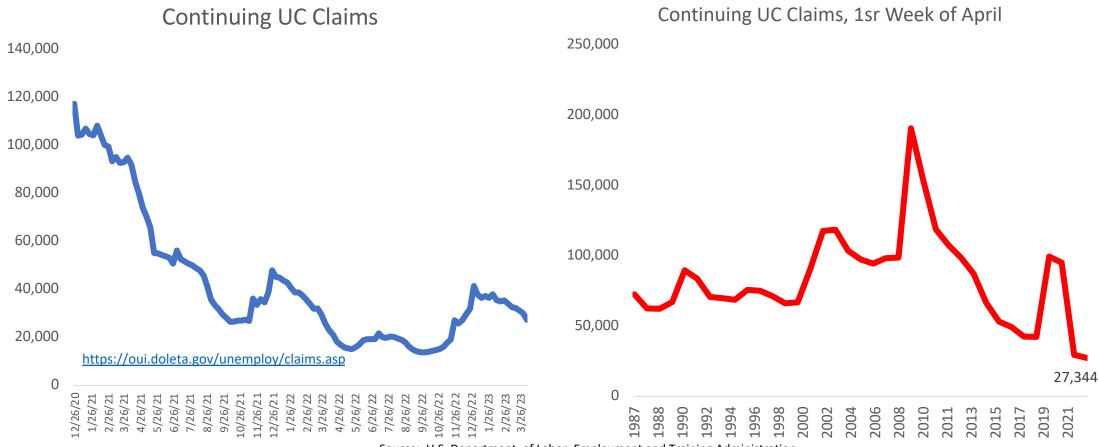
February 2023 Unemployment Rate, Seasonally Adjusted



Number of Persons Unemployment Reaches an All-Time Record Low, March 2023

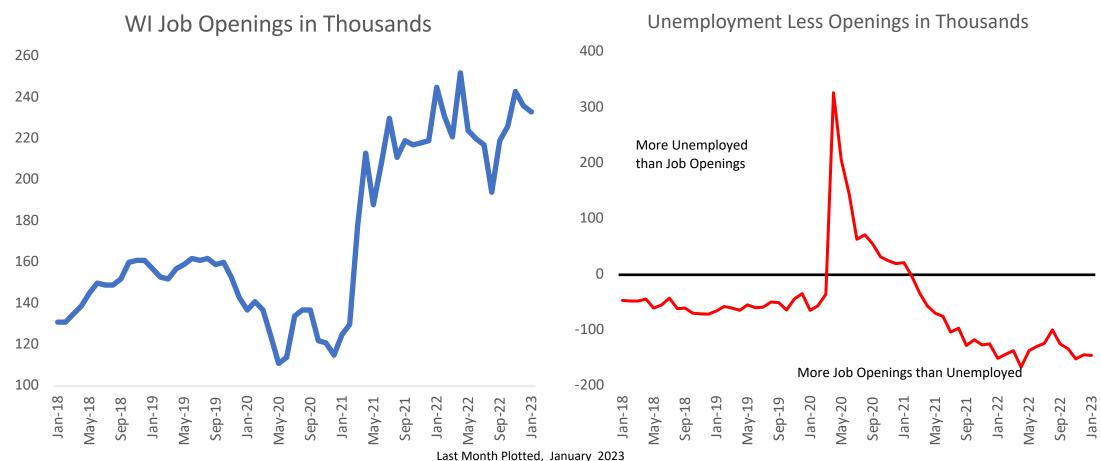


Labor Shortage Not Because of High UC Rolls Fewest Wisconsin Residents Receiving Unemployment Benefits



Source: U.S. Department of Labor, Employment and Training Administration Last Week Plotted, March 18, 2023

Wisconsin Job Openings: Labor Shortage over 150,000



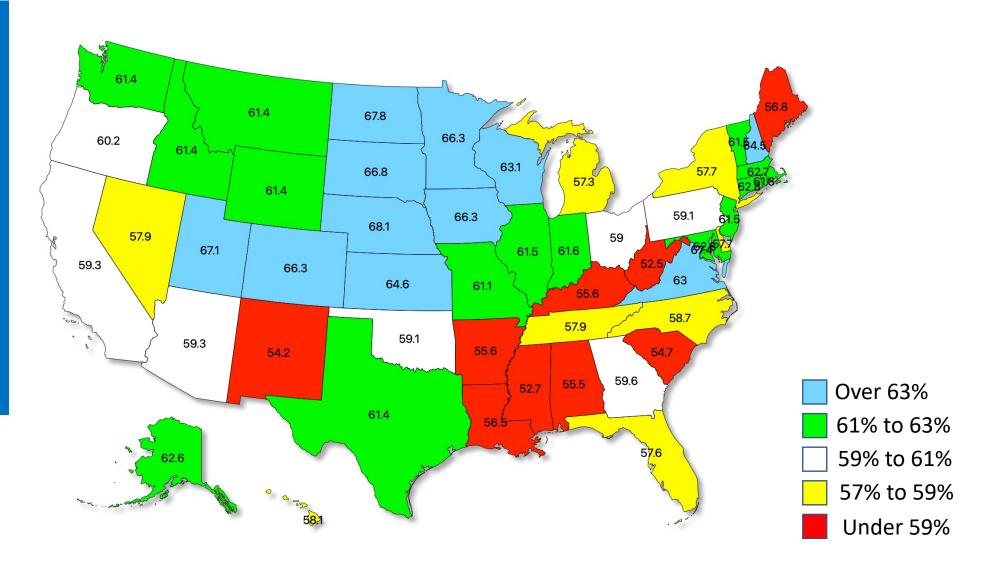
Source: U.S. Bureau of Labor Statistics, Job Openings and Labor Turnover Survey and Local Area Unemployment Statistics

Labor Force Demographics

2022 Employment Population Ratio

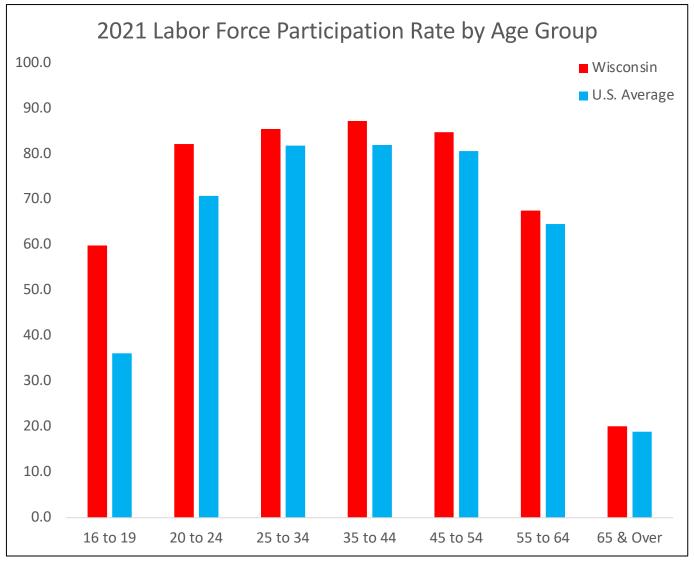
Wisconsin Among Top States

U.S. Average 60.0%



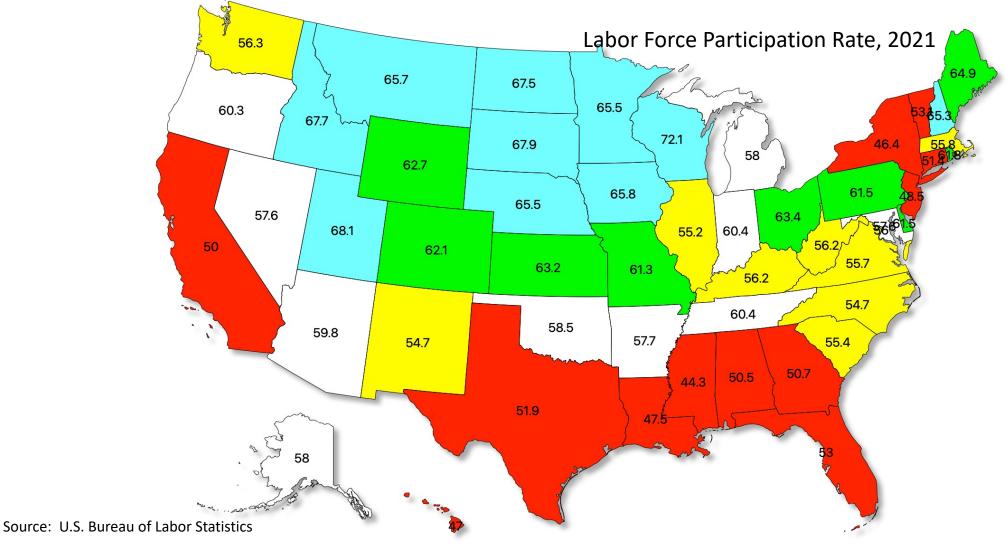
Source: U.S. Bureau of Labor Statistics

Wisconsin Workers More Engaged than the U.S. at Every Age Group



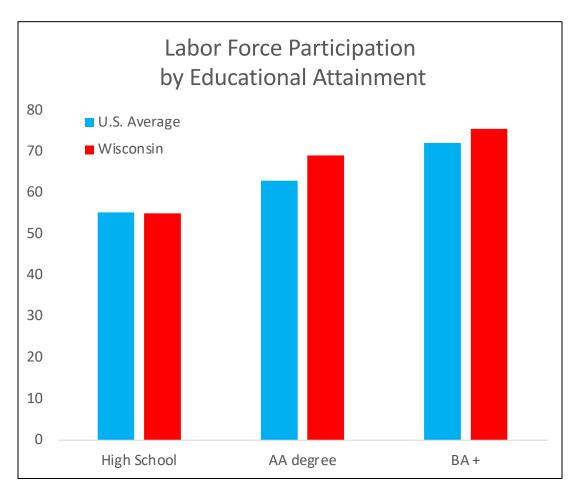
Source: U.S. Bureau of Labor Statistics

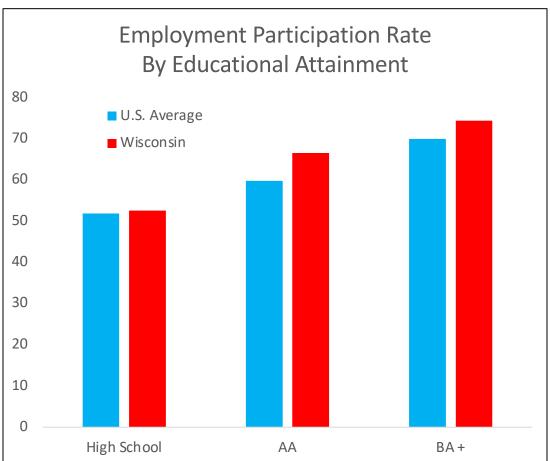
Wisconsin Top Ranked State for Labor Force Participation Among Young, 16 to 24



Labor Force Educational Attainment

Wisconsin Workers More Engaged by Educational Attainment



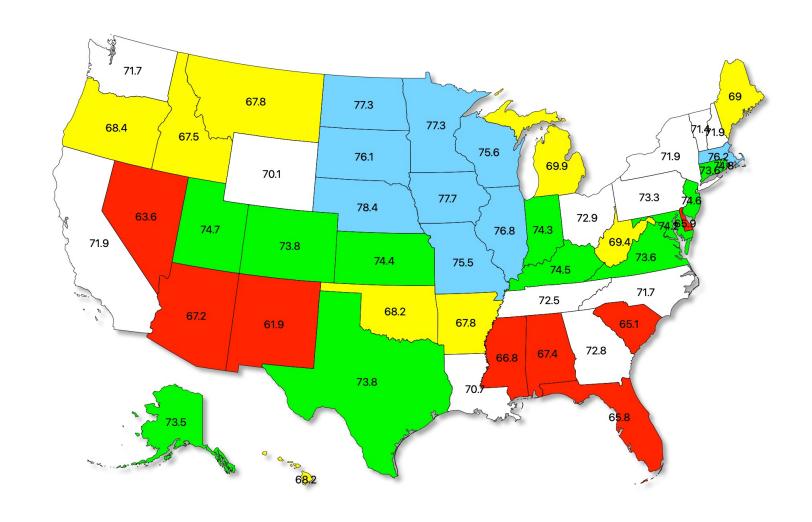


Source: U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, 2021

April 27, 2023 Wisconsin Department of Revenue

Labor Force Participation Rate: BA+ Degree

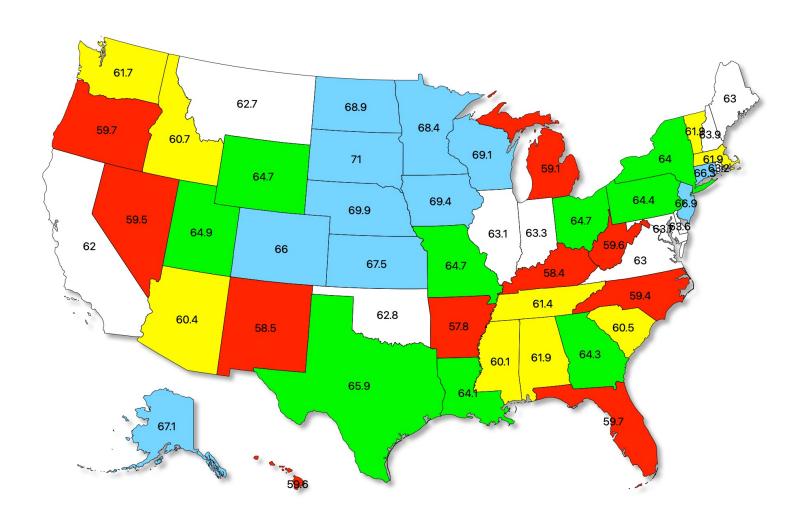
Wisconsin Ranks 8th in U.S.



