

BACK THROUGH THE LOOKING GLASS(ES)

An Actuarial and Economic Look at the Workers Compensation System

CAS RPM Seminar – March 15, 2022

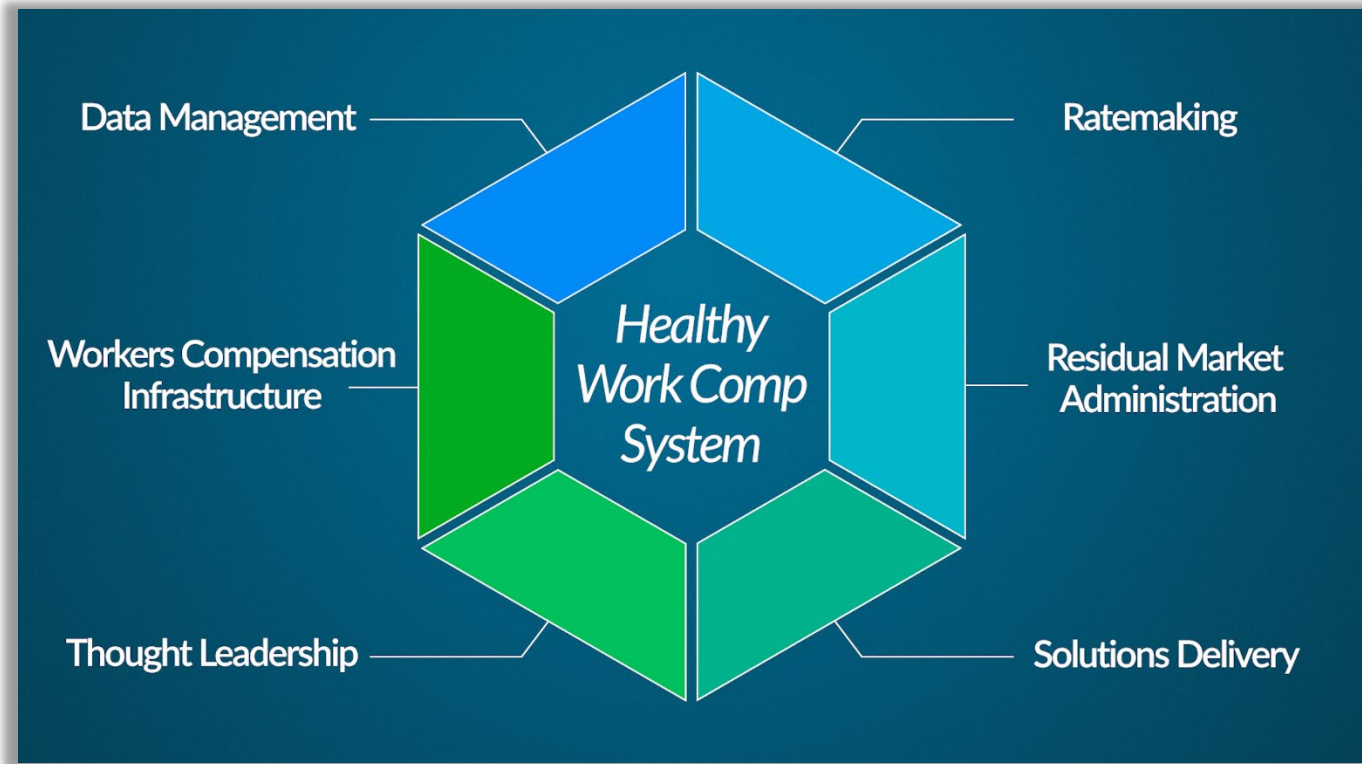
Patrick Coate, PhD
Economist II

Carolyn Wise, ACAS, MAAA
Manager & Associate Actuary

Learning Objectives

1. Discuss a variety of workers compensation topics.
2. Provide an overview of financial results, recent trends, the changing labor force, and inflation.
3. Discuss results from both actuarial and economic perspectives.

NCCI Core Services



Familiar Challenges With New Wrinkles



Rate
Adequacy

Medical
Inflation



The Economy

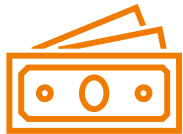
Shifting
Workforce/
Workplace



2020 Financial Results Recap

2021 Workers Compensation Insights

Net Written Premium



1% increase

Reported Combined Ratios



CY 2021	AY 2021
87%	102%

Claim Frequency



1% decline
since 2019

Source: NAIC's Annual Statement data.
Claim frequency excludes COVID-19 claim experience.

P&C Industry Net Written Premium Growth

Private Carriers

Line of Business	2020 (\$B)	2021p (\$B)	% Change From 2020
Personal Auto	243.3	252.8	
Homeowners	96.2	103.4	
Other Liability (Incl. Product Liability)	73.5	88.4	
Commercial Auto	39.9	46.0	
Commercial Multi-Peril	40.9	43.5	
Fire & Allied Lines (Incl. Earthquake)	35.7	41.8	
Workers Compensation	38.0	38.3	0.7
All Other Lines	82.4	94.1	
Total P&C Industry	650.1	708.2	8.9

