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ABOUT US

# Who is Chmura?

**We provide labor market data and analysis** so you can make informed decisions to help your communities and businesses thrive.

**Founded in 1998** by Christine Chmura, PhD.

Offices based in **Richmond, VA, and Cleveland, OH.**

**We are economists, data scientists, statisticians, and business professionals** who care about helping your community and business grow.

**We are driven by client satisfaction and success.**

**Our top priority is excellence** in customer service and data quality.

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ABOUT US

# Markets we serve

**Corporate**

**Economic Development**

**Education**

**Site Selection**

**Staffing**

**Workforce**

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# Agenda

**1. Inflation continues to drive Fed behavior**

**2. Labor market is tight but easing**

**3. We still expect a recession**

- Impact varies by industry
- Impact varies by

**4. What is driving manufacturing activity?**

- The CHIPS and Science Act

**5. State growth dependent on industry mix**

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## Inflation Continues to Drive Fed Behavior



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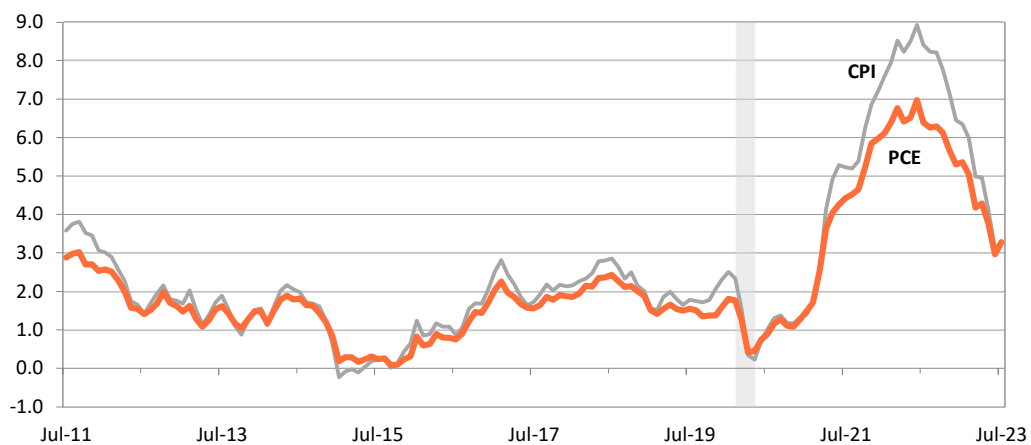
## Inflation Continues to Drive Fed Behavior

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### Two General Measures Show Inflation Dropping From 40-Yr High: Personal Consumption Expenditure Price (PCE) Index and Consumer Price Index (CPI)

Percent Change, Year-Over-Year



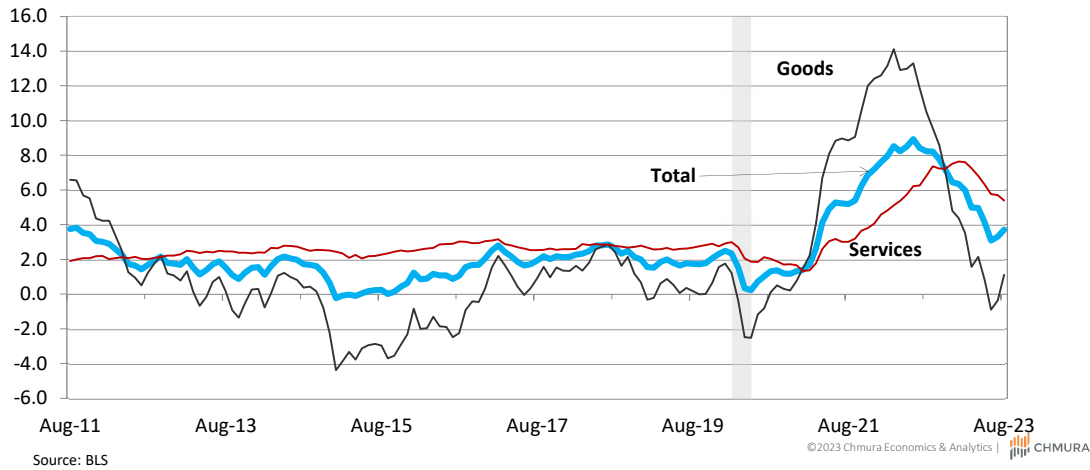
Sources: BEA and BLS.  
Data through July 2023.

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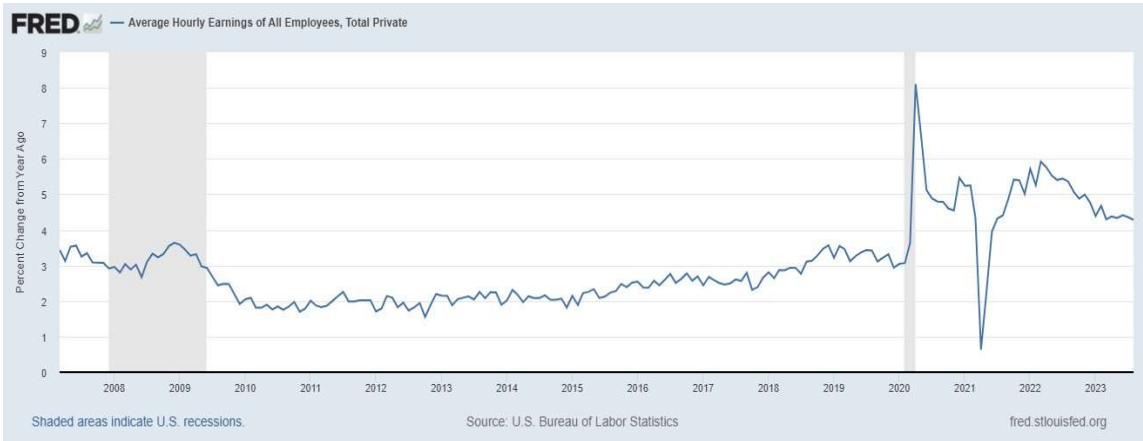
## Lockdown Shifted Demand to Goods and Away From Services

Consumer Price Index  
Percent Change, Year-Over-Year



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## Average Hourly Earnings, +4.3% in August 2023 From Year Ago



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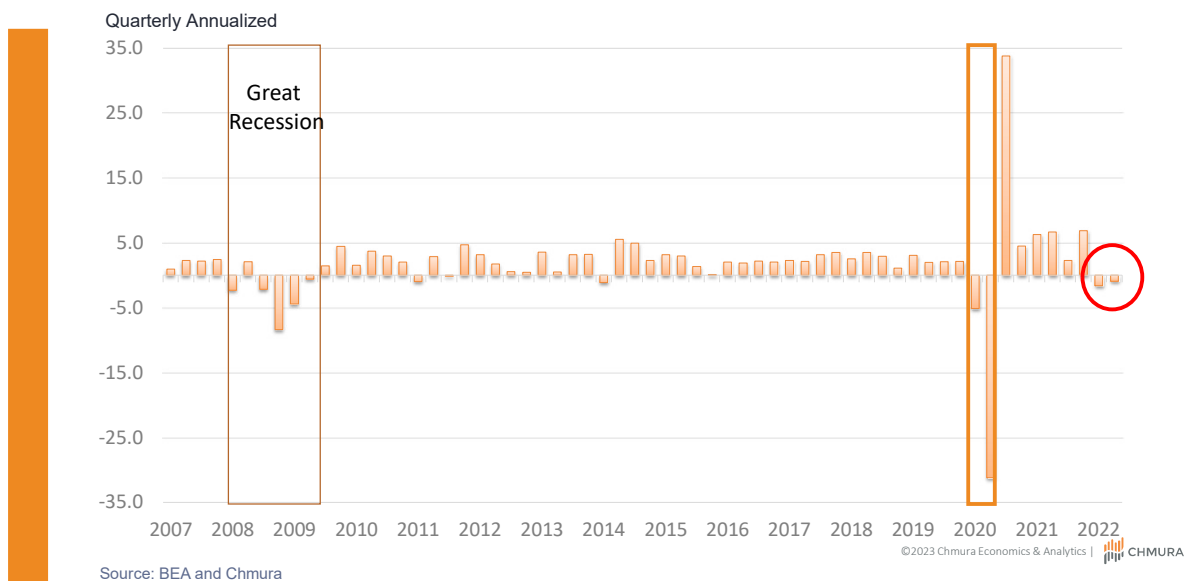
## Inflation Is Not Good For Long-Term Economic Growth

- It can spiral upward with wages rising and inflation expectations 'unanchored'
- It is a regressive tax
- It distorts decision making
  - Inventory accumulation
  - Can lead to deeper recessions
- It can lead to recession if Fed continues to raise rates

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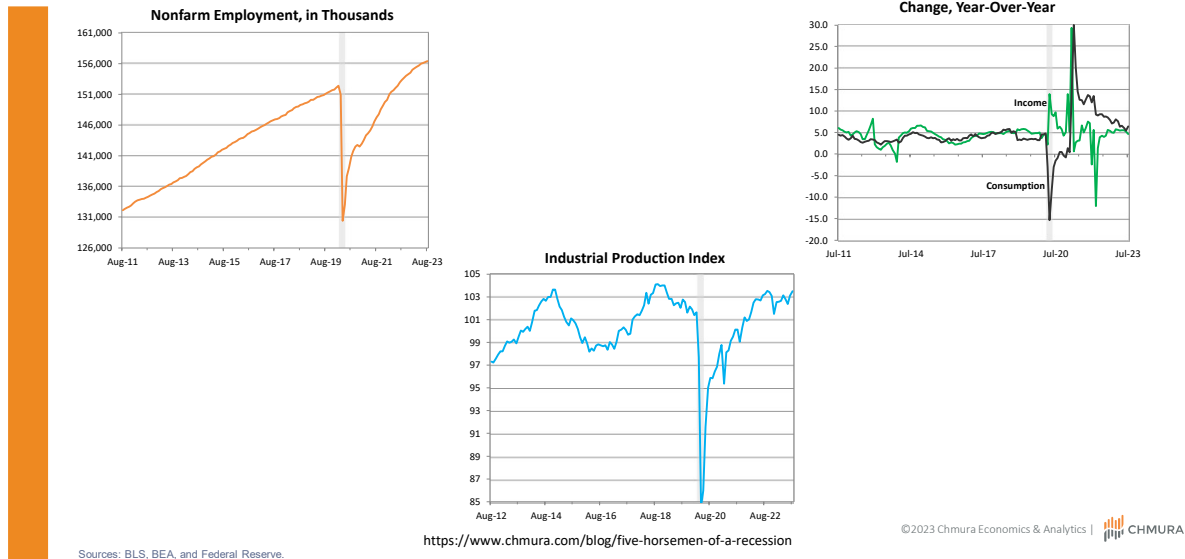
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## Doesn't Two Consecutive Declines in Real GDP Qualify As Recession?



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## No, Not 2 Straight Declines in GDP NBER is the Arbiter of Recession in U.S.