Source: U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, 2021

Labor Force
Participation Rate:
Some College or
AA Degree

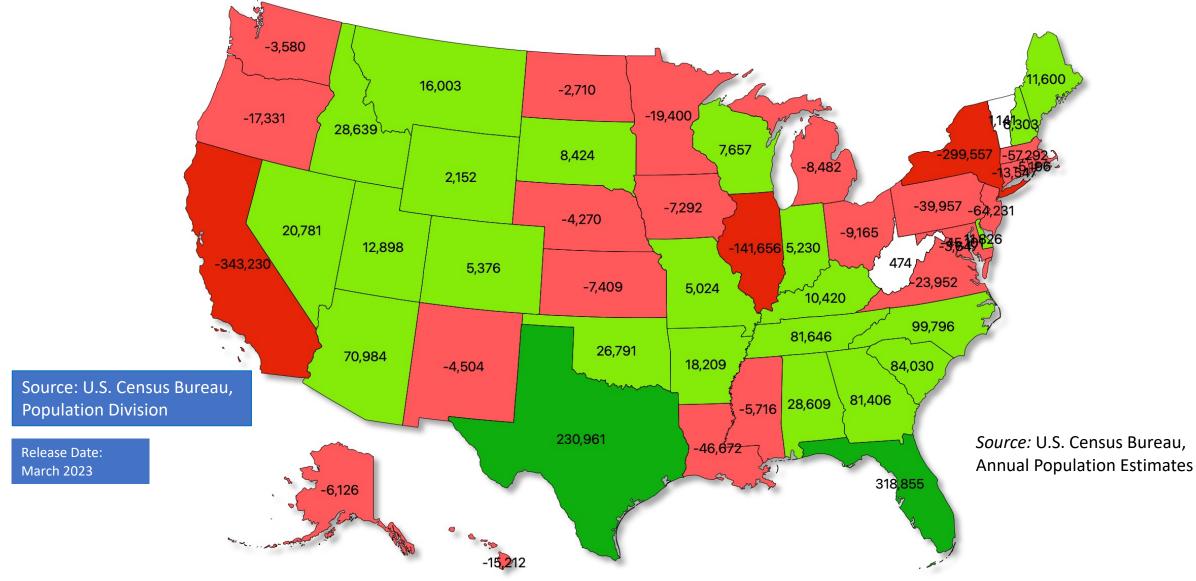
Wisconsin Ranks 4th in the U.S.



Source: U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, 2021

Labor Force and Domestic Migration

Stronger Domestic In-Migration for Wisconsin in 2022

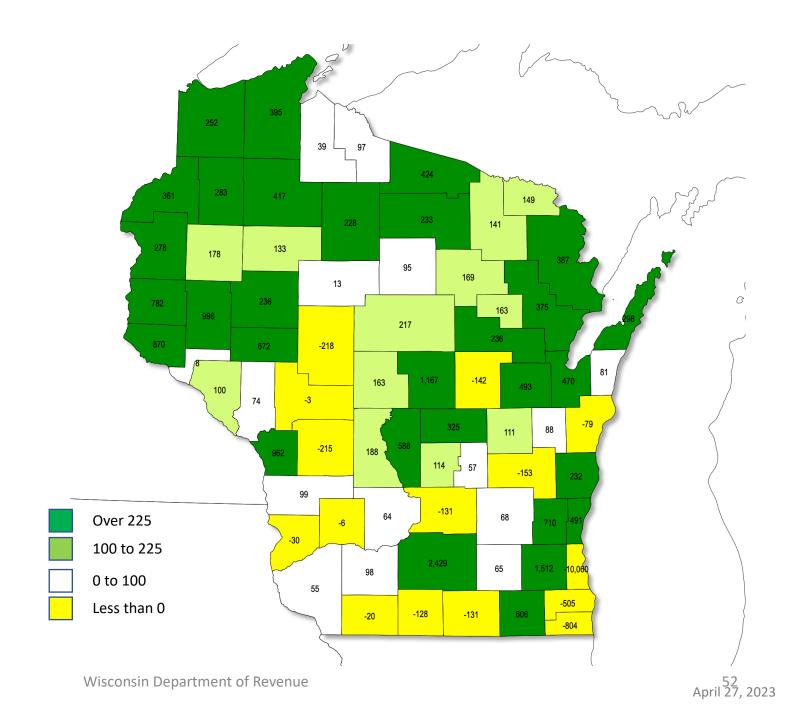


Wisconsin Net Domestic Migration by County, 2021 to 2022

Source: U.S. Census Bureau, Population Division

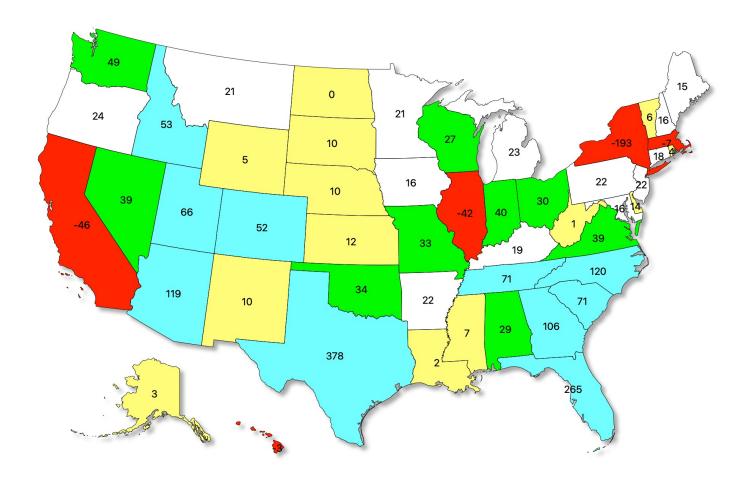
Release Date: March 2023

Annual and Cumulative Estimates of the Components of Resident Population Change for Counties in Wisconsin: April 1, 2020 to July 1, 2022 (CO-EST2022-COMP-55)

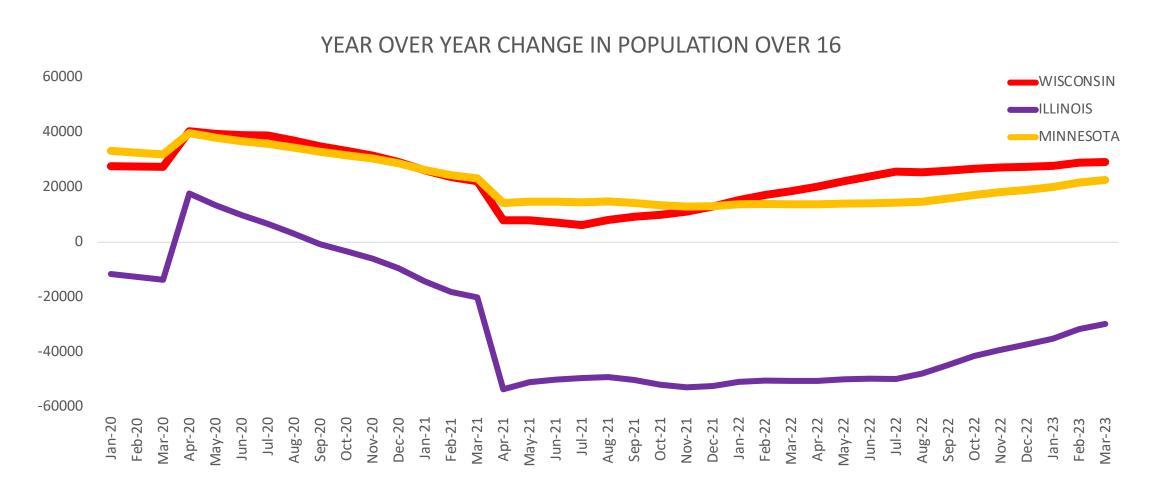


Wisconsin Gained Population Over 16, 2021 to 2022

Change in Population Over 16, 2022 Over 2021, in Thousands



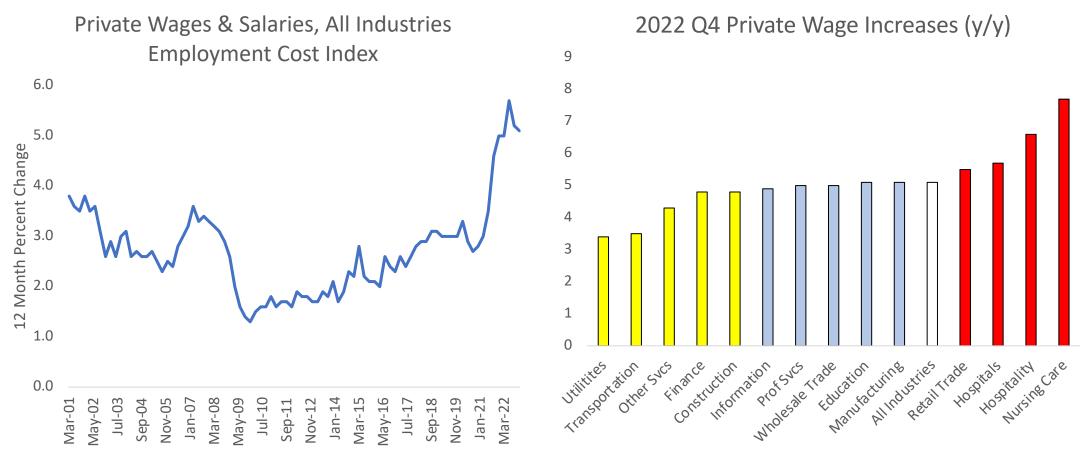
Wisconsin's Population Over 16 Increasing



Labor Shortage Brings Increasing Wages

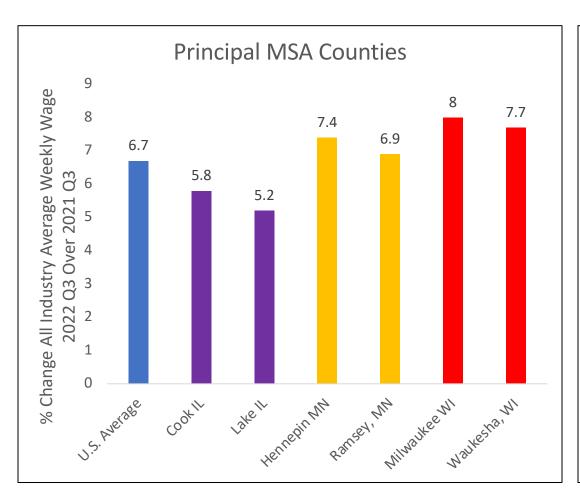
Wage Increases Highest in 21 Years

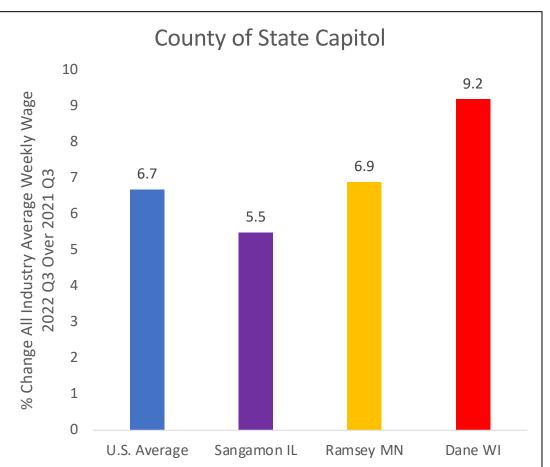
Wage Pressure Greatest in Industries With Largest Labor Shortages



Source: U.S. Bureau of Labor Statistics, Employment Cost Index, Data Retrieved, February 16, 2023

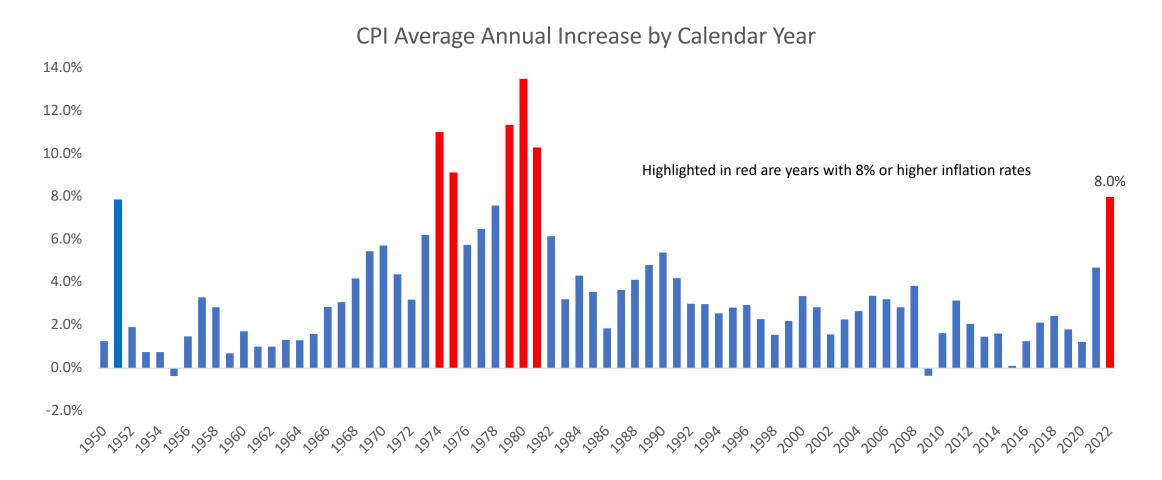
Wisconsin Wage Gains Outpace IL & MN





Inflation

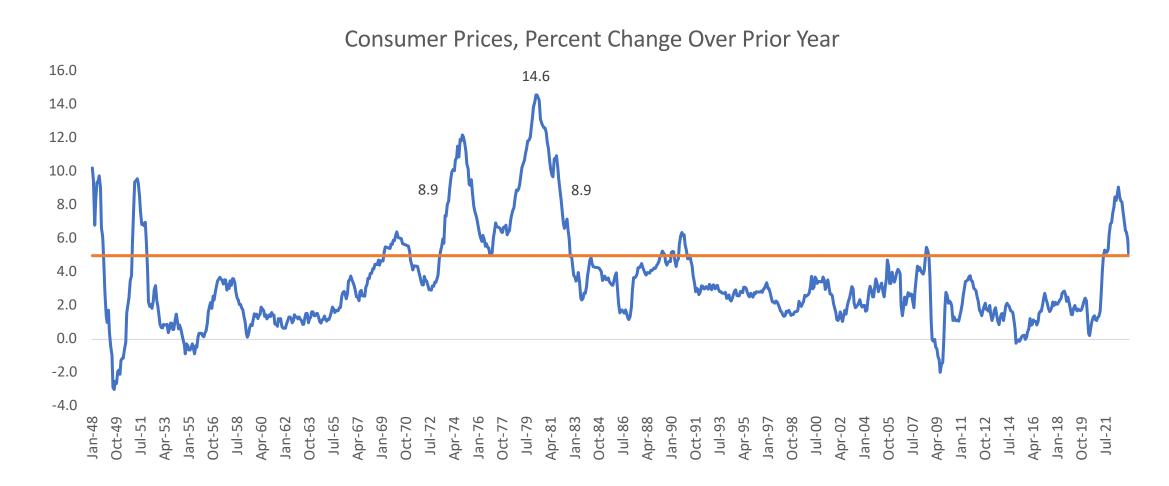
For the Calendar Year, 2022 Inflation was the Highest in over 40 years