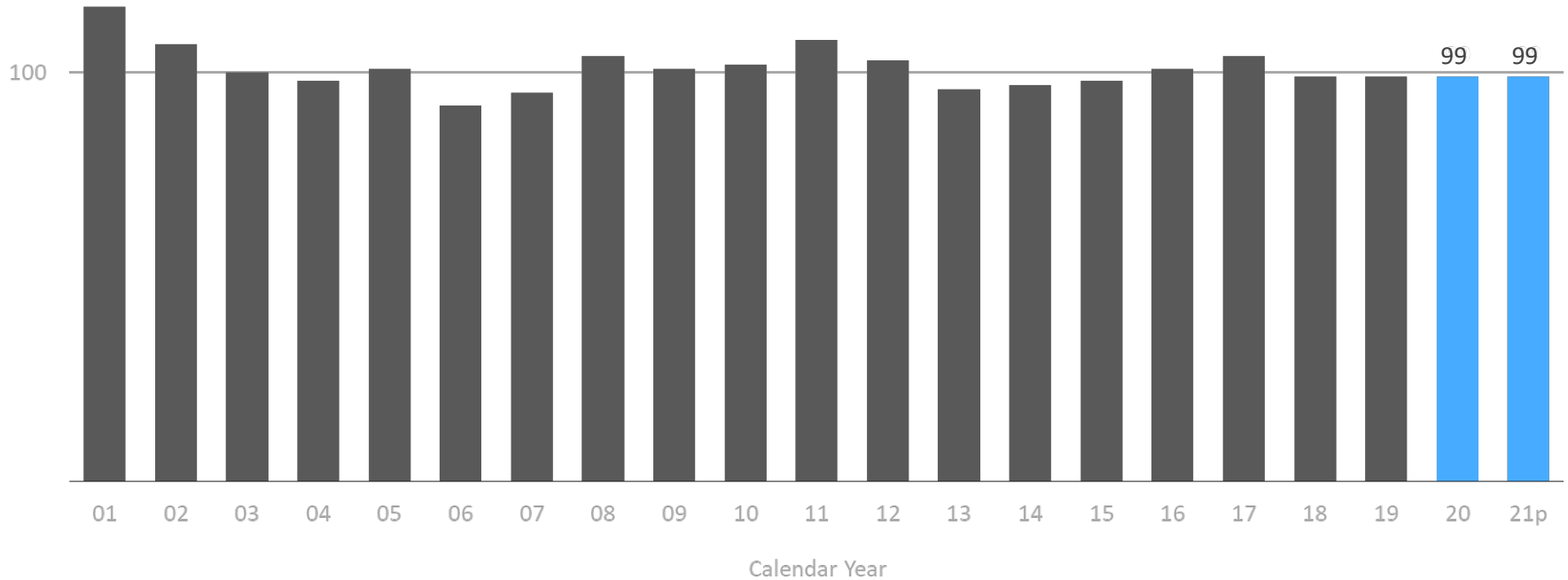
p Preliminary
Source: NAIC's Annual Statement data for individual carriers prior to consolidation of affiliated carriers



P&C Industry Net Combined Ratio

Private Carriers

Percent



p Preliminary

Sources: 2001–2008 and 2013–2021p NAIC's Annual Statement data; 2009–2012 Insurance Services Office (ISO)



P&C Industry Net Combined Ratio

Private Carriers

Line of Business	2020 (%)	2021p (%)	Difference From 2020
Personal Auto	93	101	8
Homeowners	107	104	-3
Other Liability (Incl. Product Liability)	105	97	-8
Commercial Auto	102	99	-3
Commercial Multi-Peril	110	106	-4
Fire & Allied Lines (Incl. Earthquake)	103	99	-4
Workers Compensation	87	87	0
All Other Lines	98	92	-6
Total P&C Industry	99	99	0

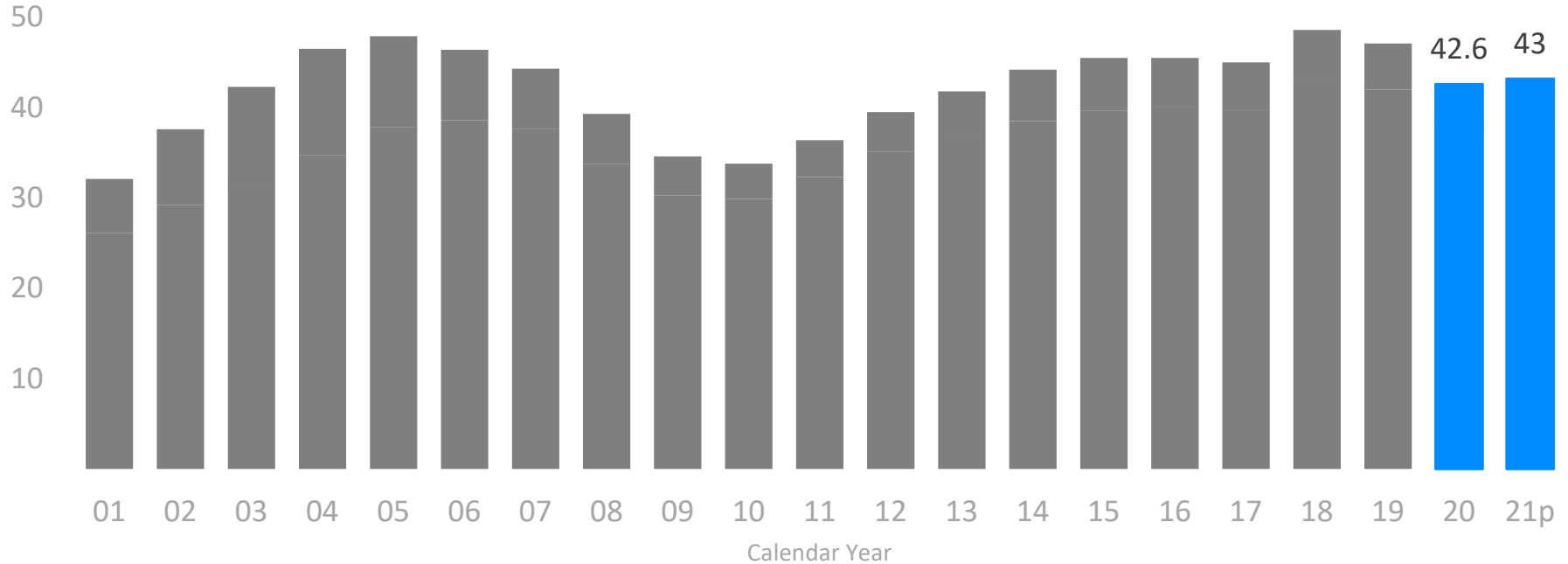
p Preliminary
Source: NAIC's Annual Statement data for individual carriers prior to consolidation of affiliated carriers