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## Inflation-Adjusted Retail Sales Have Been Relatively Flat Since March 2021



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## Retail Sales were Slightly Down From a Year Ago When Adjusted for Inflation



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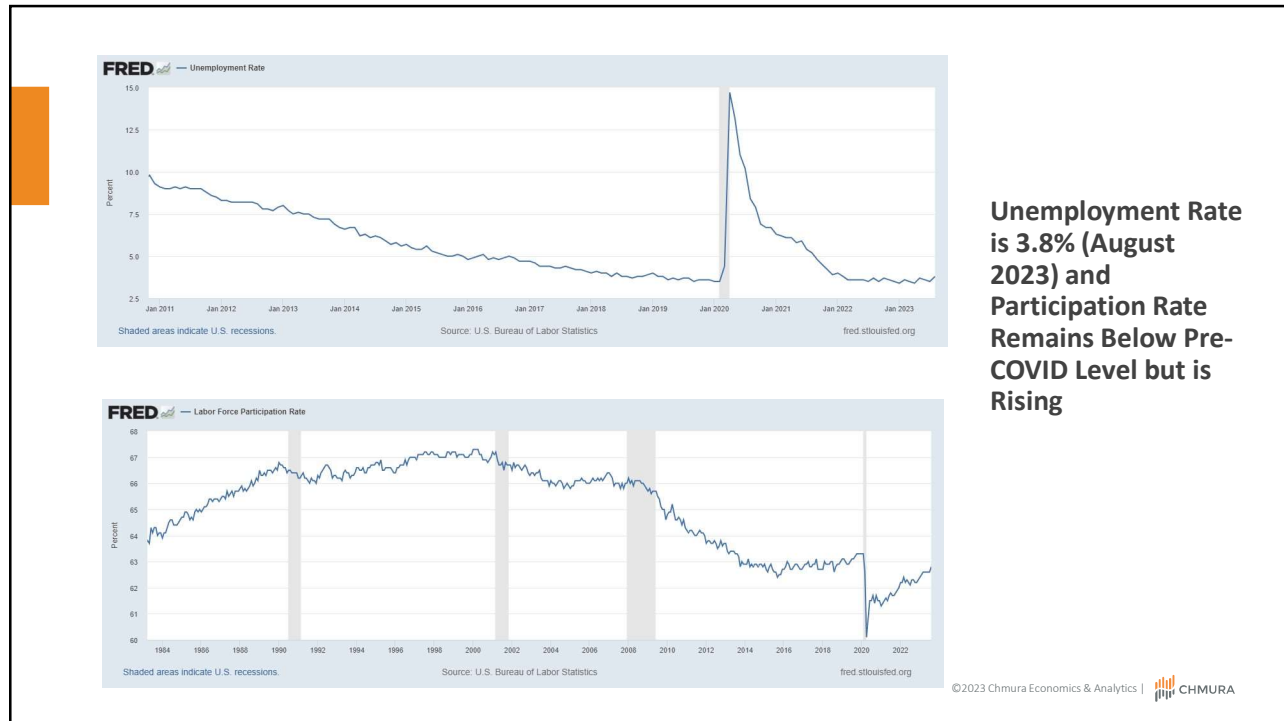
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## Labor Market is Tight But Easing

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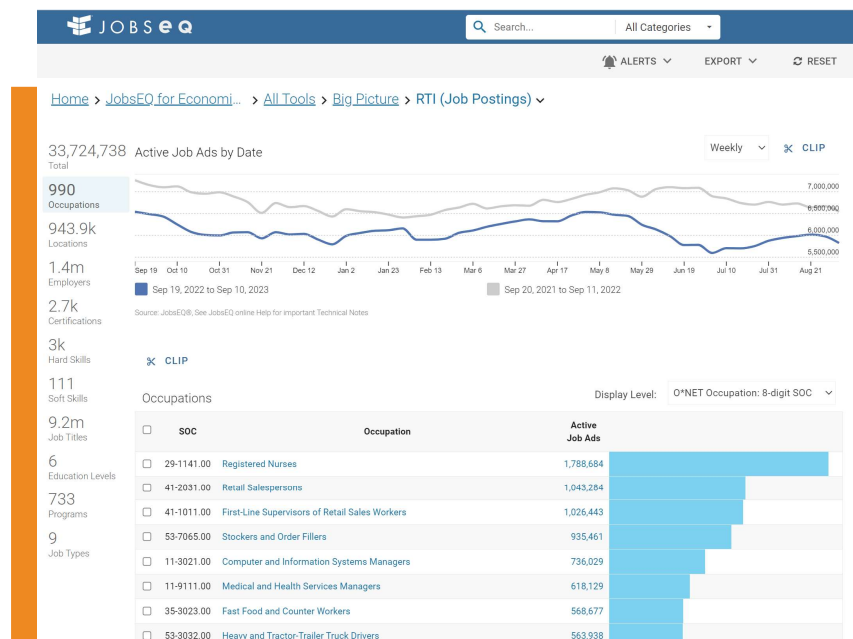
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## There are Signs of Slowing: Job Ads -17% Since June 17, 2022



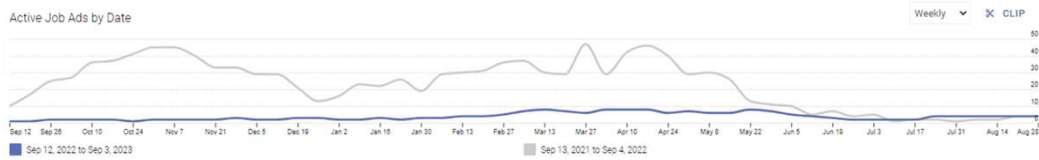
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## Recent Layoffs At High-Tech Firms

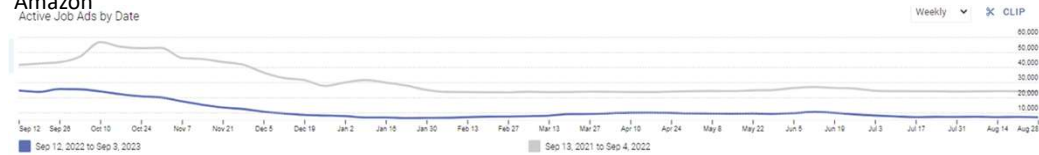
### Snapchat

Active Job Ads by Date

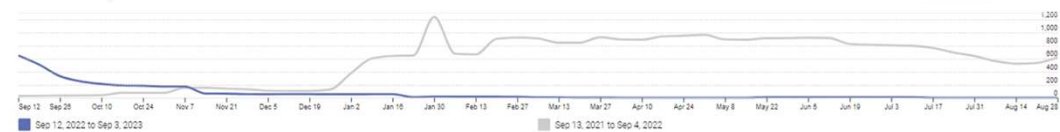


### Amazon

Active Job Ads by Date



### Twitter



Source: JOLTS®. See JOLTS® online Help for important Technical Notes

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## Signs of Easing Job Market: Fewer Workers Quit When There is Uncertainty 2.3 Quit Rate July 2023 is Same as Pre-COVID (Feb 2022)

FRED — Quits: Total Nonfarm



Definition: Number of quits in entire month as a percent of employment.

Source: BLS. Data through July 2023

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## Quits Vary by Industry and Region

Name	Jul 2023	Jun 2023	Jul 2022
Total Nonfarm.....	2.3	2.4	2.6
▼ Industry			
▼ Total Private.....	2.5	2.7	2.9
Construction.....	2.3	2.3	2.5
▼ Manufacturing.....	2.1	2.0	2.2
Durable Goods.....	1.5	1.5	1.9
Non-durable Goods.....	3.0	2.8	2.5
▼ Trade, Transportation and Utilities.....	2.7	2.8	3.0
Retail Trade.....	3.4	3.2	3.6
Professional and Business Services.....	2.6	2.7	3.6
▼ Education and Health Services.....	2.2	2.4	2.2
Health Care and Social Assistance.....	2.3	2.6	2.4
▼ Leisure and Hospitality.....	3.9	5.0	5.0
Arts, Entertainment and Recreation.....	3.6	4.3	3.5
Accommodation and Food Services.....	3.9	5.1	5.3
▼ Government.....	0.9	0.8	0.9
State and Local.....	1.0	0.8	1.0
▼ Census Region			
Northeast.....	1.7	1.7	2.1
South.....	2.7	2.9	3.0
Midwest.....	2.2	2.4	2.5
West.....	2.0	2.3	2.5

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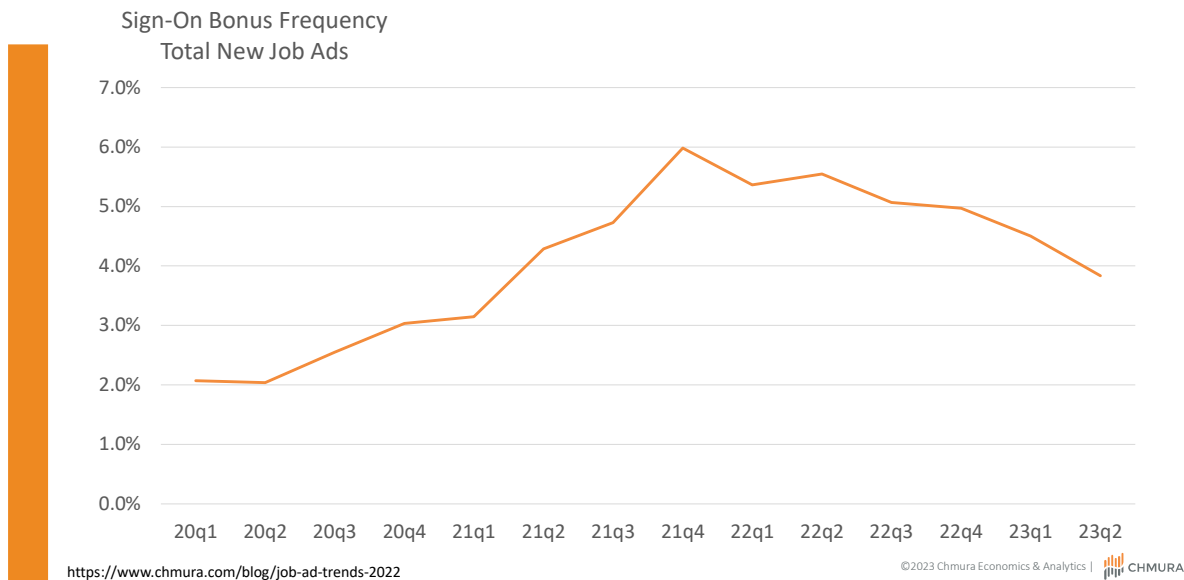
## Initial Unemployment Claims Remain Low Why? Severance Received By Workers? Hoarding Workers?



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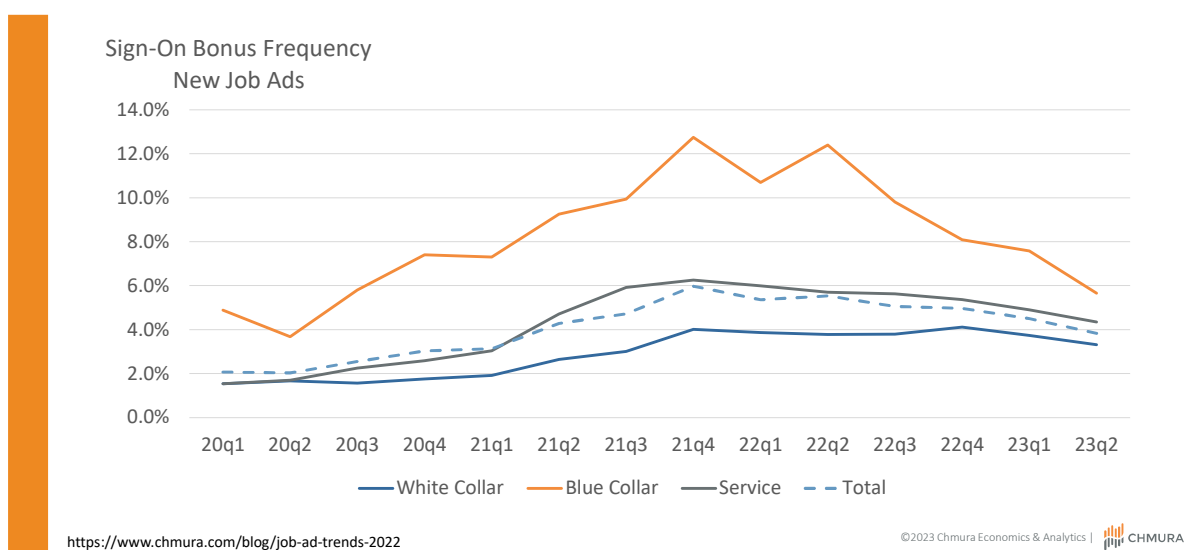
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## Decline in Sign-On Bonuses Also Indicate Slowing Hiring Competition