Consumer Prices up 5.0% in March Over Prior Year

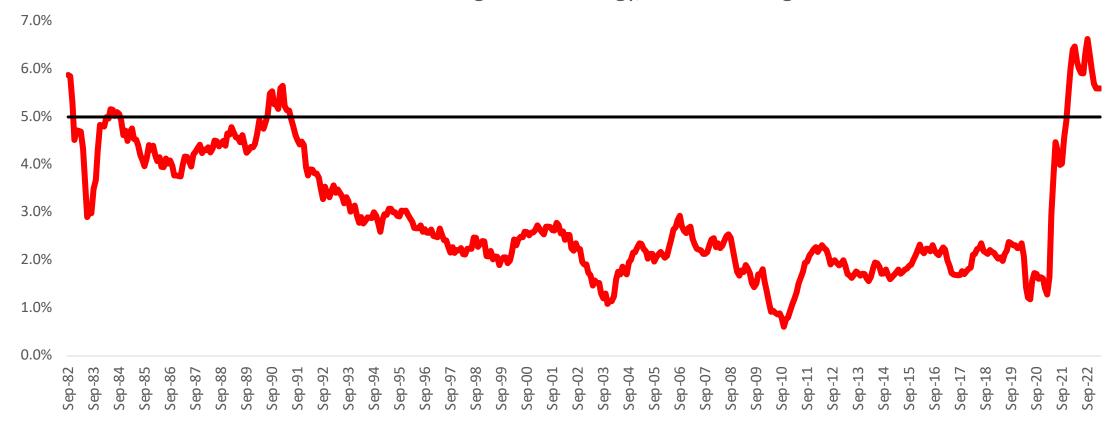
Inflation has rarely been over 5% (red line)

Over 5% for 22 consecutive months



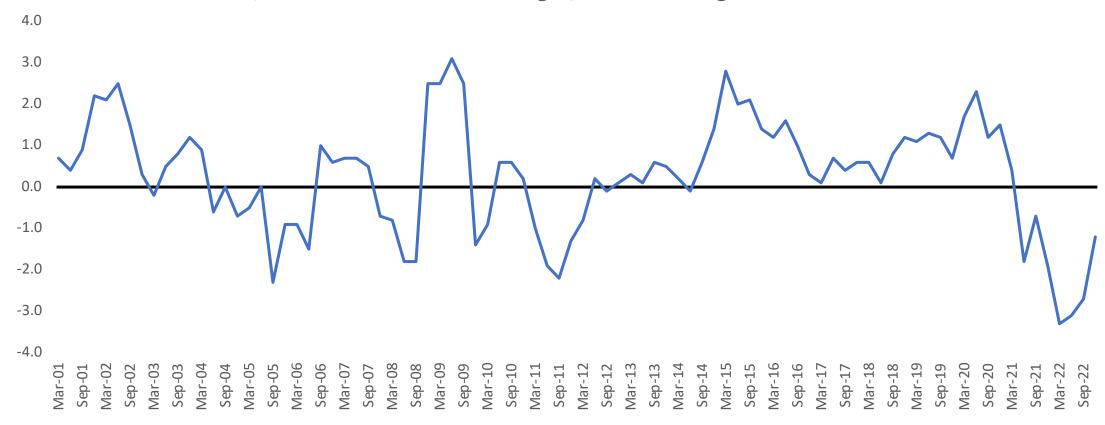
Core Inflation Rate Remains High March 2023 at 5.6%

Consumer Price Index Excluding Food & Energy, Percent Change Over Prior Year



Real Wages Decline for Seven Consecutive Quarters

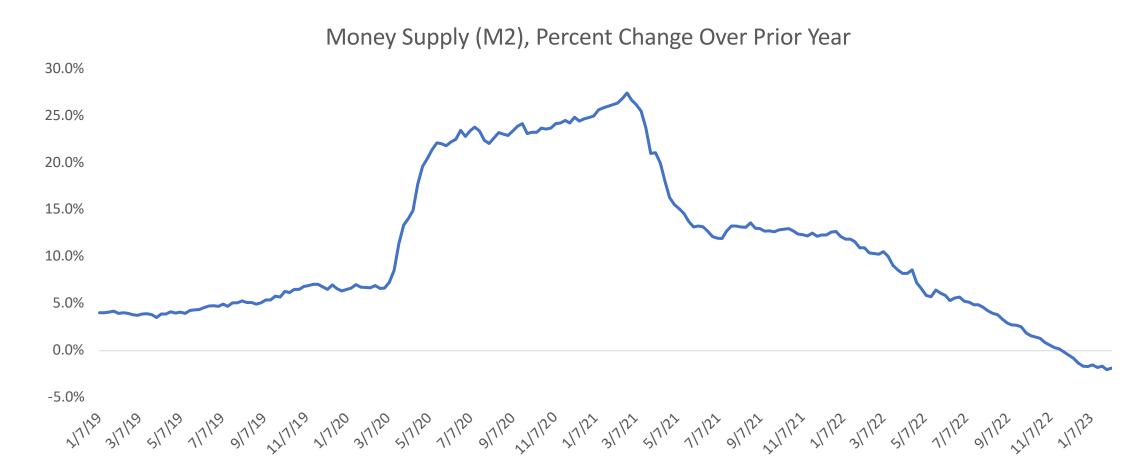




Standing on the Brake

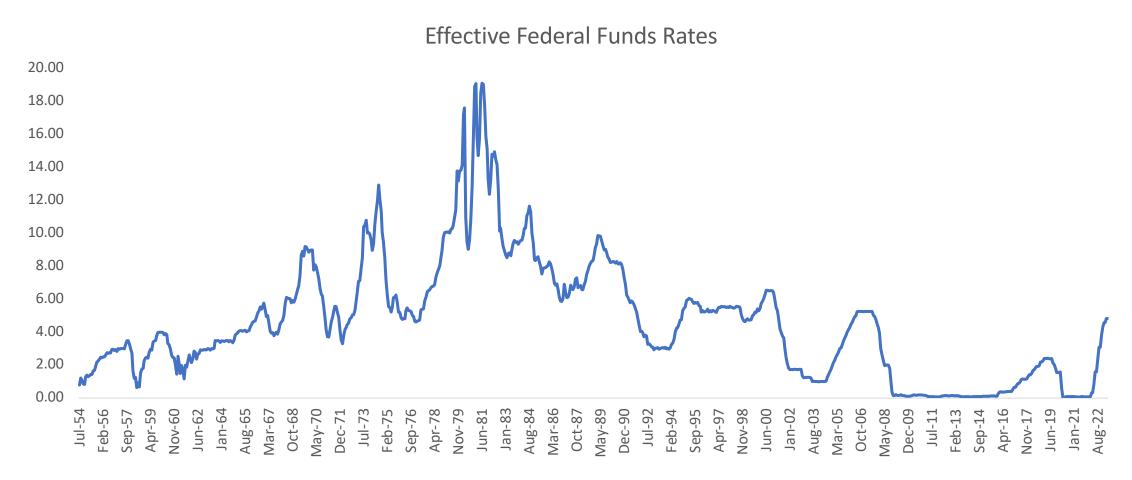
Monetary Policy Becomes Restrictive

Monetary Policy Moves to Contractionary Approach

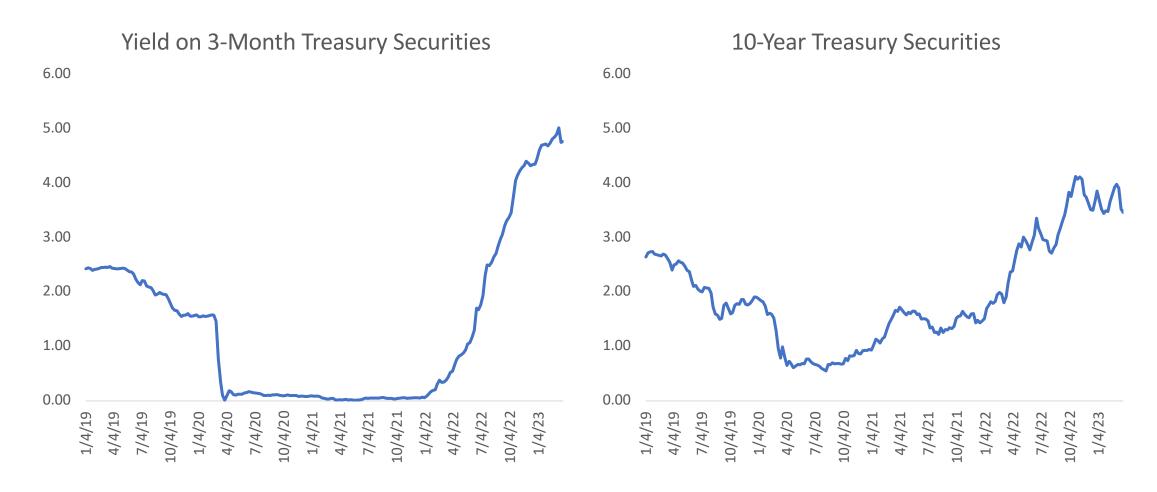


Monetary Policy

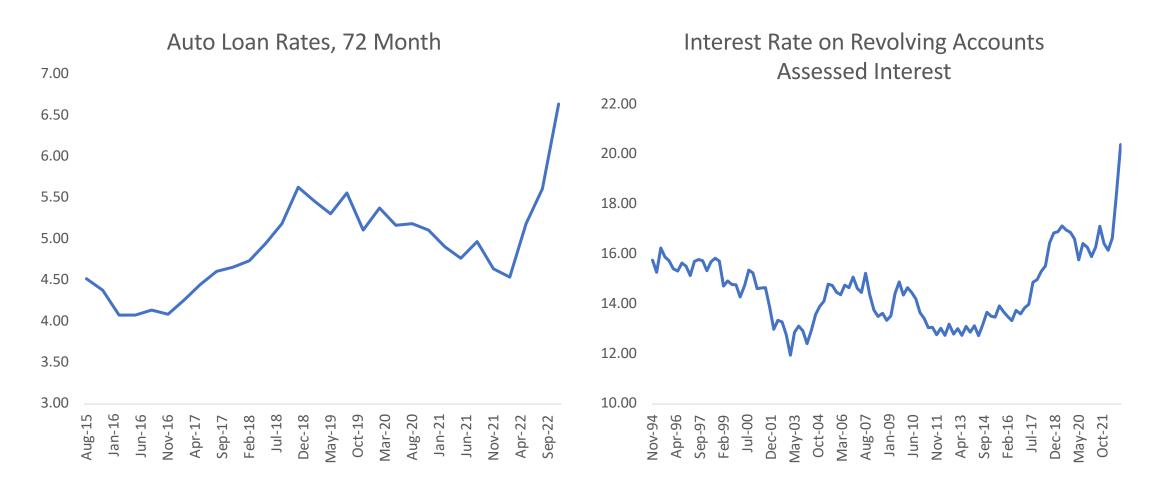
Federal Reserve Increased Interest Rates 475 Basis Points Since February 2022



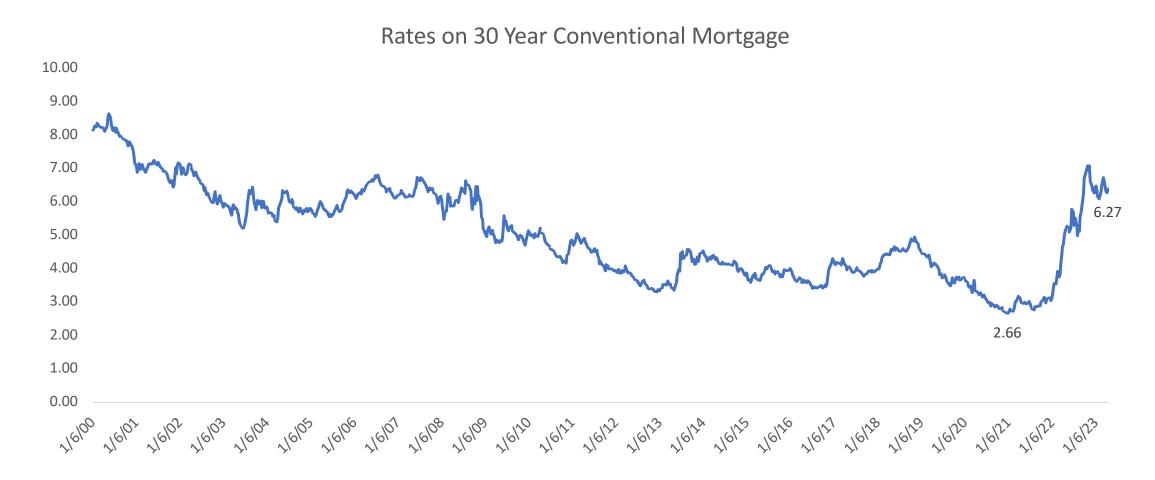
Short-Term Rates Have Risen Faster than Long-Term Rates



Rise in Interest Rates Affects Consumer Lending



Mortgage Interest Rates Reach Levels Not Seen in 15 Years

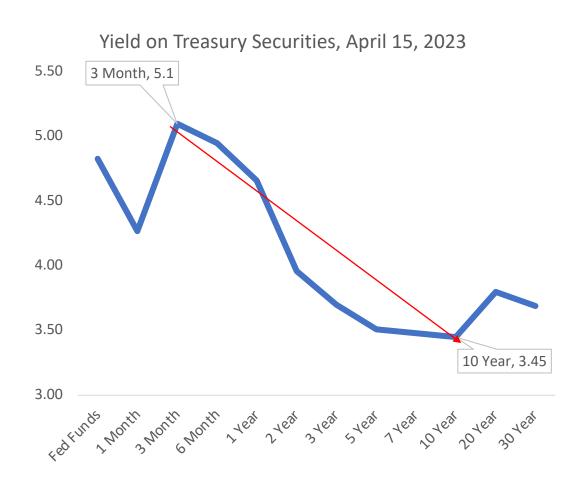


Yield Spread Yield Curve Inversion Signal: Reliable with Good Lead Time

- Every leading indicator composite index includes some form of yield curve measure
- If short-term rates exceed long-term rates,
 Federal Reserve policy is contractionary
- Yield curve inversions are a reliable leading indicator

		Date of Yield	
Recession	Start Date	Curve Inverted	Lead Time
2007-09	Dec 2007	Jan 2006	18 Months
2001	Mar 2001	Mar 2000	12 Months
1990-91	Jul 1990	Jan 1989	18 Months
1981-82	Jul 1981	Sep 1980	10 Months
1980	Jan 1980	Aug 1978	17 Months
1973-75	Nov 1973	Mar 1973	8 Months
Six Recession Average:			14 months
Number of False Positives, 1970 to 2019:			0

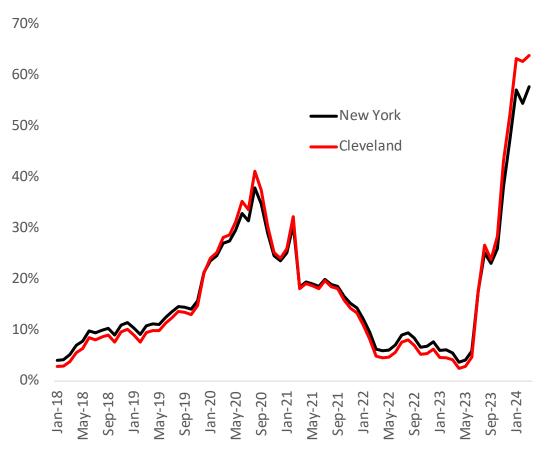
Yield Curve Signal Sharply Negative



- The FRB-New York FRB and FRB-Cleveland track the difference in basis point between the 3-Month U.S. Treasury Bill and the 10-Year Treasury Bond as a sign of a prospective recession.
- That spread is strongly negative:
 -165 basis points