WC Net Written Premium

Private Carriers and State Funds

\$ Billions



p Preliminary

Source: NAIC's Annual Statement data; includes state insurance fund data for the following states: AZ, CA, CO, HI, ID, KY, LA, MD, MO, MT, NM, OK, OR, RI, TX, and UT

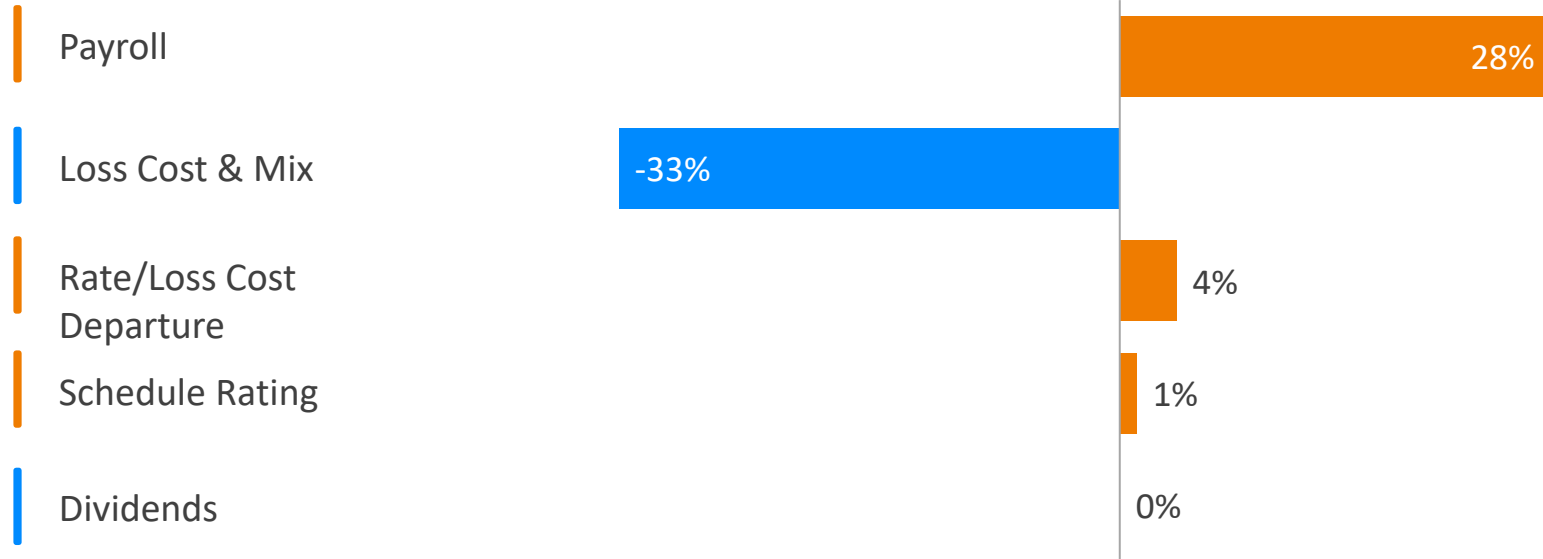
Each calendar year total for state funds includes all funds operating as a state fund in that year



WC Impact on Premium by Component

Private Carriers—NCCI States

2016 vs. 2021



Sources: NCCI's Policy data, NAIC's Annual Statement Statutory Page 14, NCCI's Financial Call data

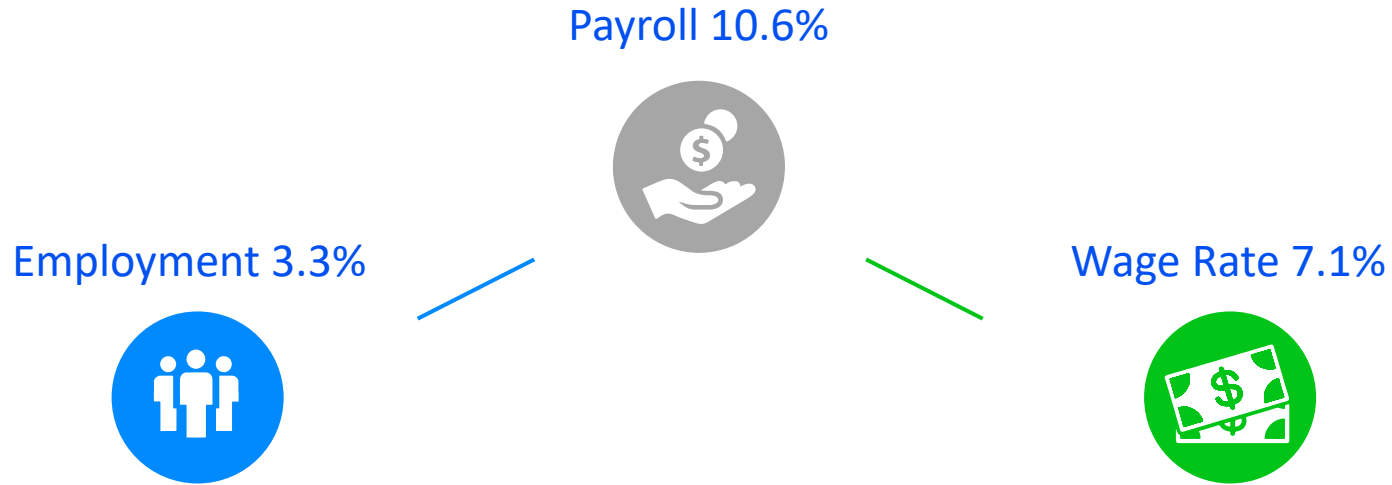
Rate/loss cost departure reflects carrier departure from NCCI rate level, which excludes a profit and contingency provision and expense constant