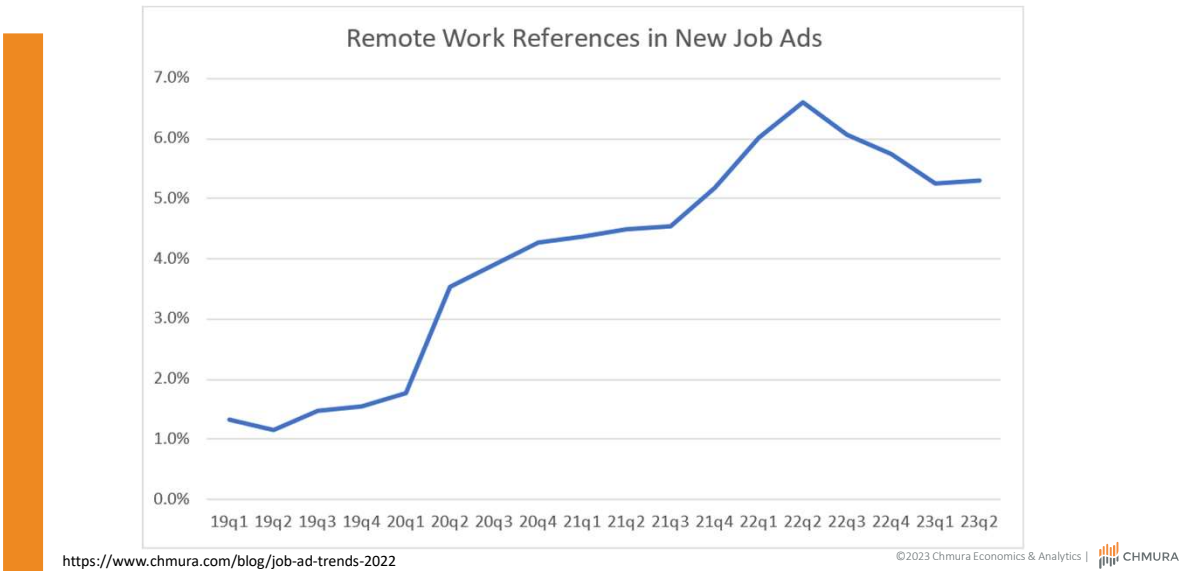
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## Decline in Sign-On Bonuses Also Indicate Slowing Hiring Competition



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## Remote Work Ads Account for Small Percent of All Ads



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## Top 20 Occupations With Highest Percentage of Remote Job Ads That Typically Require 4yr Degree or Less Are Skewed Toward IT

Occupation	Remote Ads 1/23 -8/23	Total Job Ads 1/23 -8/23	Percent of All Ads	Typical Entry Education
Telemarketers	1,810	3,738	48%	None
Travel Agents	766	1,801	43%	High school diploma or equivalent
Desktop Publishers	178	434	41%	Associate's degree
Blockchain Engineers	182	465	39%	Bachelor's degree
Proofreaders and Copy Markers	189	484	39%	Bachelor's degree
Remote Sensing Technicians	144	376	38%	Associate's degree
Health Information Technologists and Medical Registrars	7,049	21,884	32%	Associate's degree
Actuaries	1,946	6,111	32%	Bachelor's degree
Data Entry Keyers	4,742	15,297	31%	High school diploma or equivalent
Technical Writers	4,486	16,124	28%	Bachelor's degree
Real Estate Brokers	280	1,012	28%	High school diploma or equivalent
Editors	1,600	6,750	24%	Bachelor's degree
Software Developers	61,037	262,612	23%	Bachelor's degree
Search Marketing Strategists	4,973	21,594	23%	Bachelor's degree
Insurance Underwriters	2,706	11,871	23%	Bachelor's degree
Computer Systems Engineers/Architects	26,537	117,390	23%	Bachelor's degree
Business Continuity Planners	316	1,422	22%	Bachelor's degree
Web and Digital Interface Designers	2,063	9,354	22%	Bachelor's degree
Computer Systems Analysts	11,358	52,078	22%	Bachelor's degree
Database Architects	1,080	5,249	21%	Bachelor's degree

Source: Chmura's JobsEQ\*

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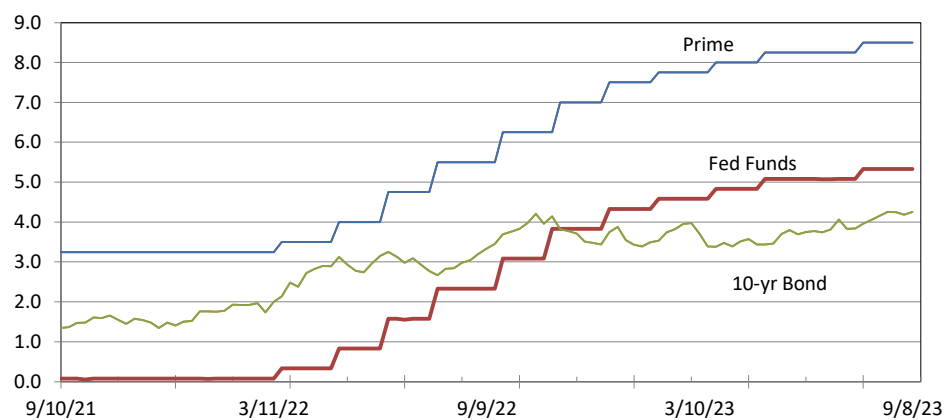
## We Still Expect Recession

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## Federal Funds Rate Target Up Over 500 Basis Points Since March 2022

Selected Interest Rates



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## How Much Will Interest Rates Rise? *Blue Chip Financial Forecasts, September 2023*

### 4<sup>th</sup> Qtr 2023

Federal Funds Rate: 5.7% (high); 5.4% (consensus)

10-Yr Treasury: 4.6% (high); 4.0% (consensus)

30-Yr Mortgage: 7.5% (high); 6.8% (consensus)

### 2<sup>nd</sup> Qtr 2024

Federal Funds Rate: 5.3% (high); 4.2% (consensus)

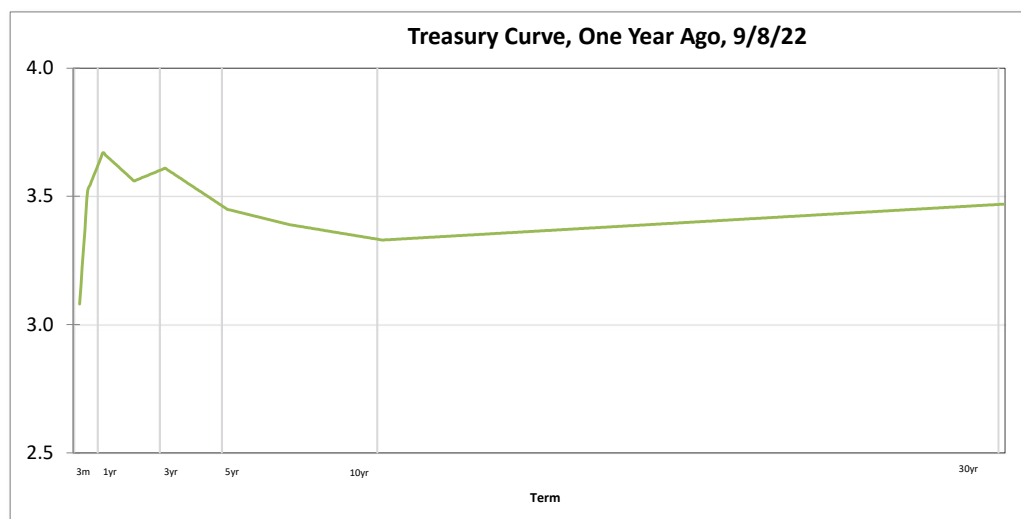
10-Yr Treasury: 5.3% (high); 3.7% (consensus)

30-Yr Mortgage: 7.8% (high); 6.1% (consensus)

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## Raising Federal Funds Rate Target Too Much Will Invert the Yield Curve

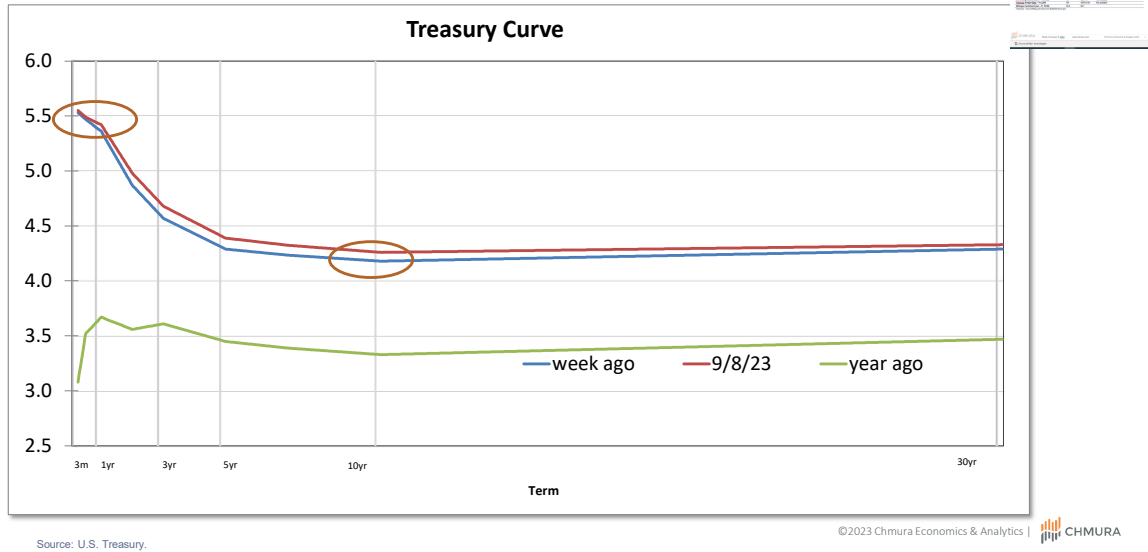


Source: U.S. Treasury.

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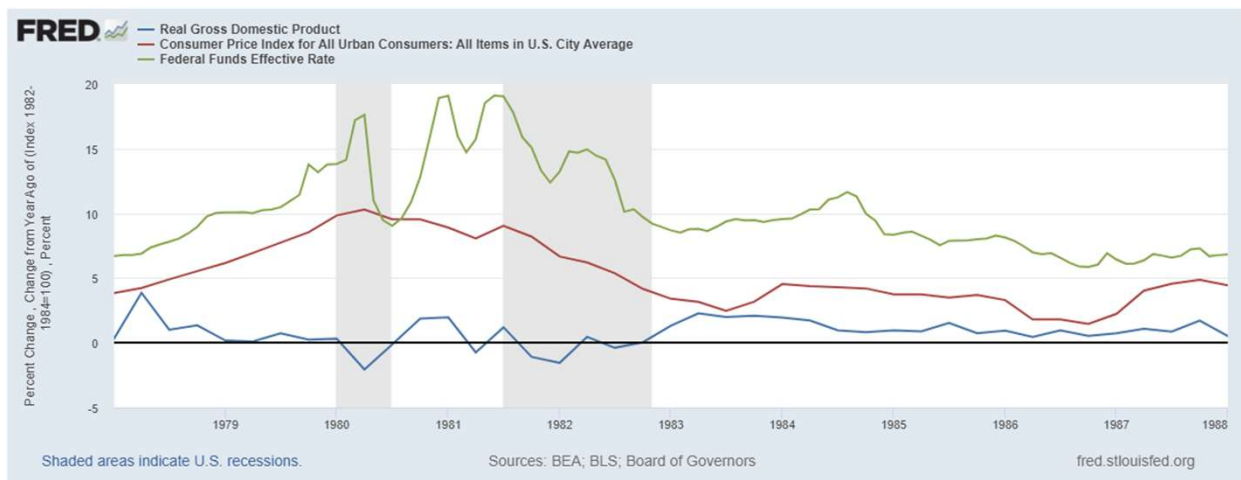
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## An Inverted Yield Curve Typically Precedes a Recession (3-Month Bill vs. 10-Yr Note)



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## Historical Context: Double Dip Recession in 1980s