Yield Spread Points to Increasing Recession Risk

Chance Of Recession Within 12 Months FRB New York & FRB Cleveland

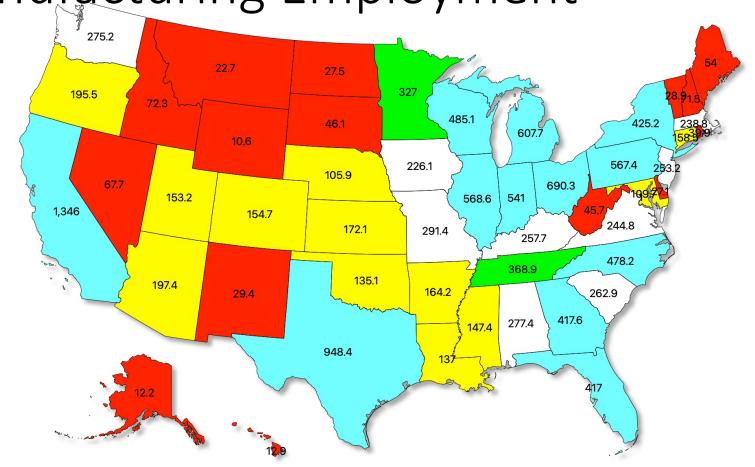


- Federal Reserve policy moving to contractionary stance
- Two more interest rate moves scheduled for 2023 totaling an additional 50 basis points
- Recession risk a 60/40
 proposition with risk rising over the course of the year

Federal Reserve Bank of New York, The Yield Curve as a Leading Indicator, https://www.newyorkfed.org/research/capital_markets/ycfaq.html

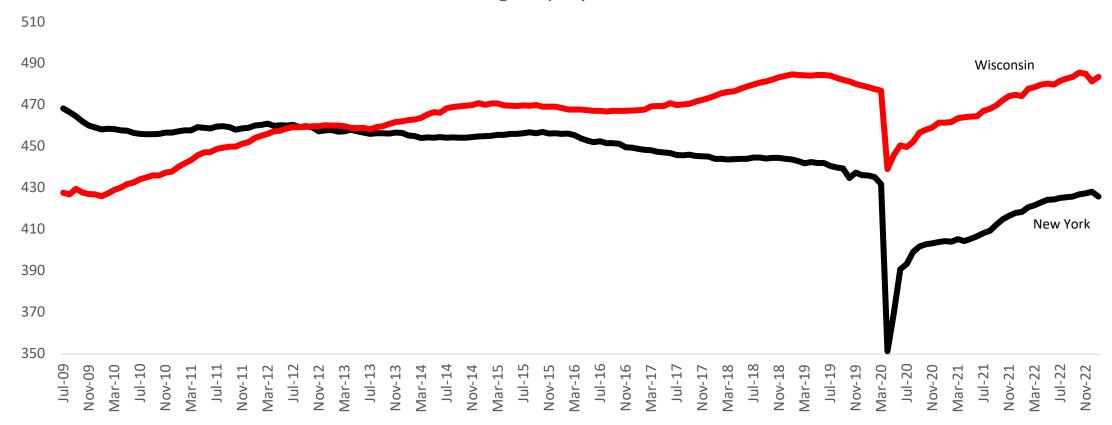
Manufacturing

Wisconsin Ranks 7th Among the States for Manufacturing Employment

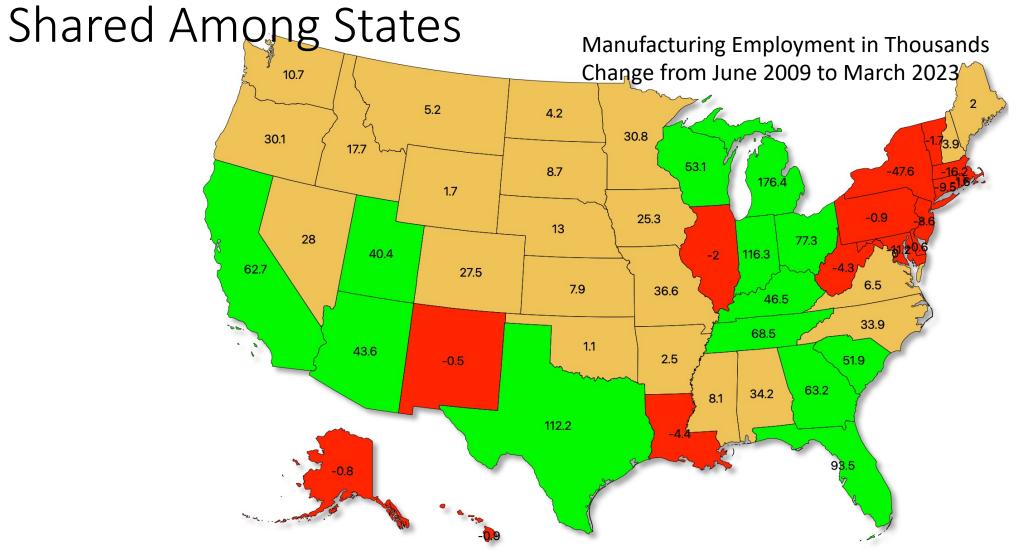


Wisconsin Manufacturing Employment Rising from a Great Recession Lows

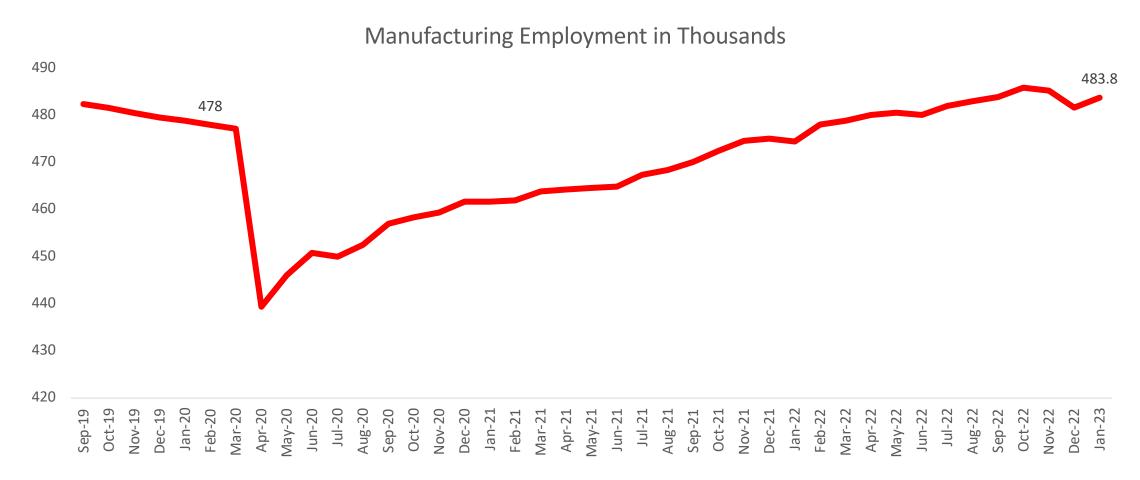
Manufacturing Employment in Thousands



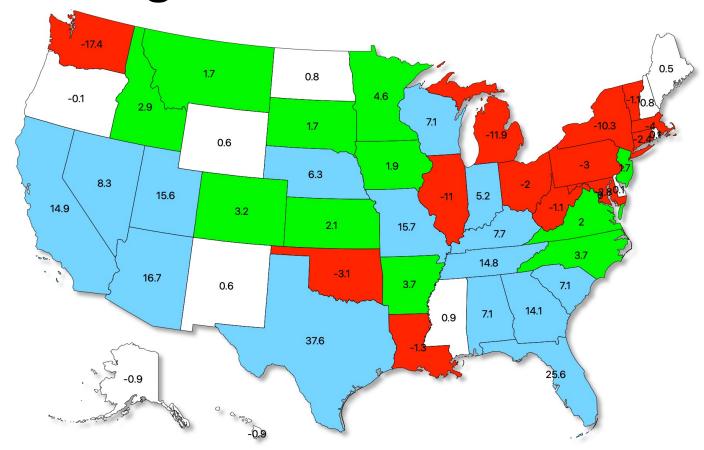
Manufacturing Employment Gains Not Equally



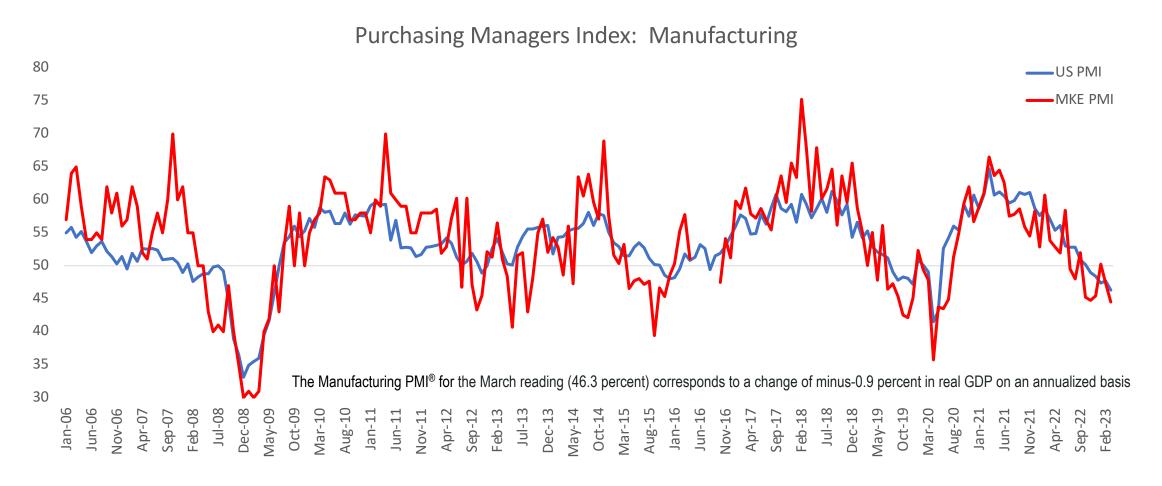
Wisconsin Manufacturing Fully Recovered From COVID Contraction



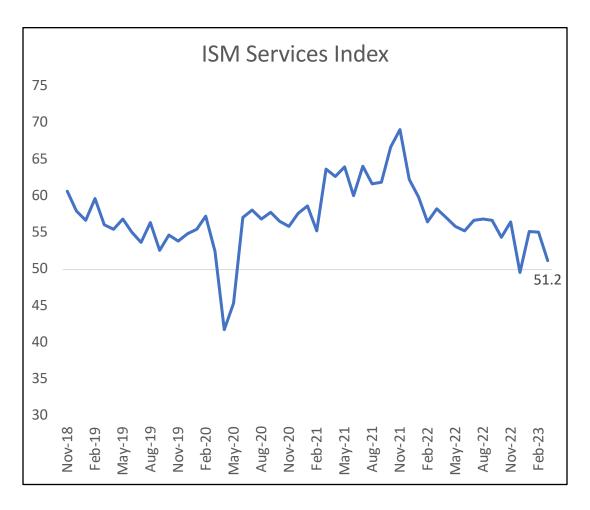
Wisconsin Among the States Gaining Manufacturing Jobs After COVID Contraction



Manufacturing Moves Slightly Negative



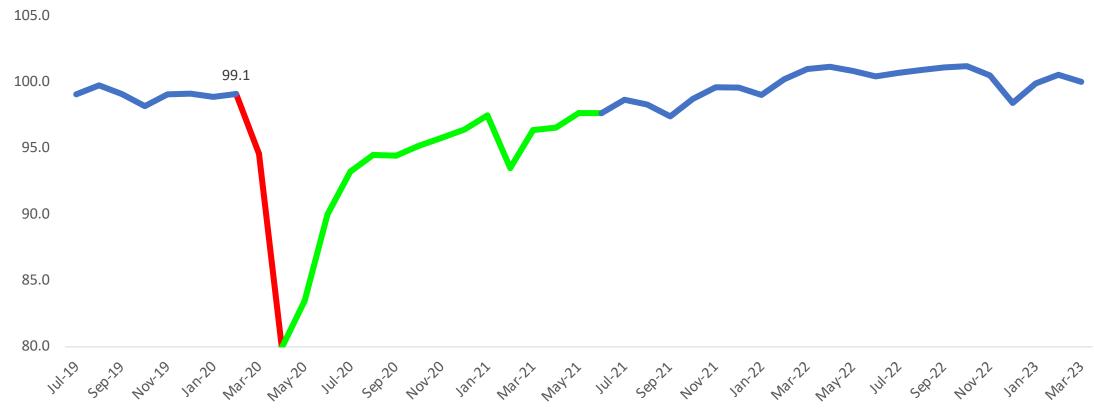
ISM Service Index Back to Expansion



- ISM Services index for December contracted for the first time since May 2020
- The 51.2% index corresponds to a 0.5% percent increase in real GDP.
- 12 industries reported growth

Manufacturing Production Above Pre-Pandemic Levels Down 1.0%, Year/Year Up 1.6% Since Year End

Total Manufacturing, Industrial Production Index, 2017 Average = 100

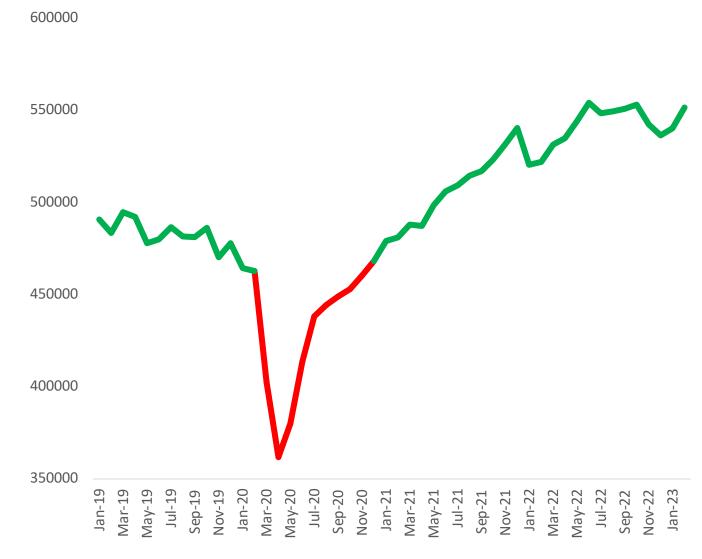


Source: Federal Reserve Board of Governor's, Industrial Production Index, https://www.federalreserve.gov/releases/g17/Current/default.htm