Based on data for all states where NCCI provides ratemaking services; rate/loss cost departure, schedule rating, and dividends exclude TX



Workplace Environment

Changes in Payroll by Component 2020–2021

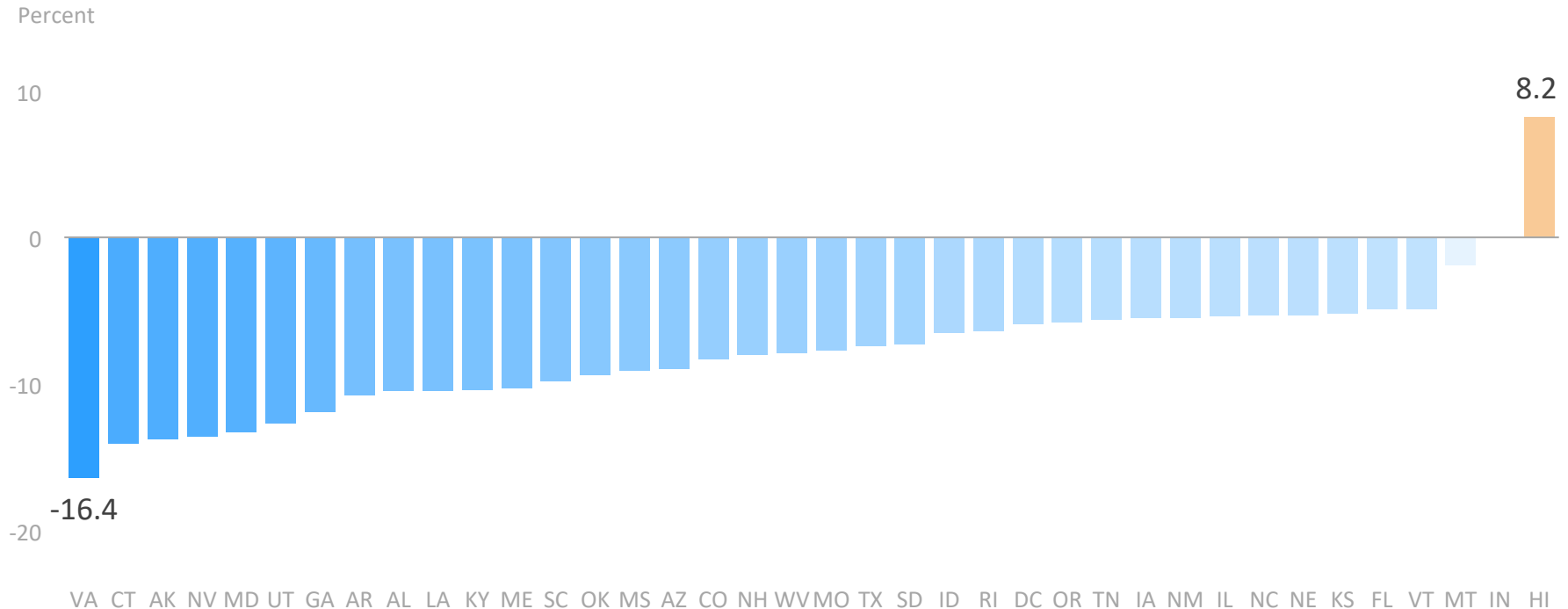


Sources: US Bureau of Labor Statistics; US Bureau of Economic Analysis; NCCI



Most Recent Changes in Bureau Premium Level

Voluntary Market, Excludes Law-Only Filings, Filing Effective Dates ranging from 11/1/2021-8/1/2022