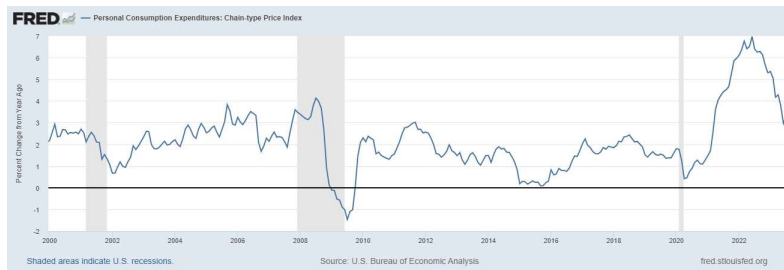
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## How High Will Rates Go? It Depends on How Quickly Inflation Comes Down

**“If inflation persists at its current four-quarter rate of 5.5%, policy rule recommendations for the funds rate range from 6.5% to 8% by the end of the year, substantially above what the Fed and markets are currently expecting.”**

**Jeff Lacker and Charles Plosser, WSJ, January 30, 2023**



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**Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assumptions of projected appropriate monetary policy, September 2023**

Variable	Median <sup>1</sup>					Central Tendency <sup>2</sup>					Range <sup>3</sup>				
	2023	2024	2025	2026	Longer run	2023	2024	2025	2026	Longer run	2023	2024	2025	2026	Longer run
Change in real GDP	2.1	1.5	1.8	1.8	1.8	1.9-2.2	1.2-1.8	1.6-2.0	1.7-2.0	1.7-2.0	1.8-2.6	0.4-2.5	1.4-2.5	1.6-2.5	1.6-2.5
June projection	1.0	1.1	1.8		1.8	0.7-1.2	0.9-1.5	1.6-2.0		1.7-2.0	0.5-2.0	0.5-2.2	1.5-2.2		1.6-2.5
Unemployment rate	3.8	4.1	4.1	4.0	4.0	3.7-3.9	3.9-4.4	3.9-4.3	3.8-4.3	3.8-4.3	3.7-4.0	3.7-4.5	3.7-4.7	3.7-4.5	3.5-4.3
June projection	4.1	4.5	4.5		4.0	4.0-4.3	4.3-4.6	4.3-4.6		3.8-4.3	3.9-4.5	4.0-5.0	3.8-4.9		3.5-4.4
PCE inflation	3.3	2.5	2.2	2.0	2.0	3.2-3.4	2.3-2.7	2.0-2.3	2.0-2.2	2.0	3.1-3.8	2.1-3.5	2.0-2.9	2.0-2.7	2.0
June projection	3.2	2.5	2.1		2.0	3.0-3.5	2.3-2.8	2.0-2.4		2.0	2.9-4.1	2.1-3.5	2.0-3.0		2.0
Core PCE inflation <sup>4</sup>	3.7	2.6	2.3	2.0		3.6-3.9	2.5-2.8	2.0-2.4	2.0-2.3		3.5-4.2	2.3-3.6	2.0-3.0	2.0-2.9	
June projection	3.9	2.6	2.2			3.7-4.2	2.5-3.1	2.0-2.4			3.6-4.5	2.2-3.6	2.0-3.0		
Memo: Projected appropriate policy path															
Federal funds rate	5.6	5.1	3.9	2.9	2.5	5.4-5.6	4.6-5.4	3.4-4.9	2.5-4.1	2.5-3.3	5.4-5.6	4.4-6.1	2.6-5.6	2.4-4.9	2.4-3.8
June projection	5.6	4.6	3.4		2.5	5.4-5.6	4.4-5.1	2.9-4.1		2.5-2.8	5.1-6.1	3.6-5.9	2.4-5.6		2.4-3.6

NOTE: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The projections for the federal funds rate are the value of the midpoint of the projected appropriate target range for the federal funds rate or the projected appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The June projections were made in conjunction with the meeting of the Federal Open Market Committee on June 13-14, 2023. One participant did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate in conjunction with the June 13-14, 2023, meeting, and one participant did not submit such projections in conjunction with the September 19-20, 2023, meeting.

1. For each period, the median is the middle projection when the projections are arranged from lowest to highest. When the number of projections is even, the median is the average of the two middle projections.

2. The central tendency excludes the three highest and three lowest projections for each variable in each year.

3. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.

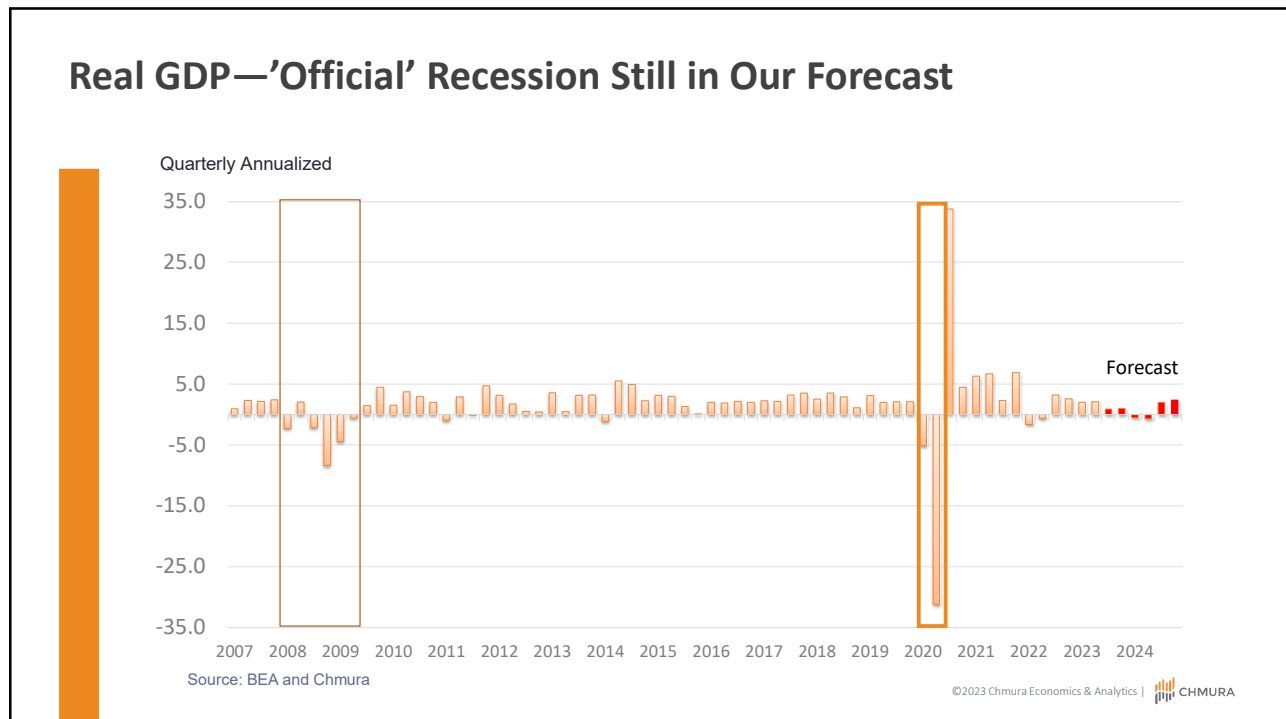
4. Longer-run projections for core PCE inflation are not collected.

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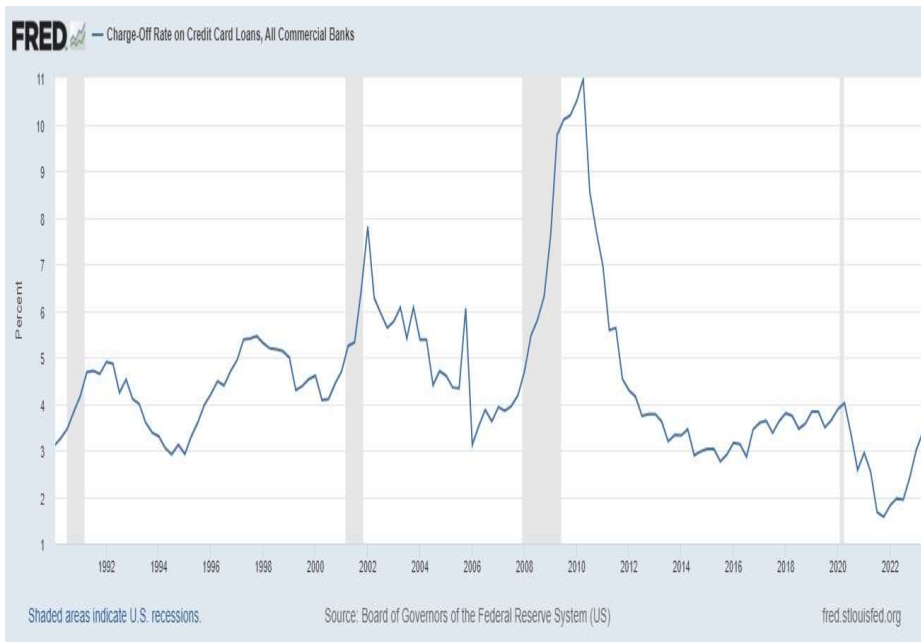
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## Why Do We Expect Recession?

- **We don't expect inflation to quickly drop to 2%**
- **Fed will raise fed funds rate target one more time**
  - Takes 1 year or longer for increases to impact economy
  - Homes, autos, capital expenditures become marginally more expensive so demand drops
  - Recession historically occurs about a year after yield curve inverts
- **Consumer showing signs of weakness**
  - Credit card usage is increasing along with delinquencies
  - Student loan repayment has started
  - Federal stimulus to households from pandemic ended
- **At this point, expect mild recession**
- **GDP will be below potential for next two years and unemployment rate will increase to about 5%**

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**Charge-Off Rates for Credit Cards are Rising**

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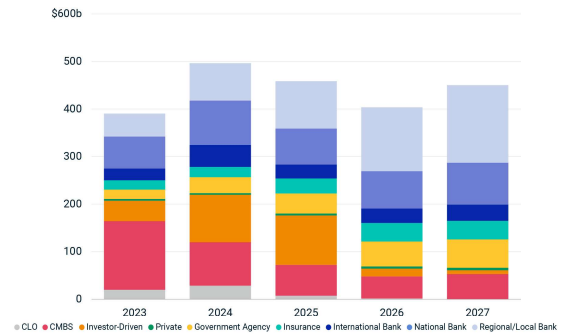
## Commercial Real Estate (CRE) Crisis Looming?