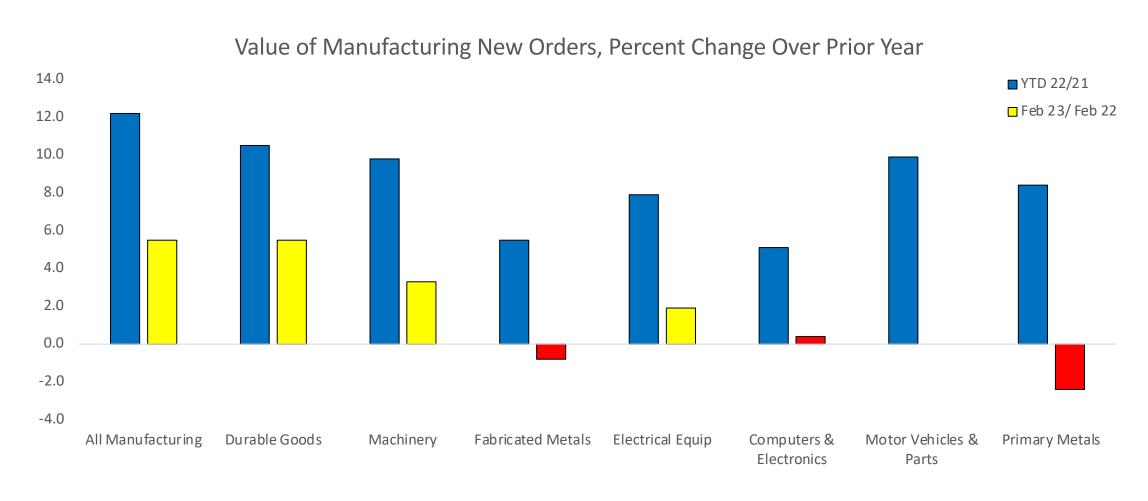
Manufacturing Orders Up 5% Y/Y

But Moving Sideways Since June

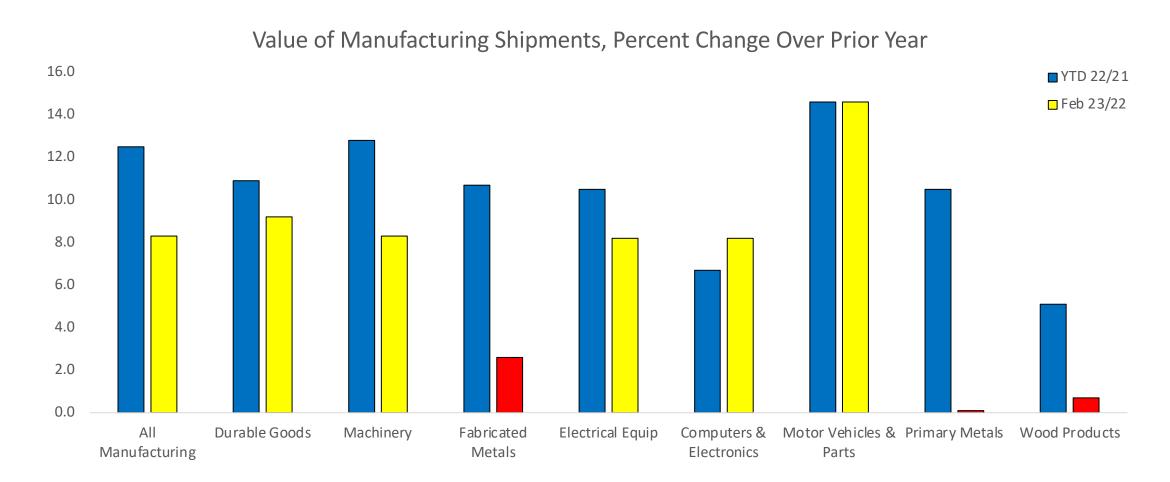
New Orders, Total Manufacturing, \$M, Seasonally Adjusted at Annual Rates



New Orders: Durable Goods New Orders Solid Overall But Some Industries Weakening



Shipments: Durable Goods Shipments Solid Overall But Some Industries Slipping



Order Backlogs Mixed Still Increasing in Some Industries

Unfilled Orders by Industry, February 2023, Percent Change Over Prior Year 8 -2 All Manufacturing Primary Metals Fabricated Metals Machinery Computers & Motor Vehicle & Ex. Electrical

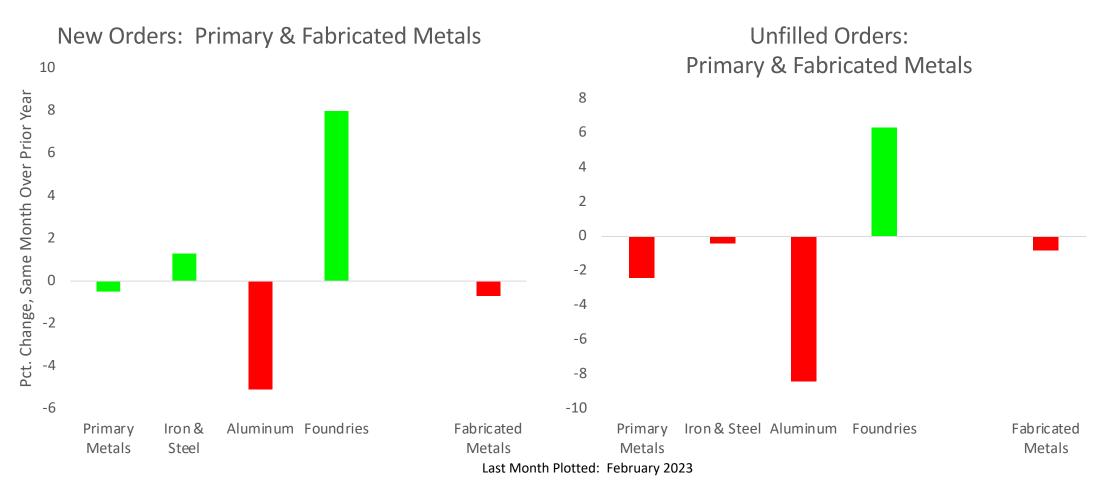
Transport ation

Electronics

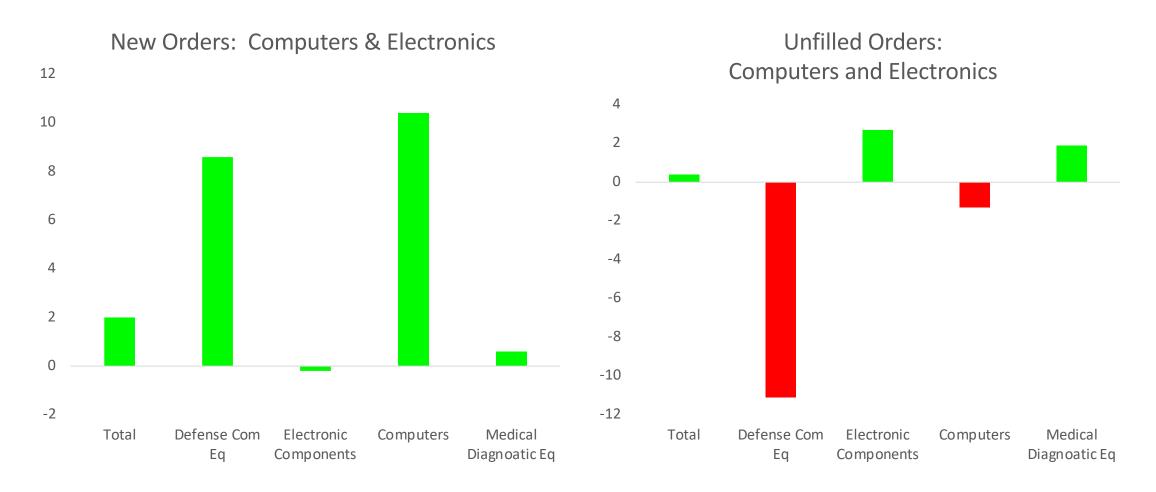
Equipment

Parts

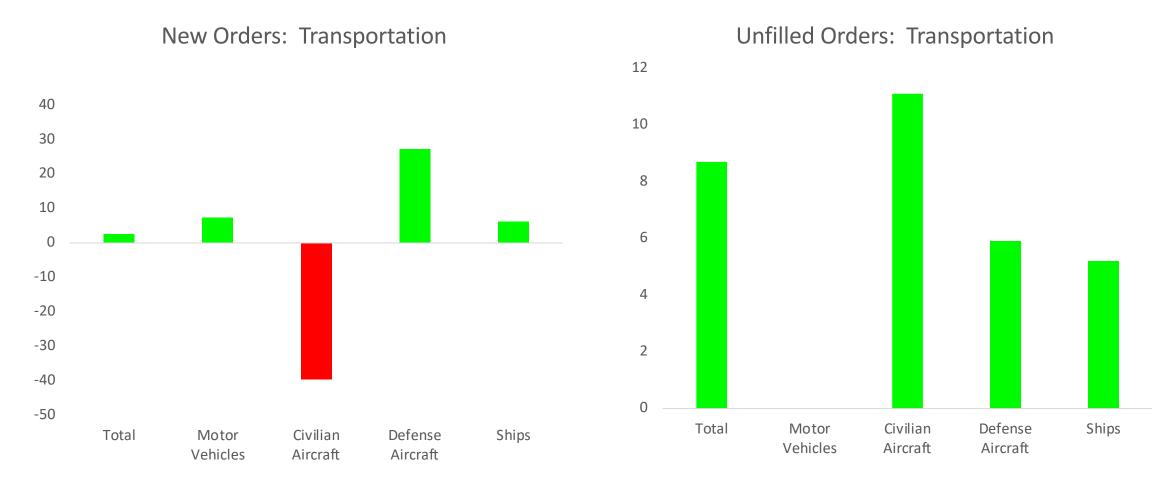
New Orders & Unfilled Orders Different Results Within Primary Metals



New & Unfilled Orders Different Results Within Computers & Electronics

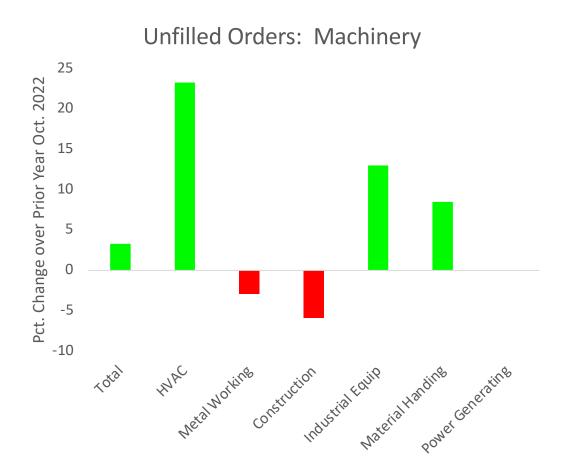


New & Unfilled Orders Different Results Within Transportation

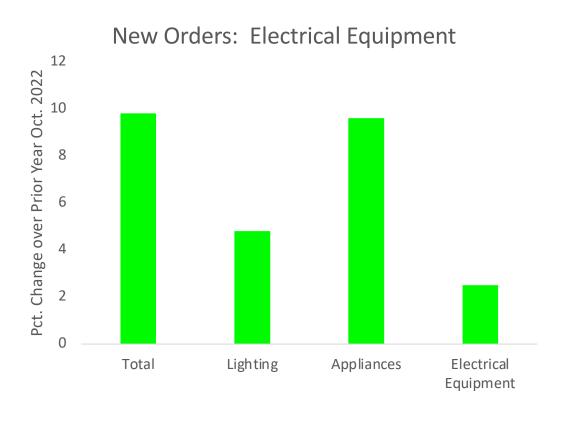


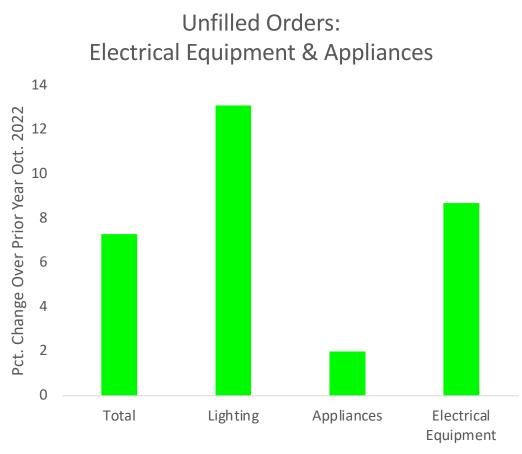
New & Unfilled Orders Different Results Within Machinery