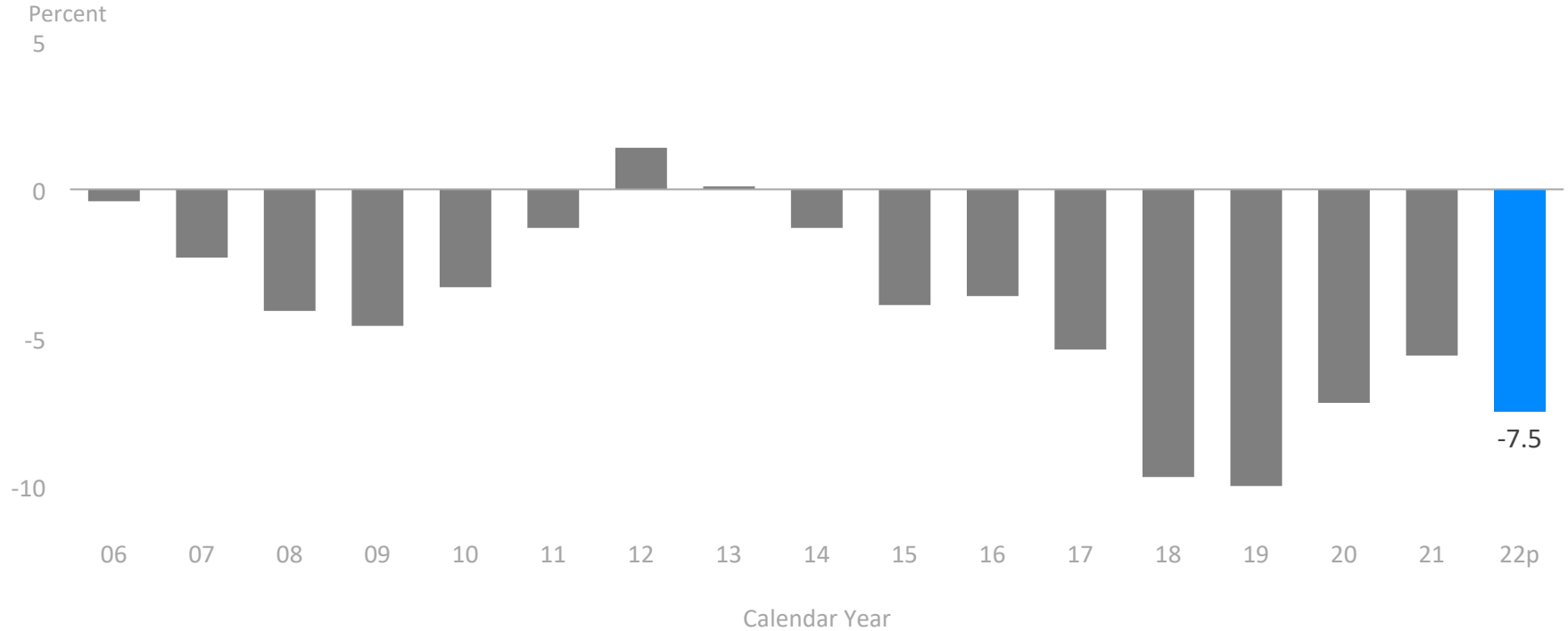


Premium level changes in advisory rates, loss costs, and rating values, as of 5/6/2022, as filed by the applicable rating organization, relative to those previously approved
IN and NC are filed in cooperation with state rating bureaus



WC Approved Changes in Bureau Premium Level

Weighted by Effective Date—NCCI States



p Preliminary

Source: NAIC's Annual Statement Statutory Page 14

Values reflect changes in average premium levels between years, based on approved changes in advisory rates, loss costs, assigned risk rates, and rating values, as of 5/6/2022

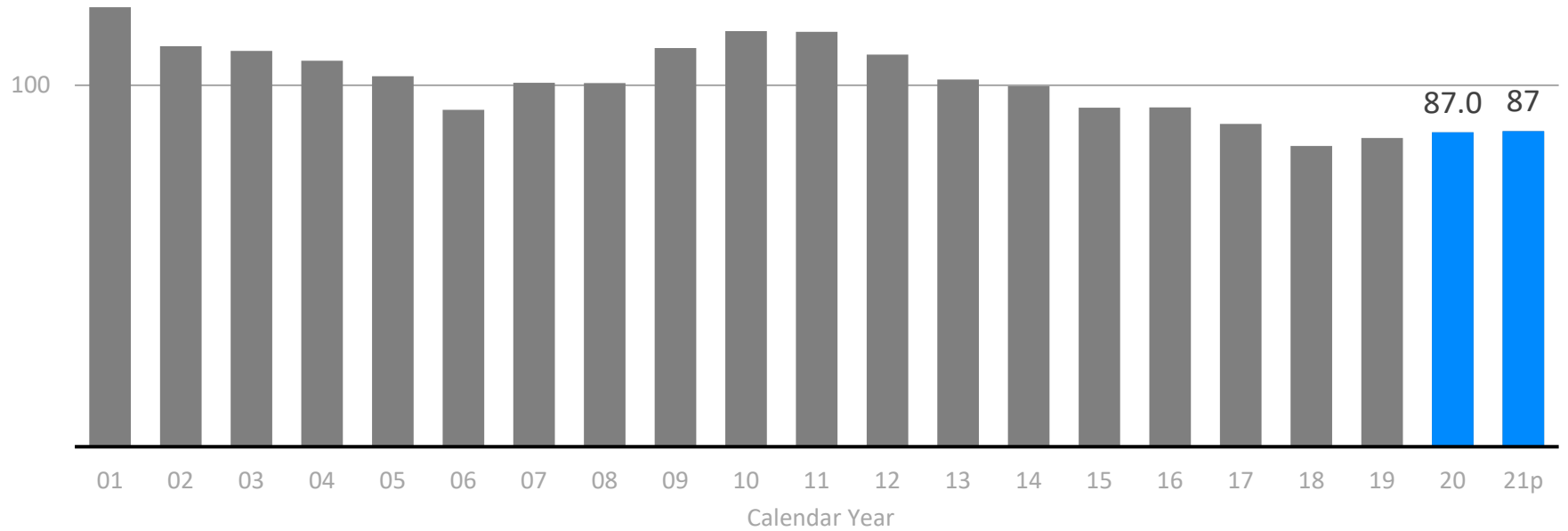
IN and NC are filed in cooperation with state rating bureaus