**\$1.3 trillion of US CRE debt is due for repayment before the end of 2025.**

**High vacancy rates are affecting CRE values:**

- Falling values (*Commercial Property Price Index is down 16% from its peak in 2022*) combined with rising interest rates is heightening the risk of defaulting
- Regional banks are overexposed to the risk of commercial default

Maturing commercial property loans by lender type\*

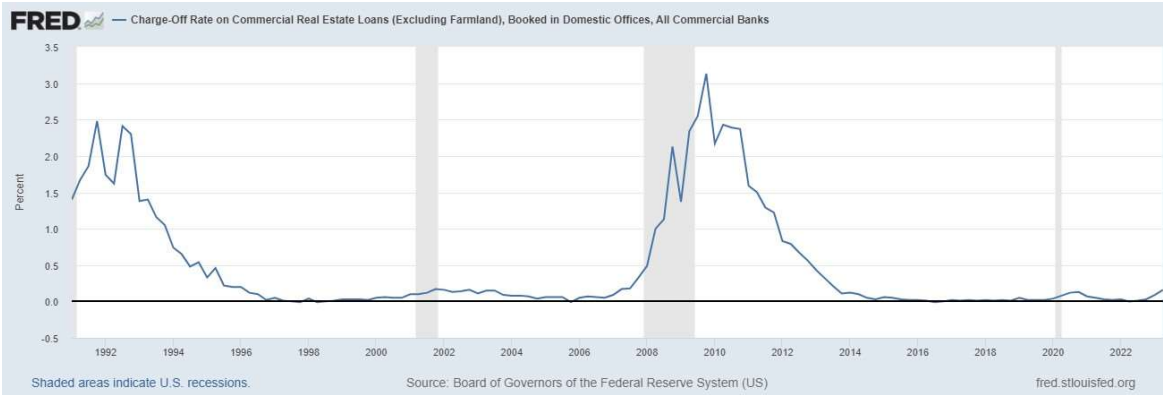


39 \*<https://www.msci.com/www/quick-take/cmbs-dominates-first-wave-of/03740236548>

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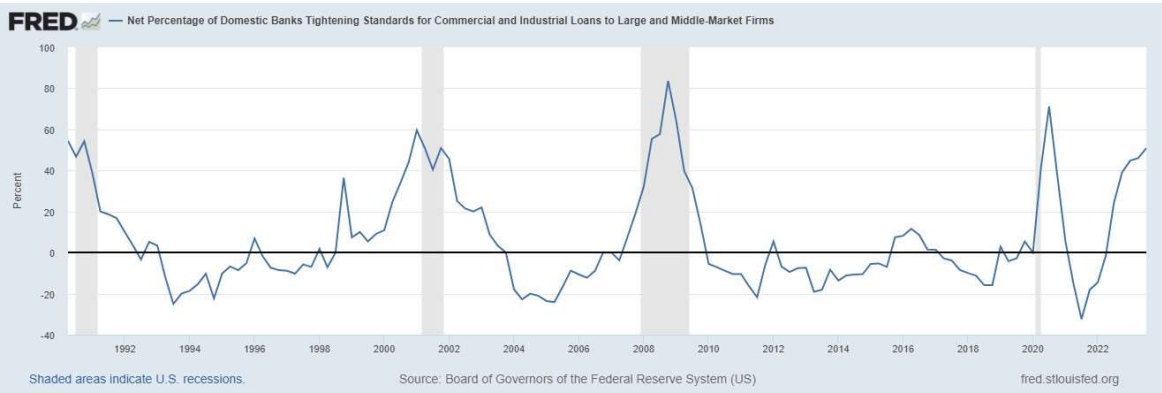
## Charge-off Rates for Commercial Real Estate are Inching Up



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## Banks are Tightening Lending Standards, 3<sup>rd</sup> Quarter 2023



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## Not All Industries Are Equally Impacted By Recession

**Durable goods hit hardest**

**Warehousing and construction have already pulled back**

**Due to demographics, health care should continue to grow**

**Education often grows during recessions**

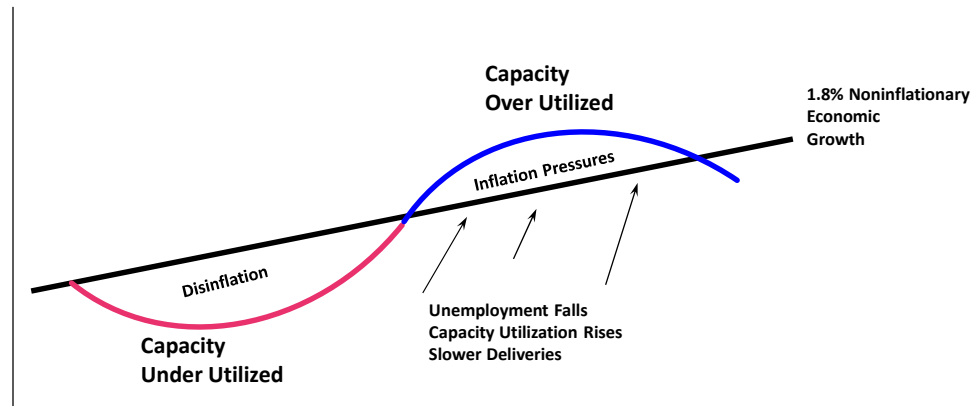
**Reshoring will continue and that will support some manufacturing**

- Pharmaceutical
- Semiconductors

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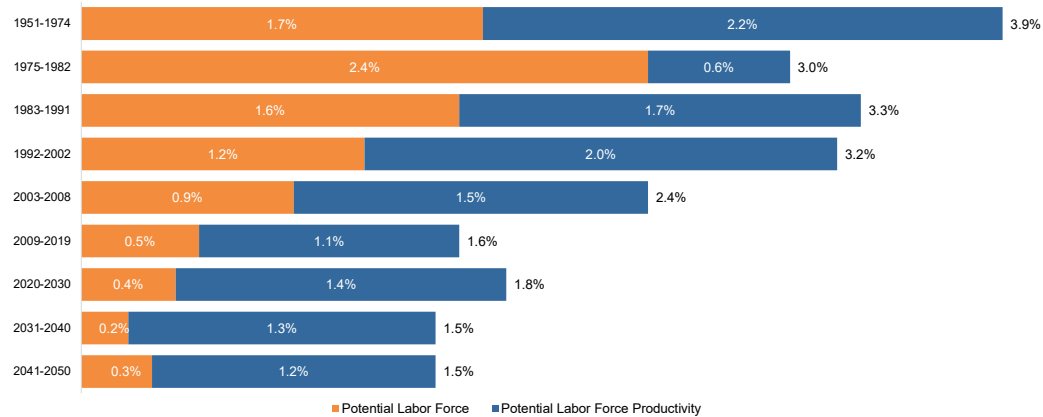
## The Fed's Goal: 1.8% Real GDP Growth



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## Labor Force and Productivity Growth Drive National GDP Growth

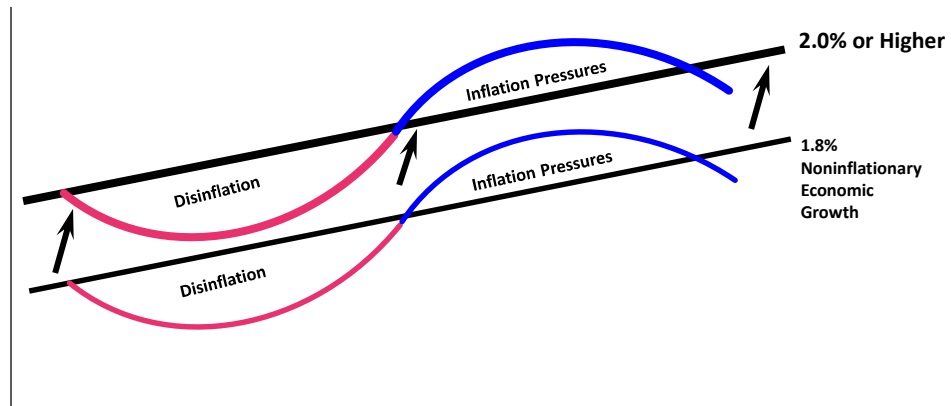


Source of Forecast: Congressional Budget Office

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## The Fed's Goal Can Be Higher with Faster Productivity Growth



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## The CHIPS and Science Act

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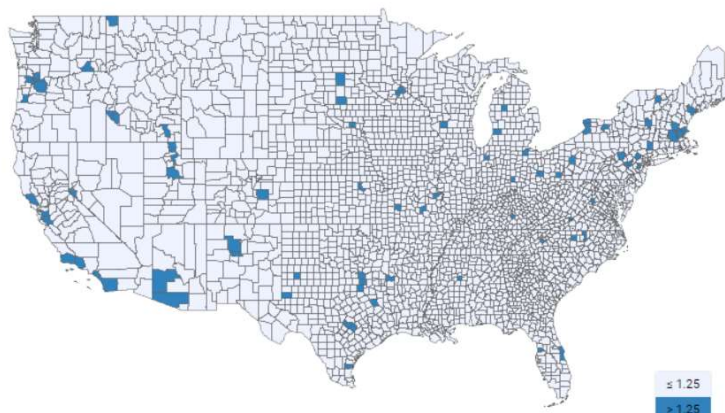
## Funding Available for 2022-26

- \$200 billion for scientific R&D and commercialization
- \$52.7 billion for semiconductor manufacturing
- \$24 billion worth of tax credits for chip production
- \$3 billion for programs aimed at leading-edge technology and wireless supply chains

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## Industry LQ in Semiconductor and Related Device Manufacturing



Source: JobsEQ®. Powered by ESRI.  
Data a four-quarter average ending in 2023Q1

48 Source: Chmura Economics and Analytics

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## Current and Planned Investments

### Intel: Chandler (AZ) Campus expansion

- **Project:** In 2021 Intel broke ground for two additional plants (Fab 52 and Fab 62). Expected start date of the operation: 2024
- **Investment:** \$20 billion
- **Employment:** 3,000 high-tech jobs
- **Workforce development initiatives:** Semiconductor manufacturing Quick Start program in partnership with Maricopa Community Colleges

### Micron: Clay (NY)

- **Project:** Planned. Largest leading-edge memory site in the U.S. Construction to begin in 2024.
- **Investment:** \$100 billion
- **Employment:** 50,000 jobs
- **Workforce development initiatives:** Micron will invest \$250 million in the Green CHIPS Community Investment Fund.

### Intel: Licking County (OH)

- **Project:** Planned. Eight chip factories
- **Investment:** \$20 billion initially. Up to \$100 billion
- **Employment:** initially 3,000 high-tech jobs (+7,000 construction jobs)
- **Workforce development initiatives:** 100 million toward partnerships with educational institutions to build a pipeline of talent and bolster research programs in Ohio

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### Intel® expansion of the Chandler campus

- In 2021 Intel broke ground for two additional plants (Fab 52 and Fab 62)
- \$20 billion investment
- 3,000 new tech-jobs
- **Workforce development initiatives:**
  - Semiconductor manufacturing Quick Start program in partnership with Maricopa Community Colleges
- **Expected start date of the operation: 2024**

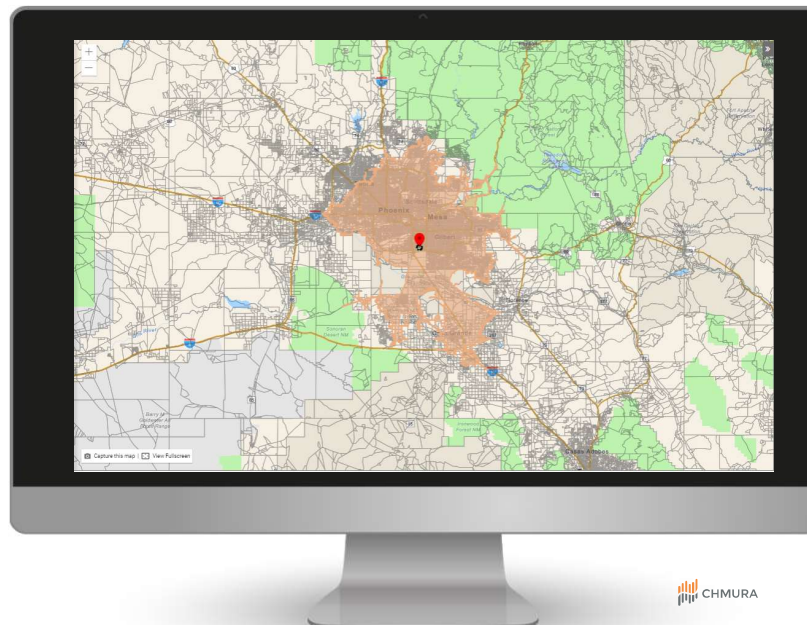
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## Laborshed for Intel

45-minute drive time  
from Intel – Chandler  
Campus



51 Source: JobsEQ by Chmura

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## Scenario: Employment Expansion

All Cate

[Home](#) > [JobsEQ for Economi...](#) > [All Tools](#) > [Industry](#) > [What-If](#) <

intel, NAICS 334413 - Semiconductor and Related Device Manufacturing (3000 Workers)