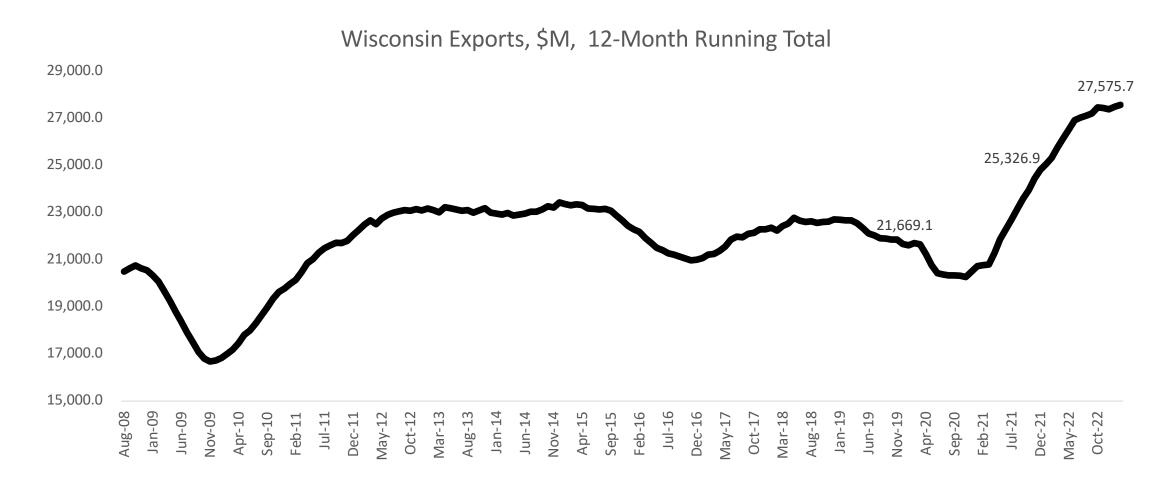


New & Unfilled Orders Different Results Within Electrical Equipment

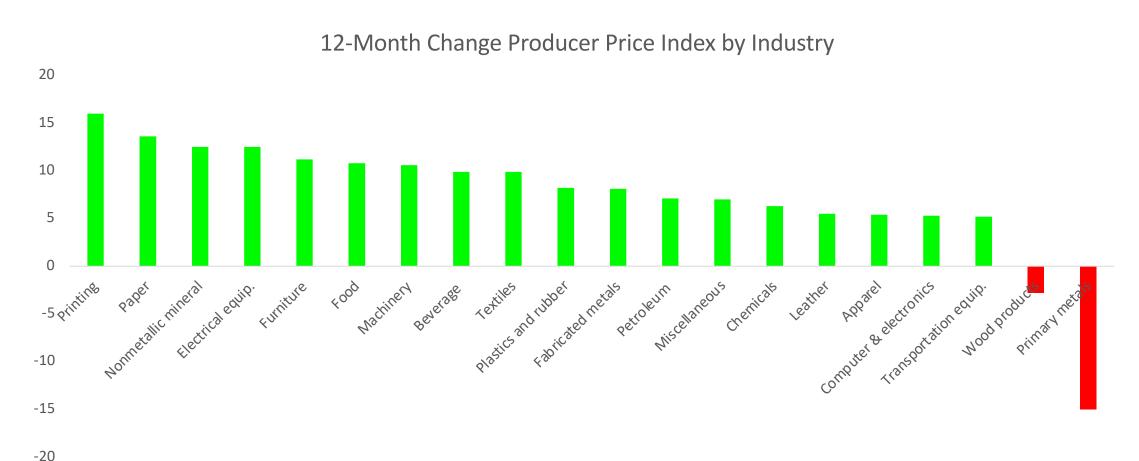




Wisconsin Exports Up 8.9% year-over-year 27% ahead of pre-pandemic levels

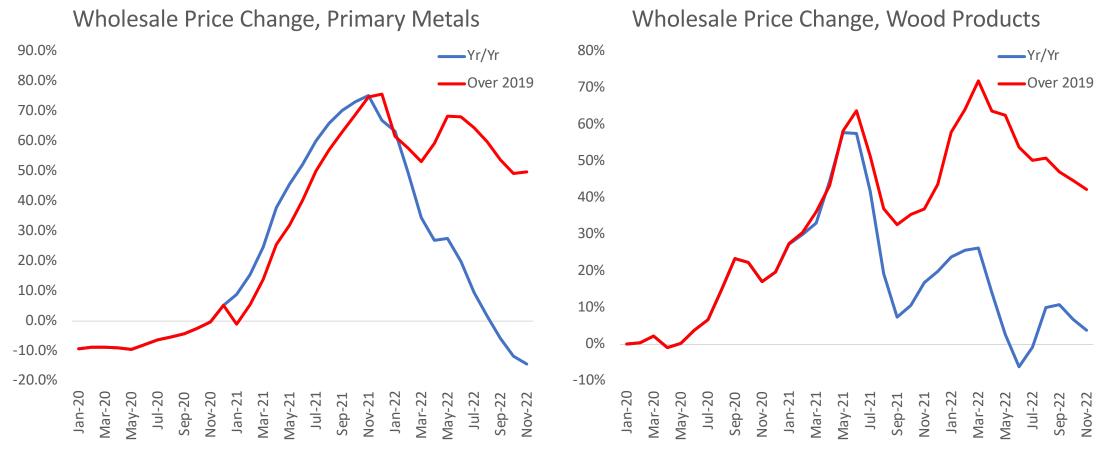


Manufacturing Price Increases Varies Widely by Industry

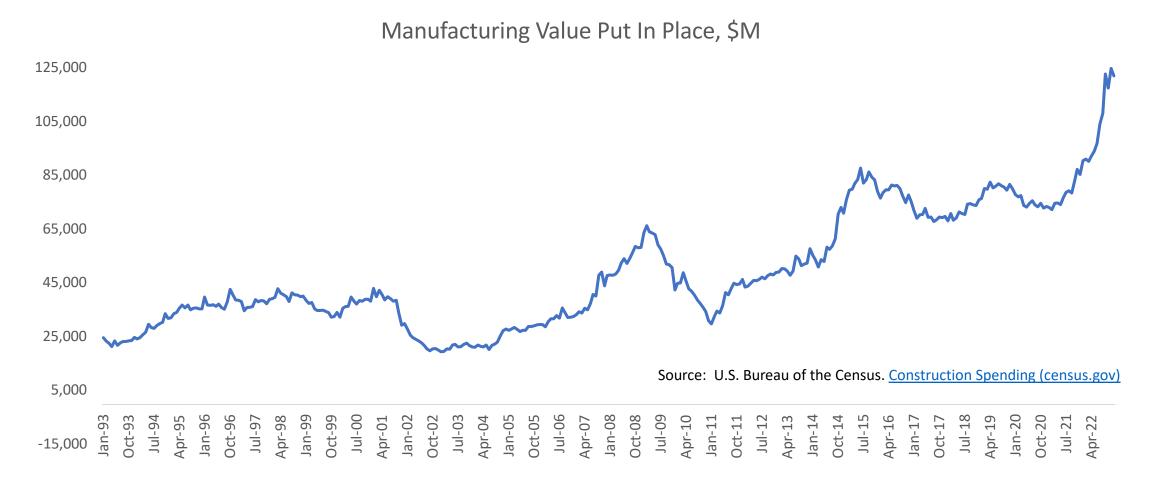


Industry Differences

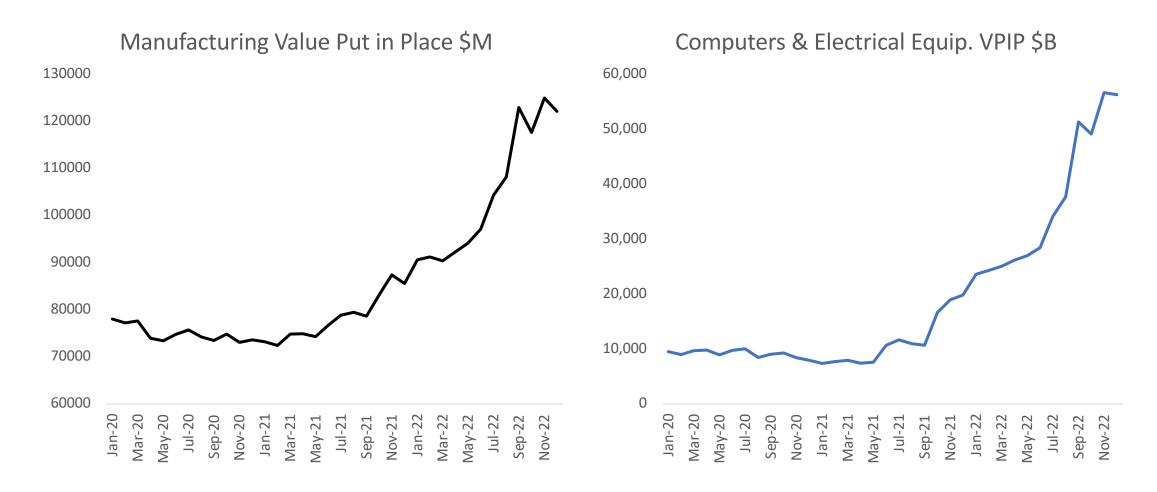
Certain Manufacturing Industries Experiencing Near-Term Price Declines



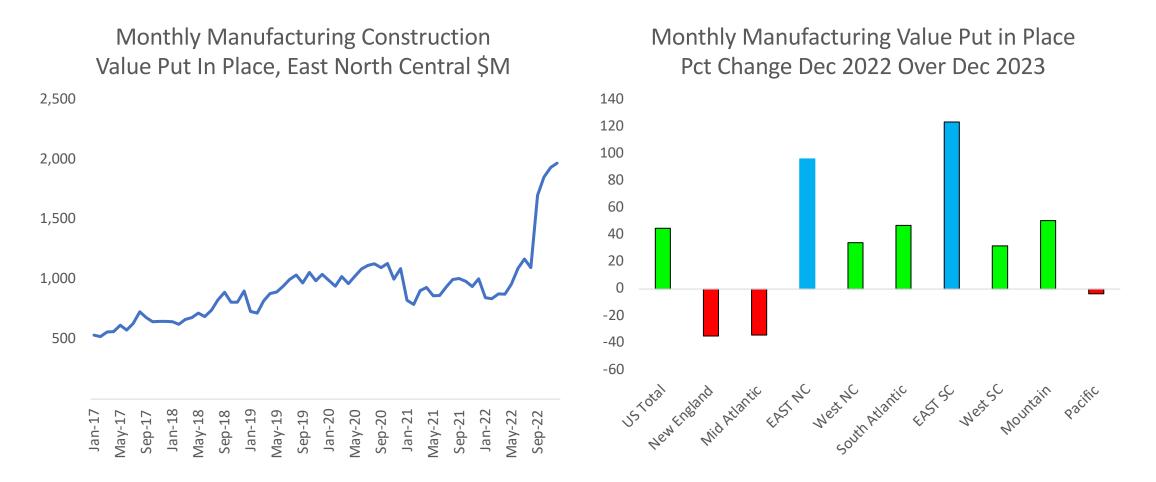
Value of Manufacturing Construction Put In Place Reaches a Record High



Manufacturing Construction Led by Investment in Computer & Electronics

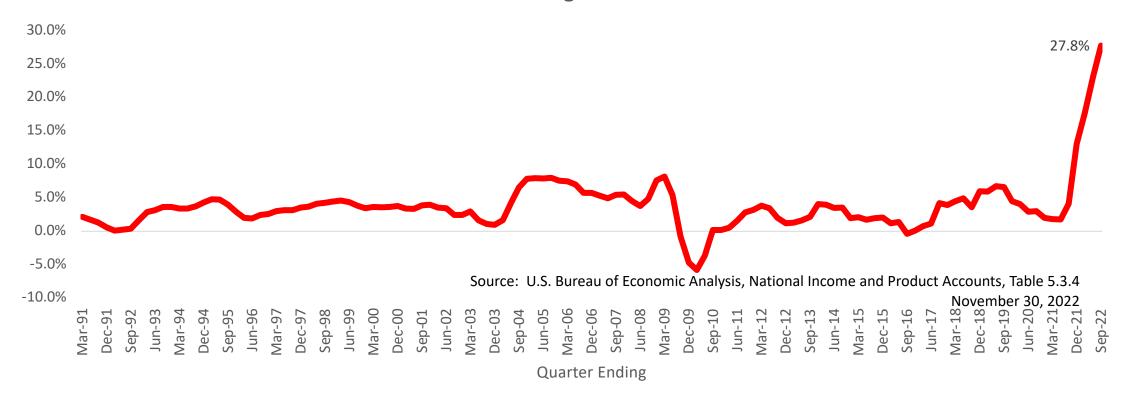


Significant Increase In Manufacturing Value Put In Place in the Great Lakes States

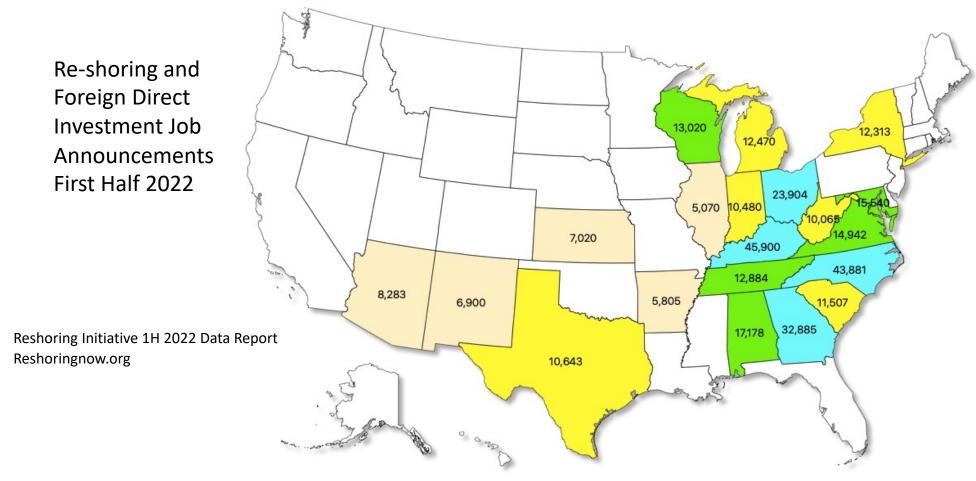


Costs of Constructing Manufacturing Structures Reaches a Record High

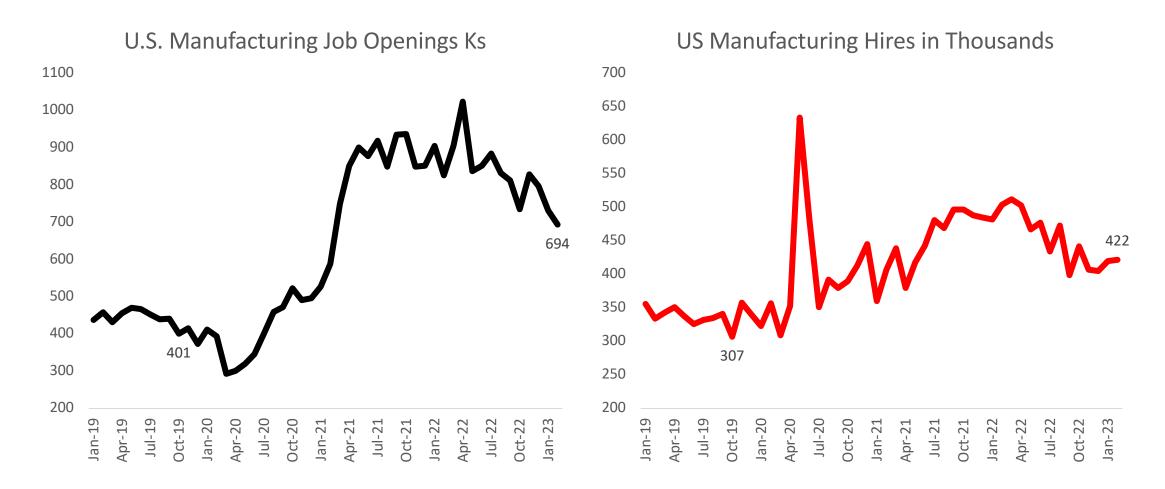
Price Index for Private Fixed Investment, Manufacturing Structures
Percent Change Over Prior Year