WC Net Combined Ratio

Private Carriers

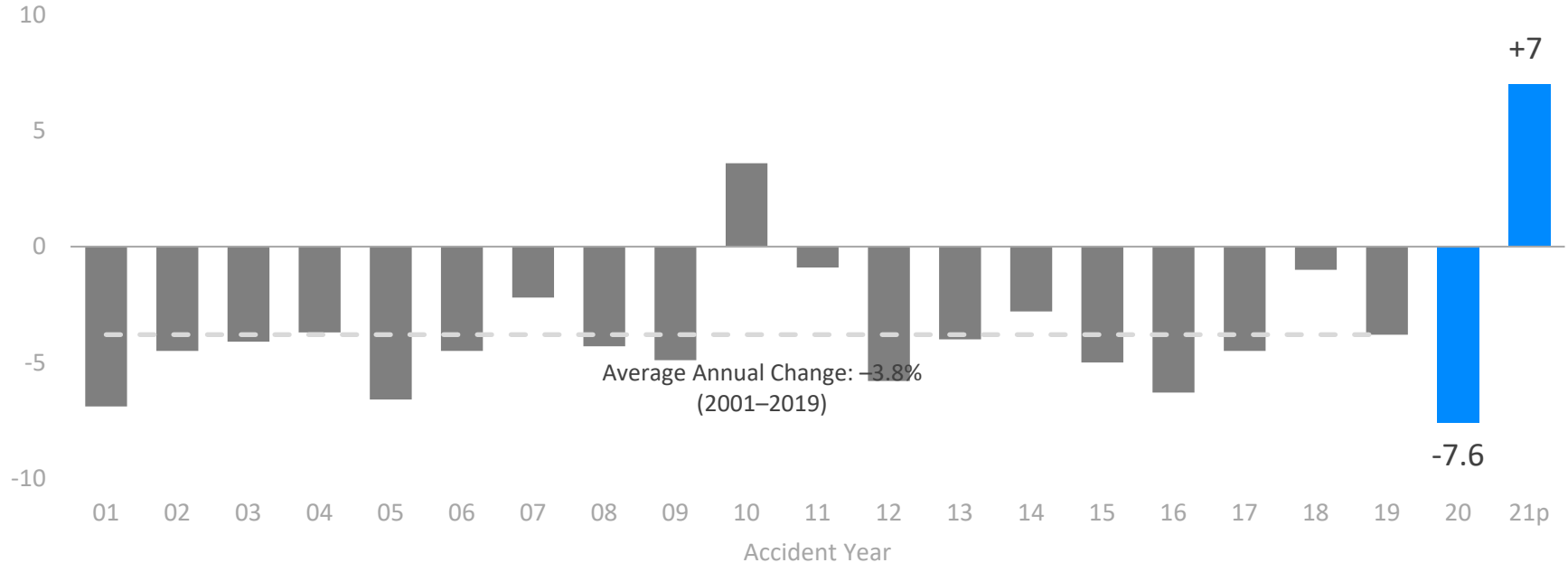
Percent



WC Lost-Time Claim Frequency

Change in Claims per \$1M Pure Premium, Private Carriers and State Funds—NCCI States, Excludes COVID-19 Claims

Percent



2010–2011 and 2019–2021 have been adjusted to reflect the impact of changes in audit activity

p Preliminary, based on data valued as of 12/31/2021; excludes COVID-19 claims

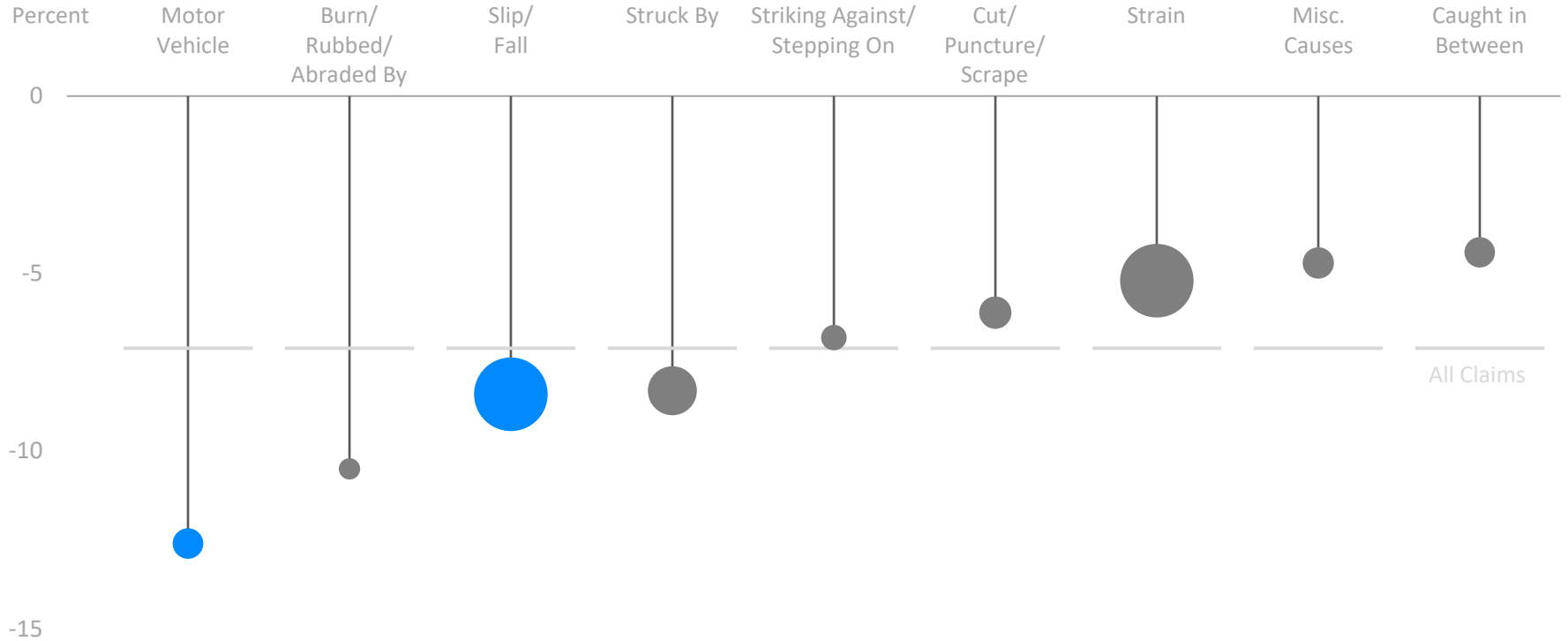
Source: NCCI's Financial Call data, developed to ultimate, premium adjusted to current wage and voluntary pure premium level, excludes high-deductible policies; based on data through 12/31/2020

Includes all states where NCCI provides ratemaking services; NV is excluded through 2001, TX is excluded through 2006, and WV is excluded through 2011



WC Lost-Time Claim Frequency by Cause of Injury

Change in Claims per \$1M Pure Premium, Accident Year 2019–2020p, Private Carriers and State Funds—NCCI States