CLIP

EXPORT

<input type="checkbox"/>	SOC	Title	New Employer Demand	Empl (Place of Residence) <sup>1</sup>	Unempl <sup>1</sup>	Regional Avg Wage	National Avg Wage	Empl Extended	Unempl Extended	Potential Candidates per Opening
<input type="checkbox"/>	51-2028	Electrical, Electronic, and Electromechanical Equipment Assemblers, Except Coil Winders, Tapers, and Finishers	423	4,394	247	\$44,800	\$43,600	404	39	11
<input type="checkbox"/>	51-9141	Semiconductor Processing Technicians	189	1,868	82	\$50,400	\$49,900	6,226	215	10
<input type="checkbox"/>	51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	144	7,107	229	\$53,000	\$49,600	27,000	1,727	51
<input type="checkbox"/>	17-2112	Industrial Engineers	124	4,417	69	\$106,600	\$101,900	18,901	276	36
<input type="checkbox"/>	15-1252	Software Developers	102	27,321	345	\$128,400	\$135,200	-	-	271
<input type="checkbox"/>	17-3023	Electrical and Electronic Engineering Technologists and Technicians	100	1,564	14	\$77,600	\$73,200	19,627	507	16
<input type="checkbox"/>	51-2092	Team Assemblers	96	13,127	732	\$41,800	\$42,100	5,264	309	144
<input type="checkbox"/>	17-2072	Electronics Engineers, Except Computer	90	2,538	23	\$131,200	\$122,300	19,108	254	28
<input type="checkbox"/>	51-1011	First-Line Supervisors of Production and Operating Workers	84	5,666	89	\$72,400	\$71,800	14,488	206	69
<input type="checkbox"/>	17-2061	Computer Hardware Engineers	78	405	10	\$122,200	\$140,300	6,937	113	5

52 Source: JobsEQ by Chmura

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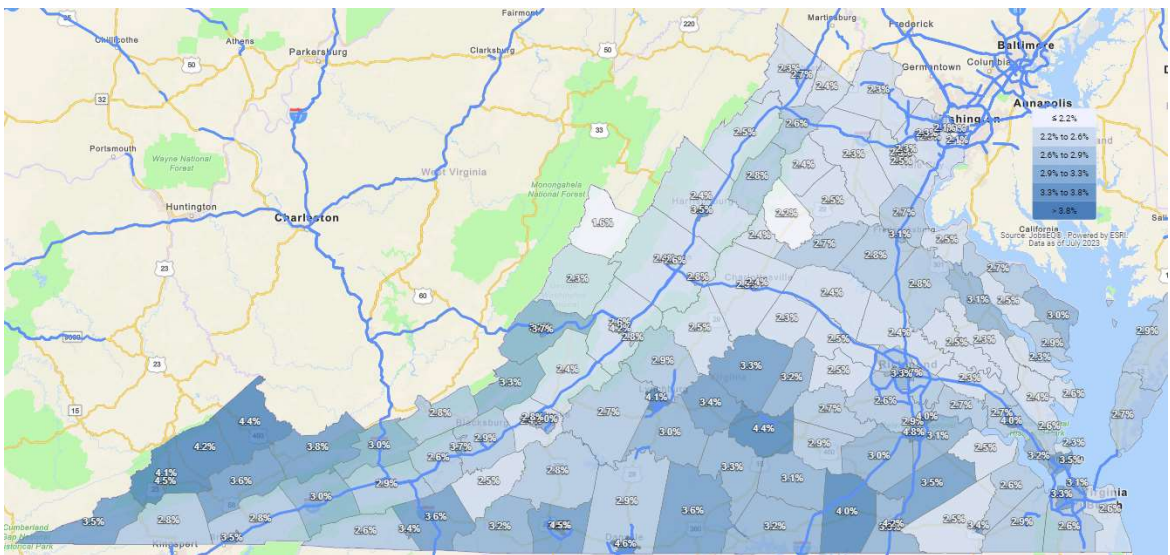
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## Regional Variation

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## Unemployment Rate Shows Conditions Vary By County



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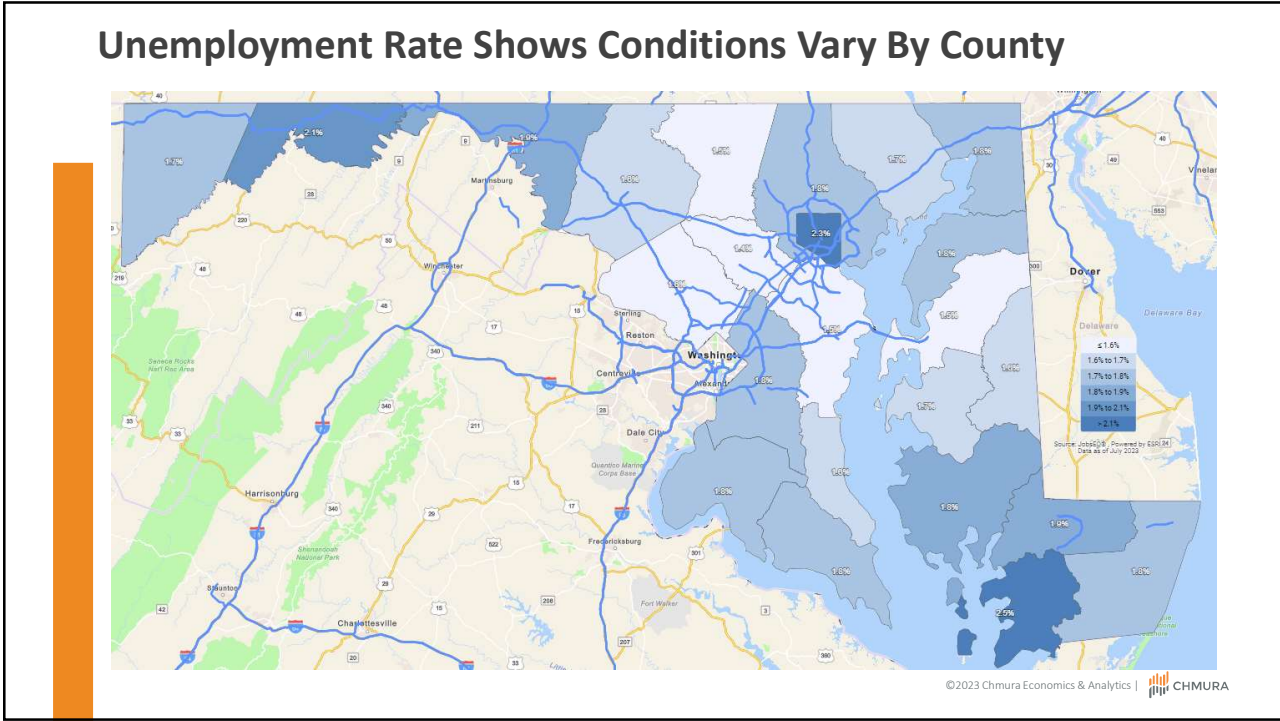
Virginia, 2023Q1<sup>1</sup>

NAICS	Industry	CURRENT			5-YEAR HISTORY		1-YEAR FORECAST					
		Empl	Avg Ann Wages	LQ	Empl Change	Trend	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	530,317	\$62,558	0.87	20,934		0.8%	58,895	25,195	29,515	4,185	0.8%
54	Professional, Scientific, and Technical Services	501,549	\$121,586	1.59	44,302		1.9%	50,069	16,654	28,555	4,859	1.0%
44	Retail Trade	412,402	\$39,029	0.97	-25,915		-1.2%	55,609	25,093	33,116	-2,600	-0.6%
61	Educational Services	371,040	\$55,438	1.09	1,269		0.1%	37,781	17,388	19,223	1,170	0.3%
72	Accommodation and Food Services	338,776	\$26,347	0.93	-16,403		-0.9%	63,047	26,839	32,479	3,729	1.1%
56	Administrative and Support and Waste Management and Remediation Services	277,555	\$56,512	1.01	15,664		1.2%	34,456	13,672	19,982	802	0.3%
23	Construction	260,334	\$66,574	1.03	19,013		1.5%	25,913	9,146	16,324	444	0.2%
92	Public Administration	260,238	\$90,431	1.33	11,685		0.9%	24,253	10,670	15,154	-1,571	-0.6%
31	Manufacturing	258,310	\$69,421	0.75	8,918		0.7%	26,291	10,387	17,662	-1,758	-0.7%
81	Other Services (except Public Administration)	201,531	\$46,210	1.10	-13,876		-1.3%	25,461	10,244	14,138	1,079	0.5%
48	Transportation and Warehousing	183,257	\$60,428	0.87	22,179		2.6%	22,763	8,941	13,058	764	0.4%
52	Finance and Insurance	149,053	\$116,082	0.87	5,073		0.7%	14,479	5,316	8,709	455	0.3%
42	Wholesale Trade	114,191	\$100,368	0.71	1,259		0.2%	12,929	4,691	8,001	236	0.2%
71	Arts, Entertainment, and Recreation	86,503	\$33,461	1.04	4,683		1.1%	13,911	5,411	7,480	1,021	1.2%
55	Management of Companies and Enterprises	86,438	\$140,674	1.31	12,362		3.1%	8,160	3,024	5,135	2	0.0%
51	Information	77,222	\$117,989	0.89	1,396		0.4%	8,232	2,690	4,874	668	0.9%
53	Real Estate and Rental and Leasing	69,871	\$71,684	0.92	4,412		1.3%	7,103	3,244	3,997	-139	-0.2%
99	Unclassified	31,071	\$63,250	3.78	14,733		13.7%	4,097	1,522	2,163	411	1.3%
11	Agriculture, Forestry, Fishing and Hunting	30,303	\$32,812	0.54	-2,199		-1.4%	3,724	1,694	2,162	-133	-0.4%
22	Utilities	18,366	\$102,488	0.85	-196		-0.2%	1,586	641	1,123	-178	-1.0%
21	Mining, Quarrying, and Oil and Gas Extraction	5,374	\$86,812	0.36	-586		-2.1%	466	182	375	-91	-1.7%
-	Total - All Industries	4,263,700	\$69,733	1.00	128,709		0.6%	506,255	205,748	286,430	14,077	0.3%

Source: JOLTQ8  
Data as of 2023Q1  
Note: Figures may not sum due to rounding.  
1. All data based upon a four-quarter moving average.  
Exits and transfers are approximate estimates based upon occupation separation rates.

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Maryland, 2023Q1<sup>1</sup>

NAICS	Industry	CURRENT			5-YEAR HISTORY		1-YEAR FORECAST					
		Empl	Avg Ann Wages	LQ	Empl Change	Trend	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	399,383	\$66,101	0.97	-6,290		-0.3%	42,774	18,947	22,196	1,631	0.4%
54	Professional, Scientific, and Technical Services	309,309	\$112,002	1.46	29,861		2.1%	30,120	10,262	17,595	2,263	0.7%
44	Retail Trade	279,661	\$42,584	0.98	-19,657		-1.3%	36,853	16,998	22,432	-2,576	-0.9%
61	Educational Services	259,489	\$66,496	1.14	-6,543		-0.5%	26,008	12,154	13,436	419	0.2%
92	Public Administration	253,656	\$98,790	1.93	11,031		0.9%	22,882	10,388	14,754	-2,261	-0.9%
72	Accommodation and Food Services	217,190	\$28,620	0.88	-21,139		-1.8%	39,925	17,193	20,806	1,926	0.9%
23	Construction	192,957	\$72,202	1.13	4,357		0.5%	18,298	6,767	12,078	-547	-0.3%
56	Administrative and Support and Waste Management and Remediation Services	189,100	\$56,545	1.02	1,499		0.2%	22,981	9,306	13,601	74	0.0%
48	Transportation and Warehousing	143,871	\$54,818	1.01	24,465		3.8%	17,112	7,006	10,233	-127	-0.1%
81	Other Services (except Public Administration)	132,247	\$45,543	1.08	-5,405		-0.8%	16,349	6,716	9,269	364	0.3%
31	Manufacturing	115,686	\$89,637	0.50	4,889		0.9%	11,696	4,651	7,908	-862	-0.7%
52	Finance and Insurance	89,407	\$127,995	0.78	-7,046		-1.5%	8,348	3,184	5,217	-52	-0.1%
42	Wholesale Trade	87,595	\$94,636	0.81	-126		0.0%	9,586	3,594	6,129	-137	-0.2%
71	Arts, Entertainment, and Recreation	52,244	\$38,174	0.93	-4,910		-1.8%	8,216	3,264	4,512	441	0.8%
53	Real Estate and Rental and Leasing	51,431	\$76,590	1.01	-4,300		-1.6%	5,063	2,385	2,939	-261	-0.5%
51	Information	41,615	\$105,141	0.71	-1,776		-0.8%	4,311	1,448	2,624	239	0.6%
55	Management of Companies and Enterprises	27,792	\$131,391	0.62	1,696		1.3%	2,518	971	1,649	-101	-0.4%
11	Agriculture, Forestry, Fishing and Hunting	12,169	\$44,984	0.33	497		0.8%	1,515	681	869	-34	-0.3%
22	Utilities	10,037	\$128,568	0.69	-21		0.0%	732	349	611	-228	-2.3%
21	Mining, Quarrying, and Oil and Gas Extraction	1,221	\$74,026	0.12	77		1.3%	128	42	86	1	0.1%
-	Total - All Industries	2,866,060	\$71,762	1.00	1,158		0.0%	331,107	138,145	192,317	646	0.0%