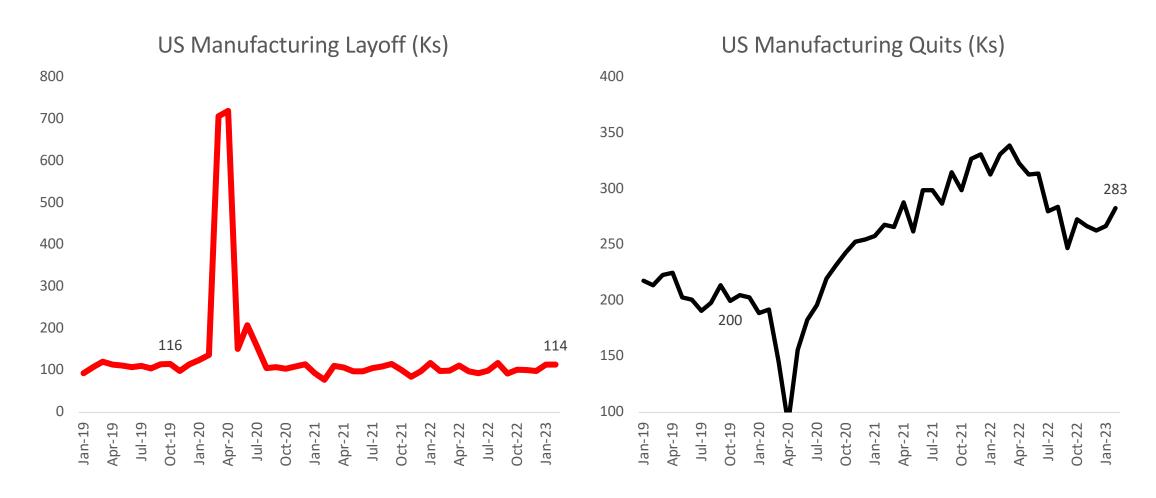
Wisconsin Ranks 8th Among States Increasing Employment From Reshoring and Foreign Direct Investment 1st Half 2022



Manufacturing Job Openings Remain Elevated Not for Lack of Trying

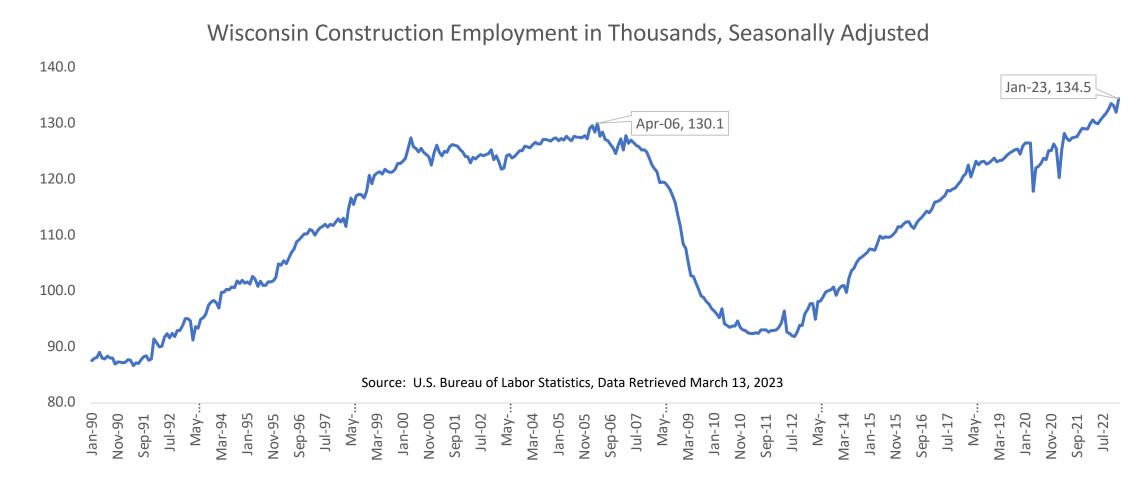


Manufacturing Layoffs Low but Quits Elevated

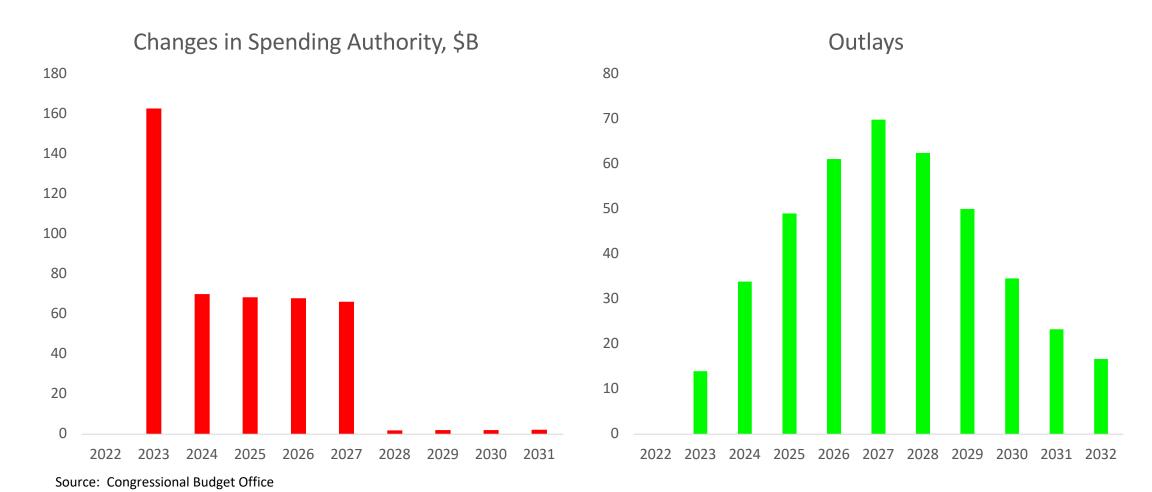


Housing & Construction

Construction Employment in Wisconsin Reaches Record High

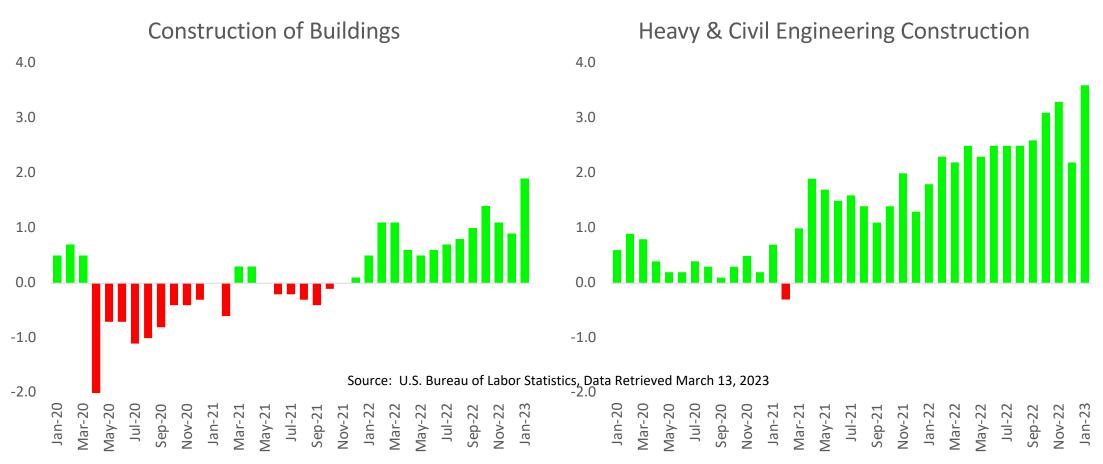


More Federal Fiscal Stimulus in the Pipeline Infrastructure Bill

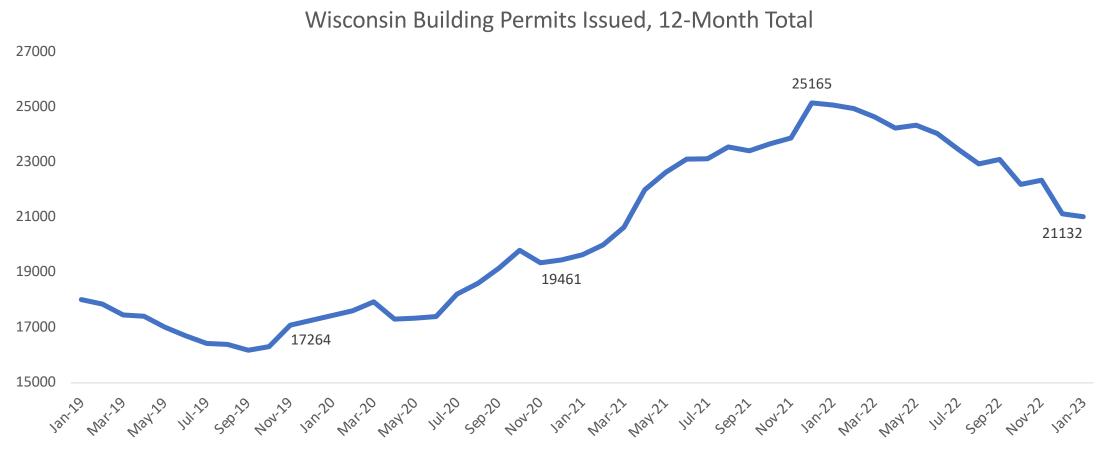


Construction Employment Increasing During the Recovery

Change in Employment (Ks) from Same Month in 2019

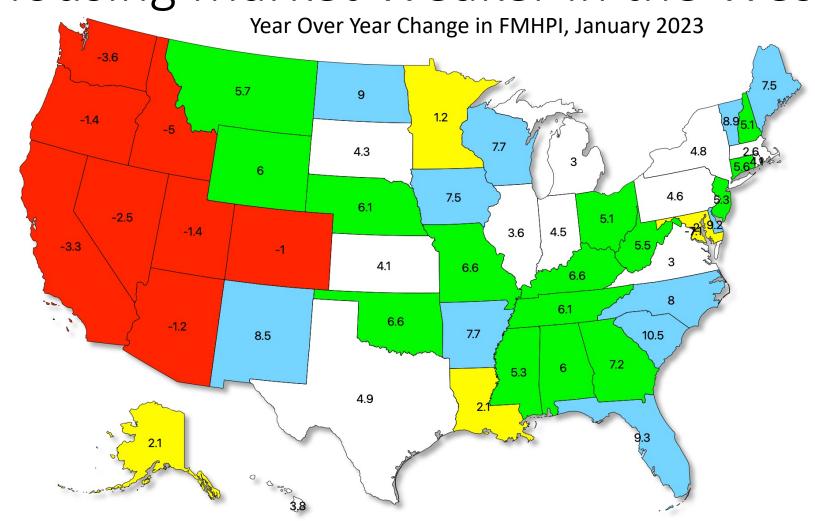


Housing: Wisconsin Housing Construction Retreating from Recent Highs



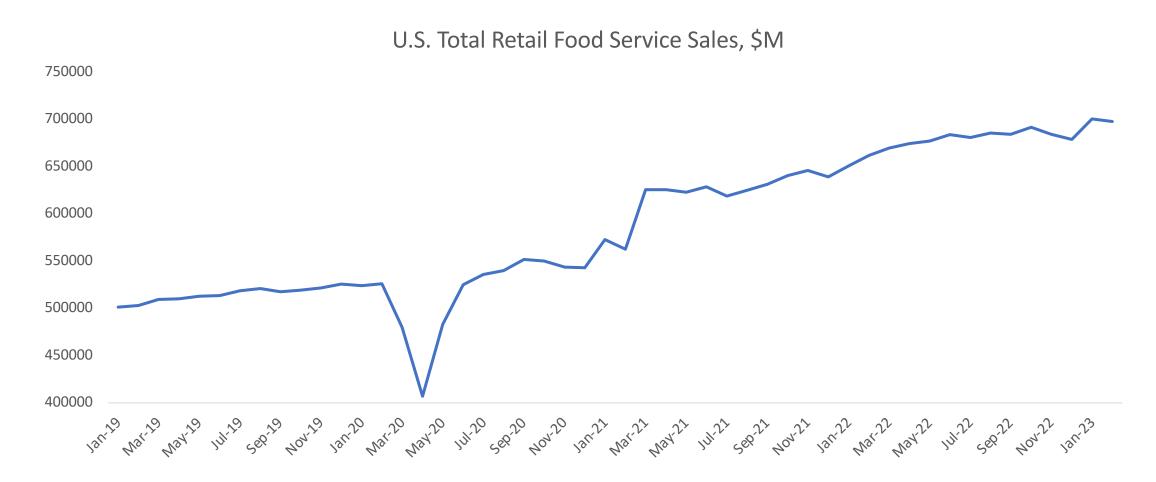
Regional Differences

Housing Market Weaker in the West



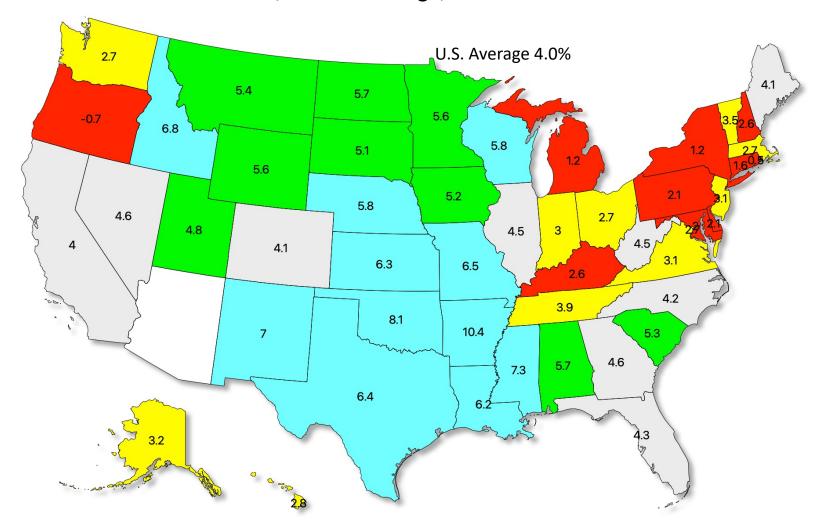
Retail Trade

Total Retail and Food Saves Up 5.5%



Retail Sales Growth, Percent Change, November 2022 Over November 2021

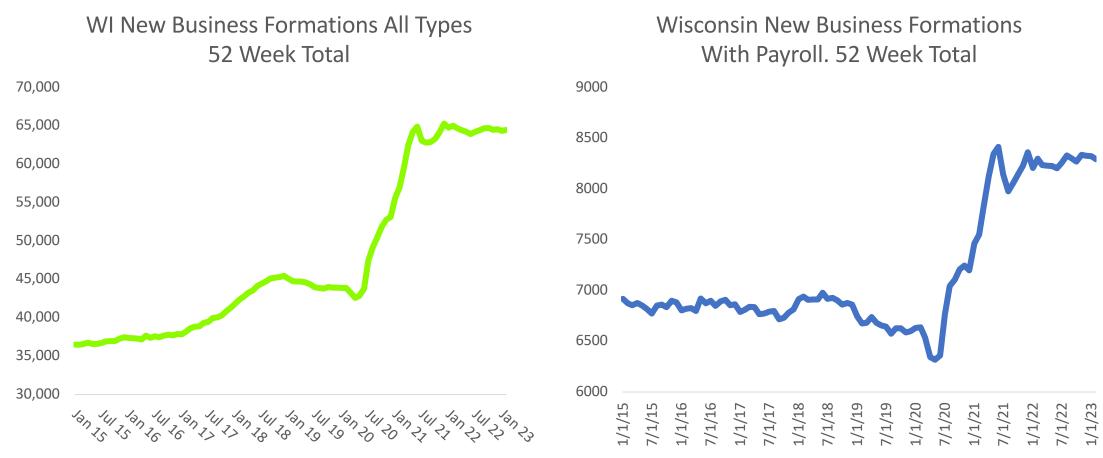
Wisconsin Ranks 10th in Retail Sales Growth