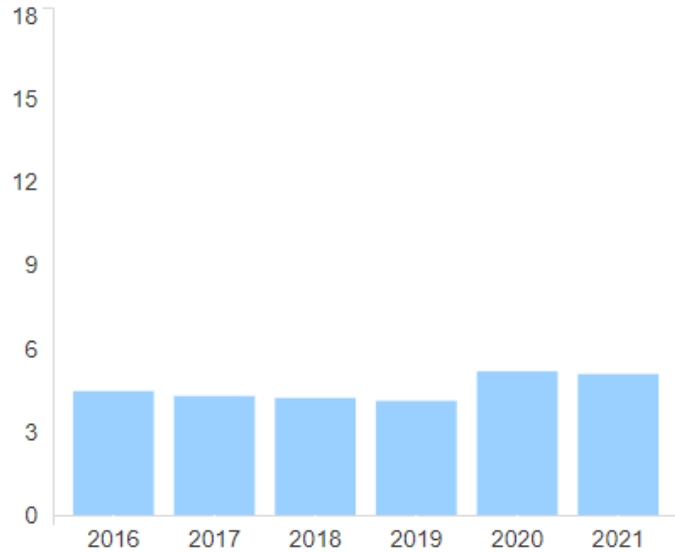
p Preliminary

Source: Based on NCCI's Statistical Plan data at first report, premium adjusted to current wage and voluntary pure premium level, excludes high-deductible policies and COVID-19 claims
Includes all states where NCCI provides ratemaking services

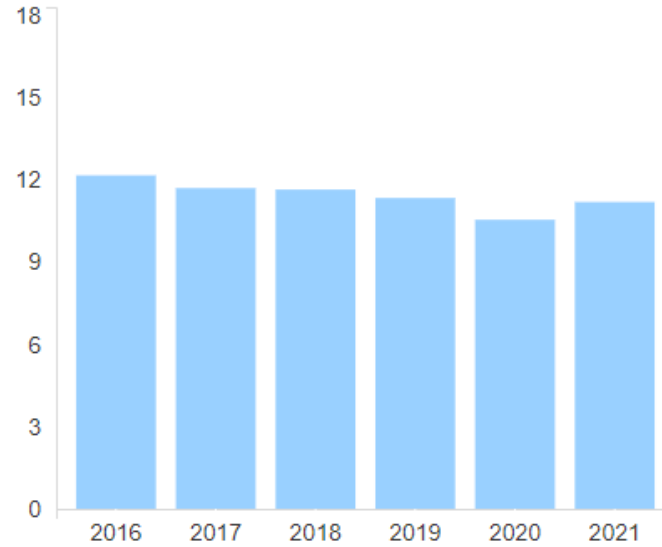


WC Lost-Time Claim Frequency by Size of Loss

Claims between \$0 and \$5,000



Claims between \$5,000 and \$100,000

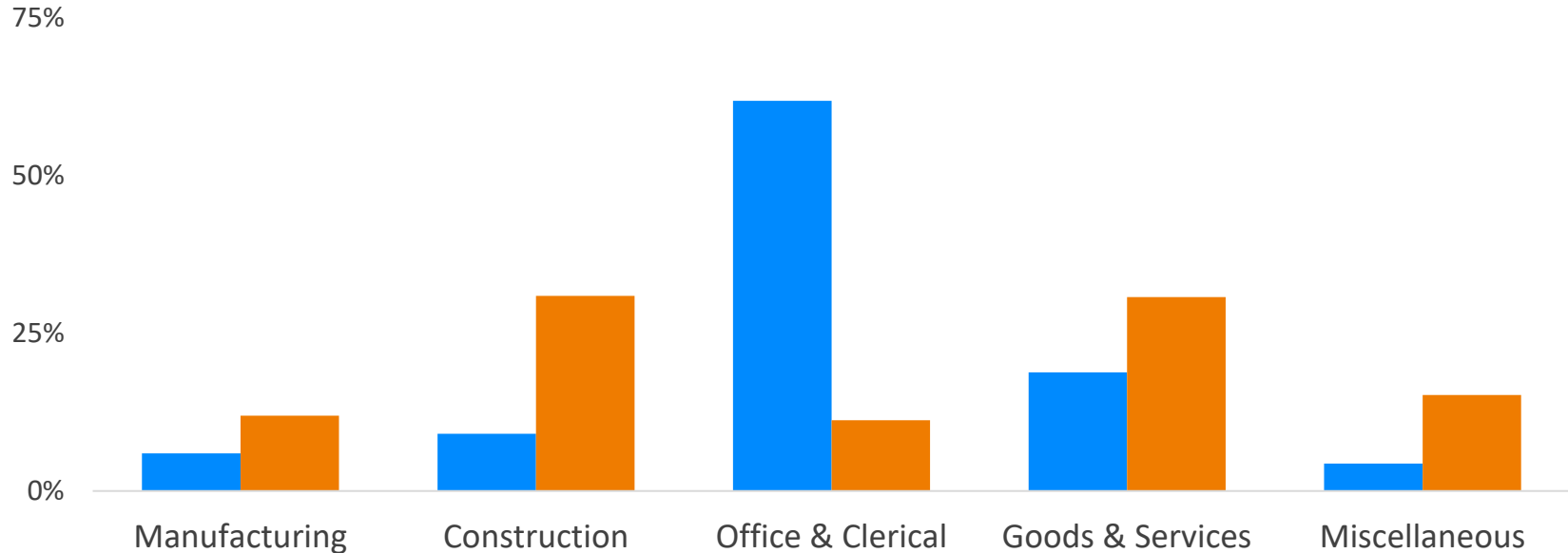


p Preliminary, Includes COVID-19 claim experience

Source: Based on NCCI's Statistical Plan data at first report, premium adjusted to current wage and voluntary pure premium level, excludes high-deductible policies and COVID-19 claims
Includes all states where NCCI provides ratemaking services