Source: JobsEQ8

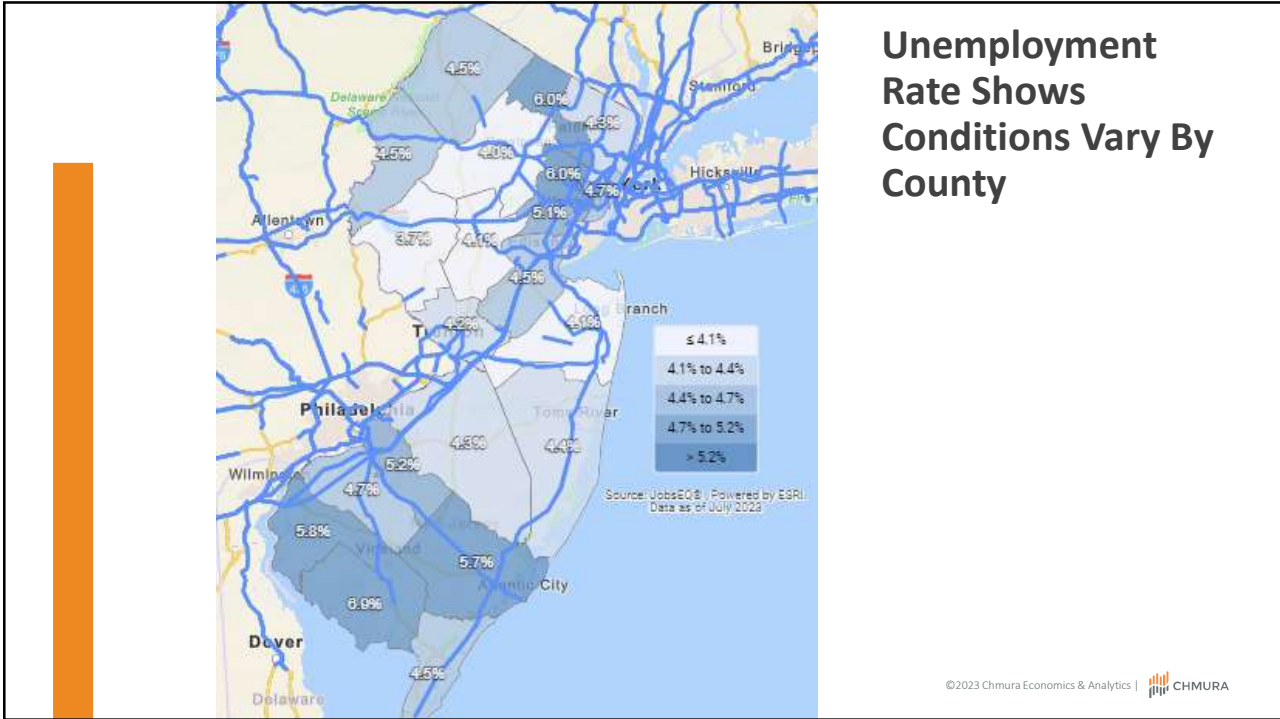
Data as of 2023Q1

Note: Figures may not sum due to rounding.

1. All data based upon a four-quarter moving average.

Exits and transfers are approximate estimates based upon occupation separation rates.

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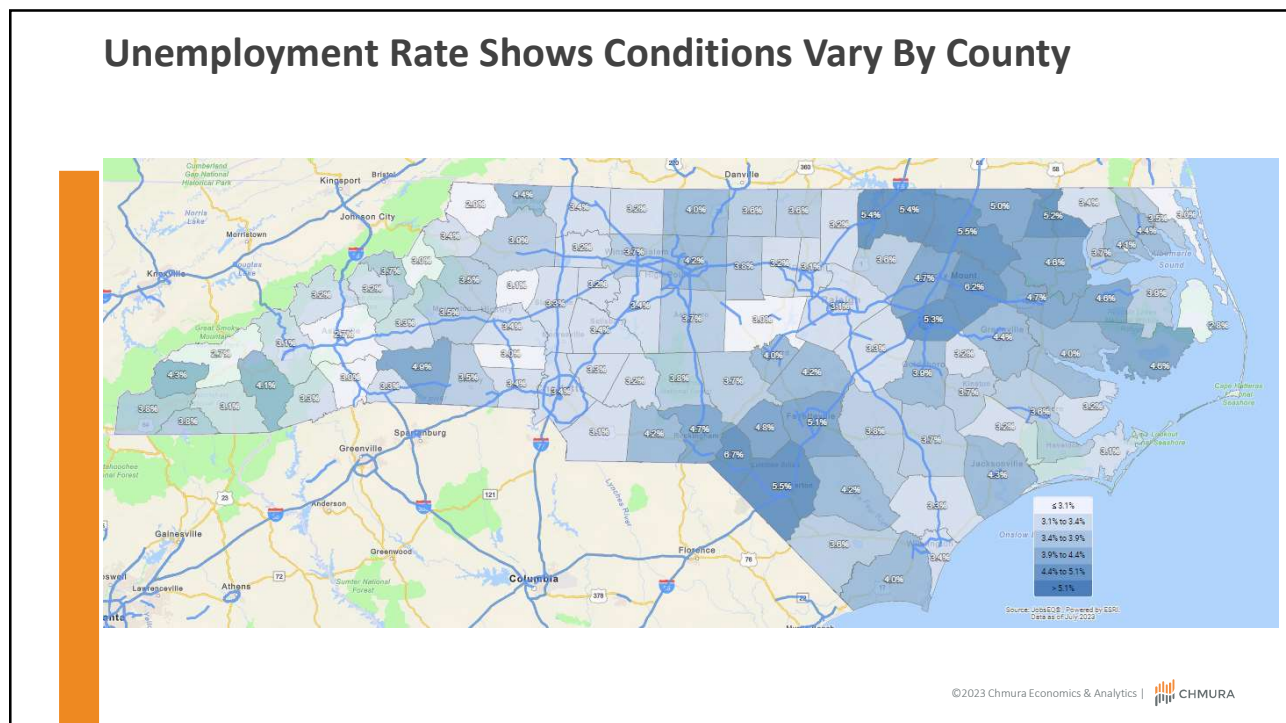
New Jersey, 2023Q1<sup>1</sup>

NAICS	Industry	CURRENT		5-YEAR HISTORY		1-YEAR FORECAST						
		Empl	Avg Ann Wages	LQ	Empl Change	Trend	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	655,014	\$66,598	1.03	30,863		1.0%	71,048	31,090	36,421	3,537	0.5%
44	Retail Trade	449,409	\$45,813	1.01	-27,130		-1.2%	58,900	27,308	36,038	-4,447	-1.0%
54	Professional, Scientific, and Technical Services	381,178	\$127,719	1.16	43,854		2.5%	36,508	12,639	21,671	2,199	0.6%
61	Educational Services	369,577	\$70,818	1.05	-1,281		-0.1%	36,545	17,301	19,126	117	0.0%
72	Accommodation and Food Services	320,614	\$30,746	0.84	5,298		0.3%	58,702	25,373	30,705	2,623	0.8%
56	Administrative and Support and Waste Management and Remediation Services	314,451	\$57,130	1.10	11,377		0.7%	38,189	15,475	22,616	98	0.0%
48	Transportation and Warehousing	296,275	\$60,553	1.35	48,770		3.7%	35,687	14,435	21,083	168	0.1%
31	Manufacturing	255,078	\$91,994	0.71	6,729		0.5%	25,879	10,256	17,439	-1,816	-0.7%
42	Wholesale Trade	216,618	\$105,928	1.29	-3,706		-0.3%	23,562	8,885	15,154	-477	-0.2%
23	Construction	203,564	\$76,881	0.77	10,306		1.0%	19,172	7,137	12,739	-705	-0.3%
92	Public Administration	200,723	\$80,944	0.99	-1,955		-0.2%	18,397	8,225	11,682	-1,510	-0.8%
52	Finance and Insurance	194,091	\$150,755	1.09	3,711		0.4%	18,375	6,916	11,330	130	0.1%
81	Other Services (except Public Administration)	188,458	\$42,016	0.99	-1,697		-0.2%	23,478	9,573	13,213	691	0.4%
55	Management of Companies and Enterprises	85,018	\$182,589	1.23	2,003		0.5%	7,801	2,971	5,046	-216	-0.3%
71	Arts, Entertainment, and Recreation	82,412	\$48,883	0.95	1,670		0.4%	12,977	5,149	7,117	711	0.9%
51	Information	81,791	\$136,973	0.90	5,555		1.4%	8,503	2,846	5,158	499	0.6%
53	Real Estate and Rental and Leasing	81,679	\$76,638	1.04	5,791		1.5%	8,049	3,788	4,668	-407	-0.5%
99	Unclassified	29,358	\$83,069	3.42	6,749		5.4%	3,739	1,436	2,040	262	0.9%
22	Utilities	19,582	\$116,671	0.87	387		0.4%	1,624	683	1,196	-255	-1.3%
11	Agriculture, Forestry, Fishing and Hunting	15,560	\$39,775	0.27	-709		-0.9%	1,945	870	1,111	-37	-0.2%
21	Mining, Quarrying, and Oil and Gas Extraction	1,641	\$109,051	0.10	327		4.5%	176	56	115	5	0.3%
-	Total - All Industries	4,442,092	\$76,996	1.00	146,913		0.7%	514,034	214,125	298,091	1,818	0.0%

Source: JostCoB  
Data as of 2023Q1  
Note: Figures may not sum due to rounding.  
1. All data based upon a four-quarter moving average.  
Exits and transfers are approximate estimates based upon occupation separation rates.