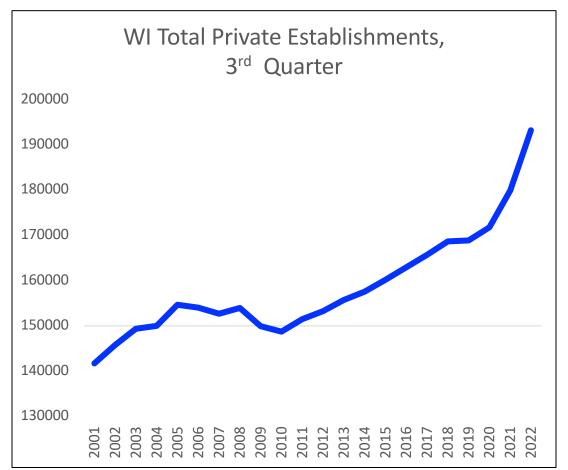
Source: U.S. Bureau of the Census

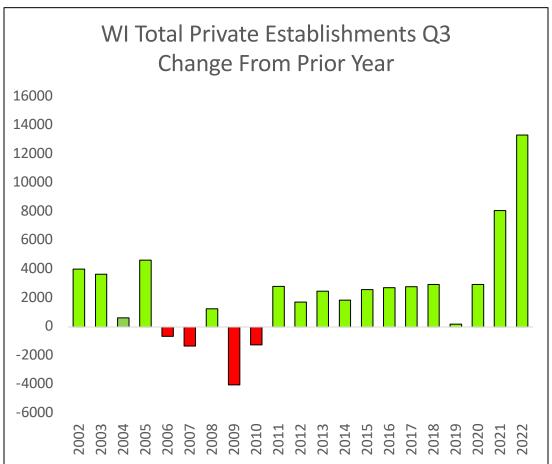
Wisconsin Entrepreneurship

Wisconsin Entrepreneurship Surged Coming Out of Contraction



Wisconsin Total Number of Businesses Rose Sharply in 2021 and 2022





Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

U.S. Outlook

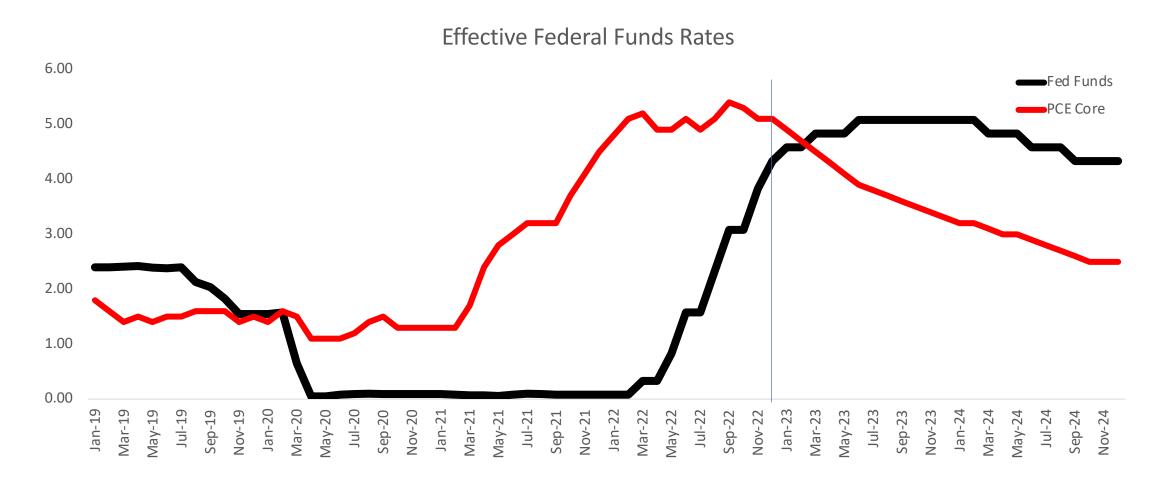
Lower Growth,
Higher Prices,
Higher Interest Rates

Federal Reserve Lowers Growth Outlook

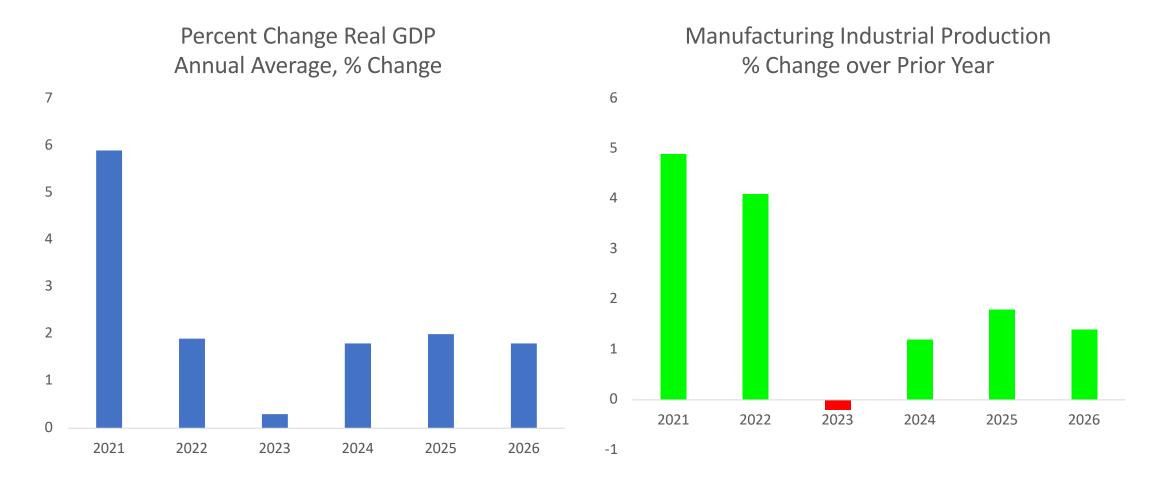
Federal Reserve FOMC Outlook March 2023			
	Median Forecasts Annual		
Economic Indicator	2023	2024	2025
Real GDP. Pct. Change	0.4	1.6	1.8
Unemployment Rate	4.5	4.6	4.6
Inflation Rate	3.3	2.5	2.1
Federal Funds Rate	5.1	4.3	3.1

Source: Federal Reserve Open Market Committee, Summary of Economic Projections, March 22, 2023

Monetary Policy: Federal Reserve Glide Path More Interest Rate Hikes Forthcoming

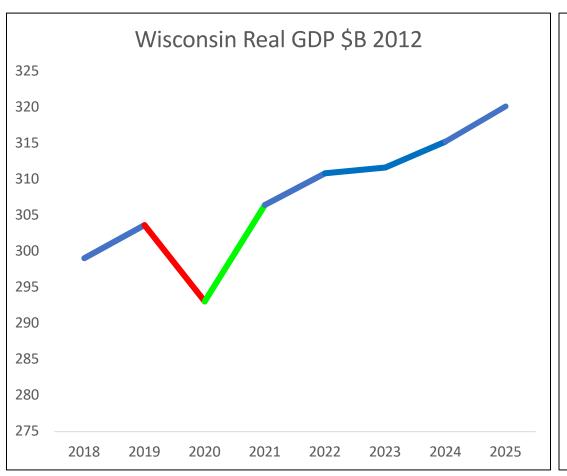


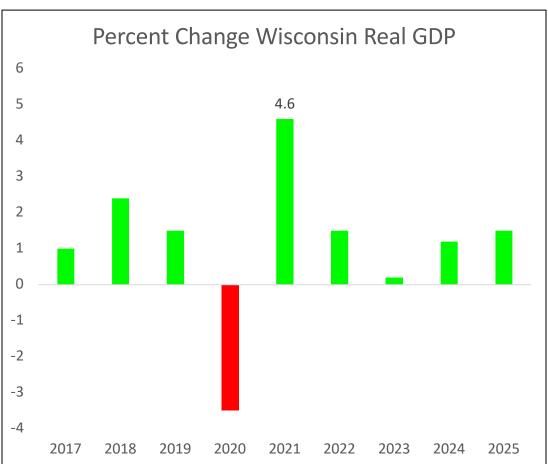
U.S. Economic Outlook Economy Downshifts to Lower Growth



Wisconsin Outlook

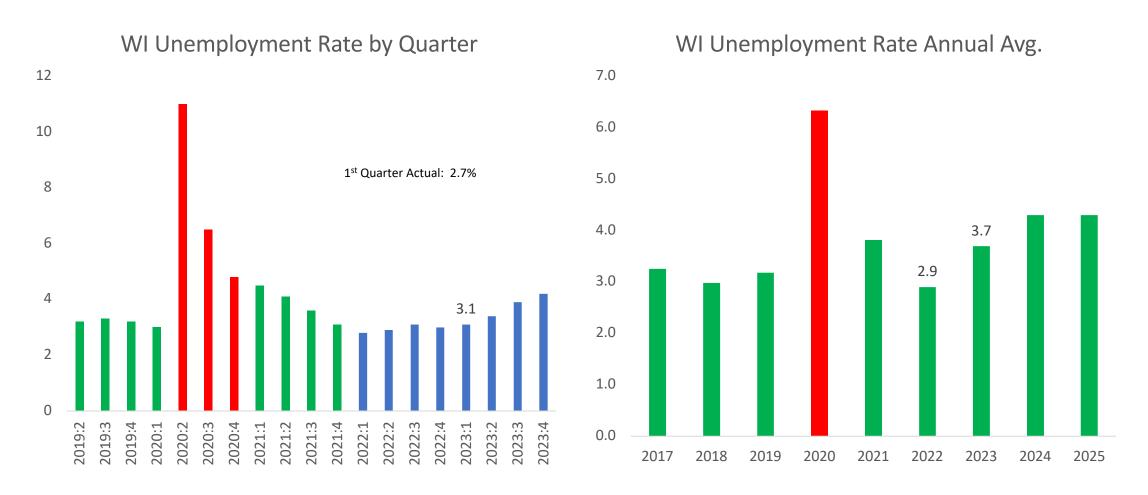
Wisconsin Outlook Growth Moderates in 2023 Resumes in 2024



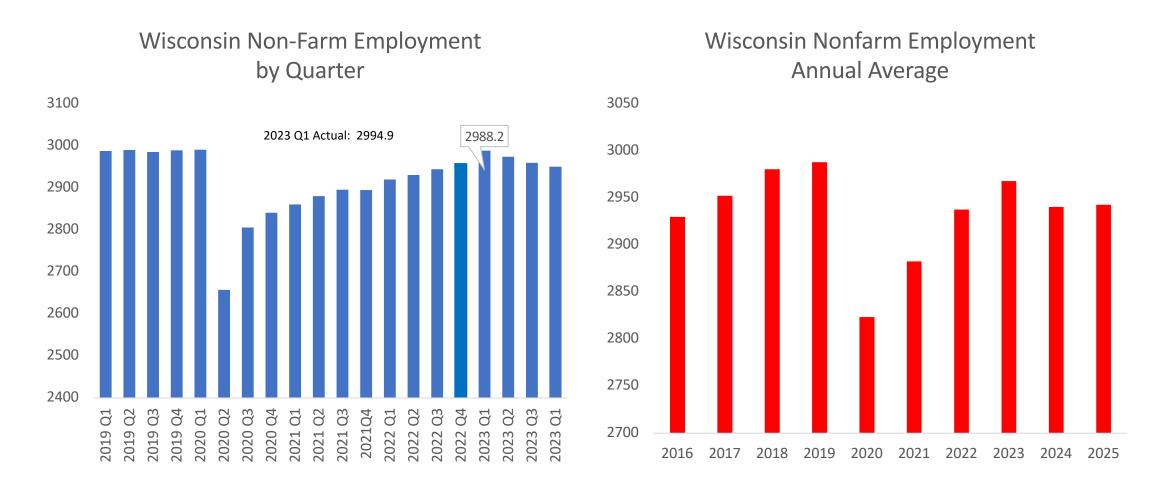


Wisconsin's Economic Outlook: Unemployment Rate

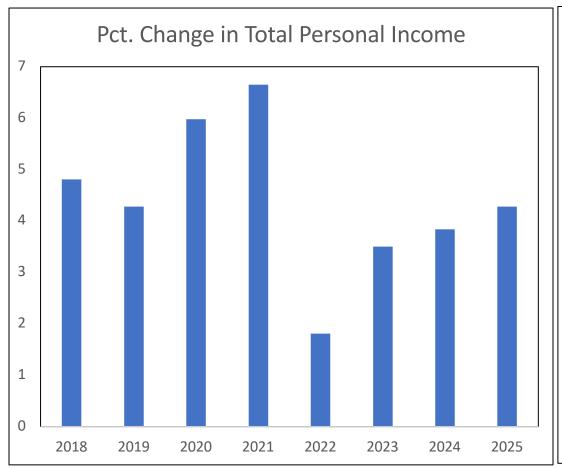
Full Employment Record Low in 2022 Q1 Will Drift Higher With Slower Growth

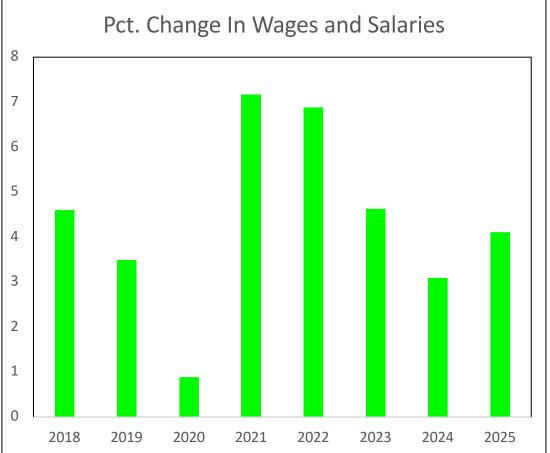


Wisconsin Non-Farm Employment, Establishment Survey Retreats Starting 2023 Q2, Stabilizes Mid-2024



Wisconsin Economic Outlook: Personal Income Supported by Wage Growth & Stimulus in 2021 Strong Wage Growth More Than Offsets Stimulus Phase-Out in 2022





Summarizing 120 Slides to a Post-It Note

Economic Outlook	2023
Real GDP. Pct. Change	0.4
Unemployment Rate	4.5
Inflation Rate	3.3
Federal Funds Rate	5.1

Wisconsin Department of Revenue April 27, 2023 121