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North Carolina, 2023Q1<sup>1</sup>

NAICS	Industry	CURRENT			5-YEAR HISTORY		1-YEAR FORECAST					
		Empl	Avg Ann Wages	LQ	Empl Change	Trend	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	664,445	\$63,054	0.91	32,559		1.0%	77,533	31,631	37,054	8,848	1.3%
44	Retail Trade	546,843	\$39,197	1.08	19,352		0.7%	78,227	33,371	44,040	816	0.1%
31	Manufacturing	480,801	\$67,695	1.17	4,176		0.2%	52,455	19,385	32,962	108	0.0%
72	Accommodation and Food Services	442,973	\$24,108	1.01	10,772		0.5%	85,818	35,187	42,581	8,049	1.8%
61	Educational Services	387,545	\$56,862	0.96	-529		0.0%	42,043	18,205	20,126	3,711	1.0%
56	Administrative and Support and Waste Management and Remediation Services	367,701	\$50,188	1.12	40,969		2.4%	48,735	18,167	26,551	4,017	1.1%
54	Professional, Scientific, and Technical Services	356,758	\$98,591	0.95	80,633		5.3%	38,779	11,884	20,377	6,518	1.8%
23	Construction	310,740	\$62,617	1.03	44,918		3.2%	33,085	10,944	19,533	2,608	0.8%
92	Public Administration	249,094	\$60,199	1.07	5,841		0.5%	25,394	10,245	14,551	598	0.2%
52	Finance and Insurance	227,327	\$115,698	1.11	51,177		5.2%	24,491	8,138	13,333	3,021	1.3%
81	Other Services (except Public Administration)	225,450	\$35,307	1.03	16,724		1.6%	30,171	11,490	15,859	2,822	1.3%
48	Transportation and Warehousing	217,443	\$55,443	0.86	51,009		5.5%	28,650	10,637	15,536	2,476	1.1%
42	Wholesale Trade	206,460	\$92,334	1.08	18,331		1.9%	25,055	8,507	14,509	2,039	1.0%
71	Arts, Entertainment, and Recreation	92,732	\$38,214	0.93	4,220		0.9%	15,714	5,818	8,043	1,853	2.0%
51	Information	86,924	\$106,650	0.84	3,518		0.8%	10,001	3,037	5,504	1,461	1.7%
53	Real Estate and Rental and Leasing	83,525	\$65,009	0.92	11,423		3.0%	9,335	3,893	4,796	647	0.8%
55	Management of Companies and Enterprises	83,313	\$134,768	1.05	391		0.1%	8,811	2,926	4,970	915	1.1%
11	Agriculture, Forestry, Fishing and Hunting	44,276	\$55,424	0.67	-4,356		-1.9%	5,658	2,479	3,165	14	0.0%
22	Utilities	16,506	\$104,808	0.64	1,220		1.5%	1,558	578	1,012	-32	-0.2%
21	Mining, Quarrying, and Oil and Gas Extraction	3,155	\$87,569	0.17	78		0.5%	358	108	222	28	0.9%
-	Total - All Industries	5,094,012	\$61,926	1.00	392,424		1.6%	640,858	246,438	343,076	51,344	1.0%

Source: JOLT®

Data as of 2023Q1

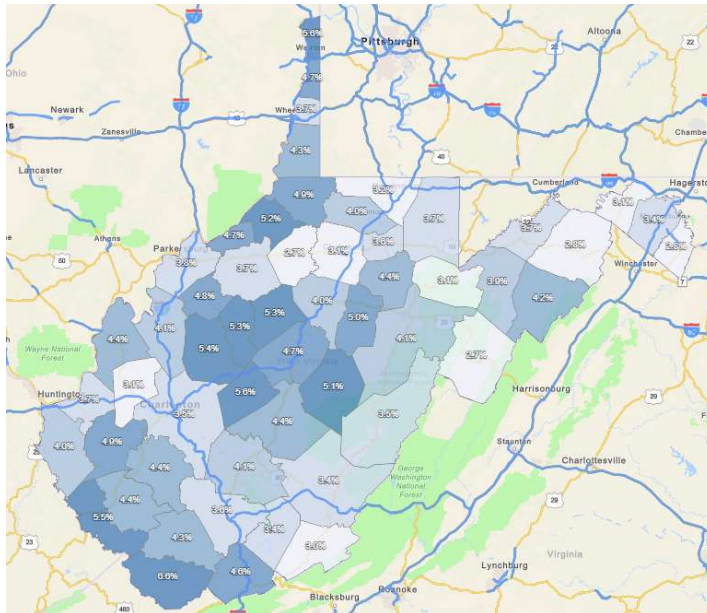
Note: Figures may not sum due to rounding.

1. All data based upon a four-quarter moving average.

Exits and transfers are approximate estimates based upon occupation separation rates.

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## Unemployment Rate Shows Conditions Vary By County



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West Virginia, 2023Q1<sup>1</sup>

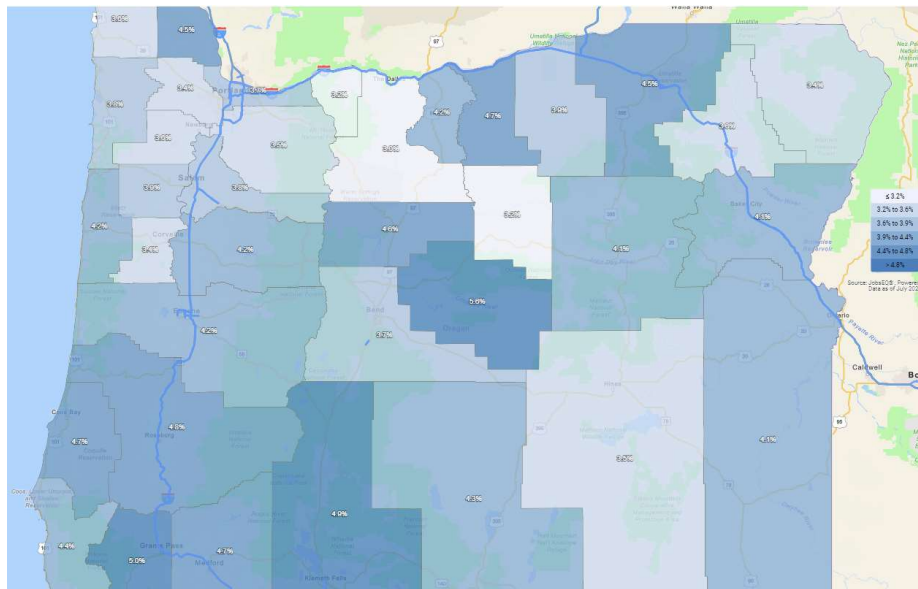
NAICS	Industry	CURRENT			5-YEAR HISTORY		1-YEAR FORECAST					
		Empl	Avg Ann Wages	LQ	Empl Change	Trend	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	139,849	\$57,539	1.35	2,306		0.3%	14,010	6,618	7,753	-361	-0.3%
44	Retail Trade	80,675	\$34,905	1.12	-7,409		-1.7%	9,902	4,888	6,450	-1,436	-1.8%
72	Accommodation and Food Services	62,138	\$22,020	1.00	-5,163		-1.6%	11,001	4,907	5,938	156	0.3%
61	Educational Services	58,402	\$50,260	1.02	-1,014		-0.3%	5,258	2,725	3,013	-480	-0.8%
92	Public Administration	50,021	\$58,374	1.51	1,432		0.6%	4,038	2,042	2,900	-903	-1.8%
31	Manufacturing	46,816	\$67,610	0.80	-715		-0.3%	4,403	1,877	3,192	-667	-1.4%
23	Construction	40,846	\$57,372	0.95	-828		-0.4%	3,626	1,429	2,551	-355	-0.9%
56	Administrative and Support and Waste Management and Remediation Services	40,013	\$48,434	0.86	1,581		0.8%	4,653	1,965	2,873	-185	-0.5%
54	Professional, Scientific, and Technical Services	32,283	\$69,777	0.61	2,788		1.8%	2,865	1,068	1,831	-33	-0.1%
48	Transportation and Warehousing	29,071	\$56,489	0.81	-350		-0.2%	3,250	1,412	2,062	-225	-0.8%
81	Other Services (except Public Administration)	28,474	\$32,719	0.92	-2,735		-1.8%	3,258	1,441	1,989	-172	-0.6%
21	Mining, Quarrying, and Oil and Gas Extraction	20,030	\$101,435	7.82	-1,506		-1.4%	1,486	674	1,390	-578	-2.9%
52	Finance and Insurance	19,165	\$67,541	0.66	714		0.8%	1,634	681	1,115	-162	-0.8%
42	Wholesale Trade	18,863	\$75,170	0.69	-2,210		-2.2%	1,924	772	1,316	-164	-0.9%
11	Agriculture, Forestry, Fishing and Hunting	10,860	\$15,078	1.15	-999		-1.7%	1,198	604	771	-178	-1.6%
71	Arts, Entertainment, and Recreation	10,364	\$22,680	0.73	754		1.5%	1,483	644	891	-52	-0.5%
51	Information	9,084	\$63,011	0.62	-837		-1.7%	841	315	570	-44	-0.5%
53	Real Estate and Rental and Leasing	8,282	\$49,667	0.65	231		0.6%	748	383	472	-107	-1.3%
55	Management of Companies and Enterprises	7,799	\$87,722	0.70	1,215		3.4%	647	272	461	-86	-1.1%
22	Utilities	7,542	\$86,592	2.07	-26		-0.1%	505	262	458	-214	-2.8%
99	Unclassified	1,131	\$59,490	0.81	949		44.0%	128	55	78	-5	-0.5%
-	Total - All Industries	721,708	\$52,373	1.00	-11,781		-0.3%	76,875	34,674	48,271	-6,069	-0.8%

Source: JosaEOR  
 Date as of: 2023Q1  
 Note: Figures may not sum due to rounding.  
 1. All data based upon a four-quarter moving average.  
 Exits and transfers are approximate estimates based upon occupation separation rates.

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## Unemployment Rate Shows Conditions Vary By County



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Oregon, 2023Q1<sup>1</sup>

NAICS	Industry	CURRENT		LQ	5-YEAR HISTORY		1-YEAR FORECAST					
		Empl	Avg Ann Wages		Empl Change	Trend	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
62	Health Care and Social Assistance	302,880	\$64,257	1.01	17,182		1.2%	36,457	14,437	16,913	5,107	1.7%
44	Retail Trade	217,035	\$41,622	1.04	-2,666		-0.2%	31,160	13,247	17,482	431	0.2%
31	Manufacturing	198,012	\$82,738	1.17	1,780		0.2%	22,539	7,997	13,598	944	0.5%
72	Accommodation and Food Services	180,258	\$28,814	1.01	-7,116		-0.8%	34,988	14,320	17,330	3,338	1.9%
61	Educational Services	152,255	\$62,160	0.92	2,325		0.3%	16,899	7,159	7,914	1,826	1.2%
23	Construction	135,989	\$74,095	1.10	17,276		2.8%	14,419	4,788	8,547	1,084	0.8%
54	Professional, Scientific, and Technical Services	130,395	\$93,569	0.85	15,674		2.6%	13,452	4,335	7,433	1,684	1.3%
56	Administrative and Support and Waste Management and Remediation Services	115,033	\$54,704	0.86	3,200		0.6%	14,999	5,679	8,300	1,020	0.9%
48	Transportation and Warehousing	91,911	\$58,541	0.89	15,321		3.7%	11,900	4,493	6,562	846	0.9%
92	Public Administration	84,997	\$81,265	0.89	3,037		0.7%	8,736	3,497	4,967	273	0.3%
81	Other Services (except Public Administration)	84,770	\$43,552	0.95	-9,443		-2.1%	11,285	4,319	5,961	1,004	1.2%
42	Wholesale Trade	77,945	\$91,660	0.99	267		0.1%	9,221	3,208	5,472	542	0.7%
11	Agriculture, Forestry, Fishing and Hunting	74,079	\$43,999	2.72	1,040		0.3%	10,203	4,163	5,314	727	1.0%
52	Finance and Insurance	57,653	\$97,573	0.69	-2,943		-1.0%	5,923	2,060	3,375	487	0.8%
55	Management of Companies and Enterprises	50,069	\$134,869	1.54	2,699		1.1%	5,095	1,756	2,982	356	0.7%
51	Information	40,418	\$114,434	0.95	2,127		1.1%	4,600	1,412	2,558	631	1.6%
71	Arts, Entertainment, and Recreation	39,044	\$34,437	0.96	-1,359		-0.7%	6,556	2,448	3,384	724	1.9%
53	Real Estate and Rental and Leasing	36,743	\$62,254	0.99	2,876		1.6%	4,017	1,711	2,108	198	0.5%
22	Utilities	9,434	\$111,383	0.90	372		0.8%	910	331	579	1	0.0%
99	Unclassified	6,282	\$81,441	1.56	5,538		53.2%	820	308	437	75	1.2%
21	Mining, Quarrying, and Oil and Gas Extraction	1,672	\$70,070	0.23	-215		-2.4%	189	57	118	15	0.9%
-	Total - All Industries	2,086,876	\$65,389	1.00	66,974		0.7%	263,111	100,969	140,562	21,580	1.0%

Source: JOLTCOR  
Data as of 2023Q1  
Note: Figures may not sum due to rounding.  
1. All data based upon a four-quarter moving average.  
Exits and transfers are approximate estimates based upon occupation separation rates.

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## Summary

- Fed target of 2% inflation dictates future rate increases
- We still expect recession in 2024
- Federal spending & reshoring will support some industries
  - Semiconductors
  - Pharmaceuticals
- Regional growth dependent on industry mix

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