Payroll and Premium Shares by Industry Groups

Exposure-Accident Year 2020

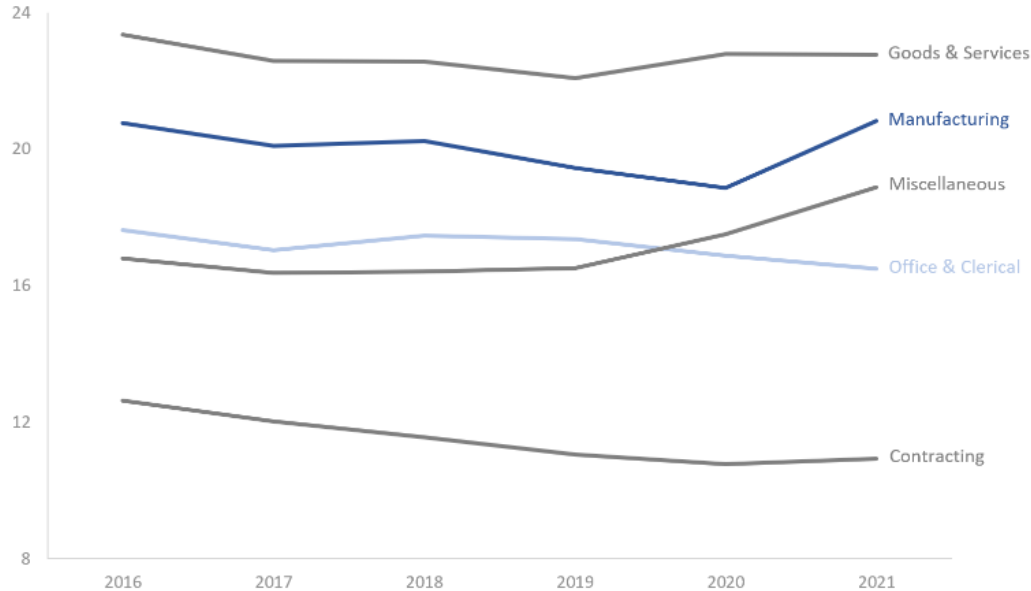


Source: Based on Exposure-Accident Year 2020 data from NCCI's Statistical Plan for all jurisdictions where NCCI provides ratemaking services. Excludes high-deductible policies.

WC Lost-Time Claim Frequency by Industry Group

Average Lost-Time Claim Frequency by Industry Group

Accident Year, Including COVID-19 Claims, First Report



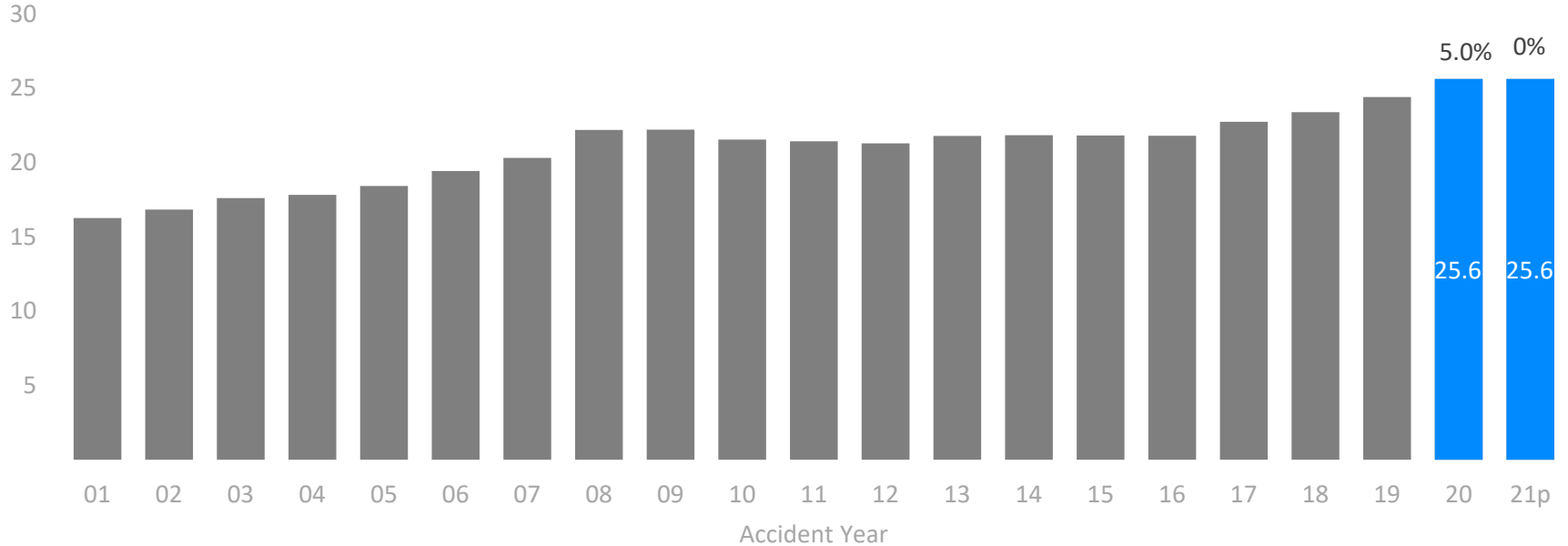
p Preliminary, Includes COVID-19 claim experience

Source: Based on NCCI's Statistical Plan data at first report, premium adjusted to current wage and voluntary pure premium level, excludes high-deductible policies and COVID-19 claims
Includes all states where NCCI provides ratemaking services

WC Average Indemnity Claim Severity

Private Carriers and State Funds—NCCI States, Excludes COVID-19 Claims

Severity
(\$ Thousands)



p Preliminary, based on data valued as of 12/31/2021; excludes COVID-19 claims

Source: NCCI's Financial Call data, developed to ultimate, excludes high-deductible policies; based on data through 12/31/2020

Values displayed reflect the methodology underlying the most recent rate/loss cost filing

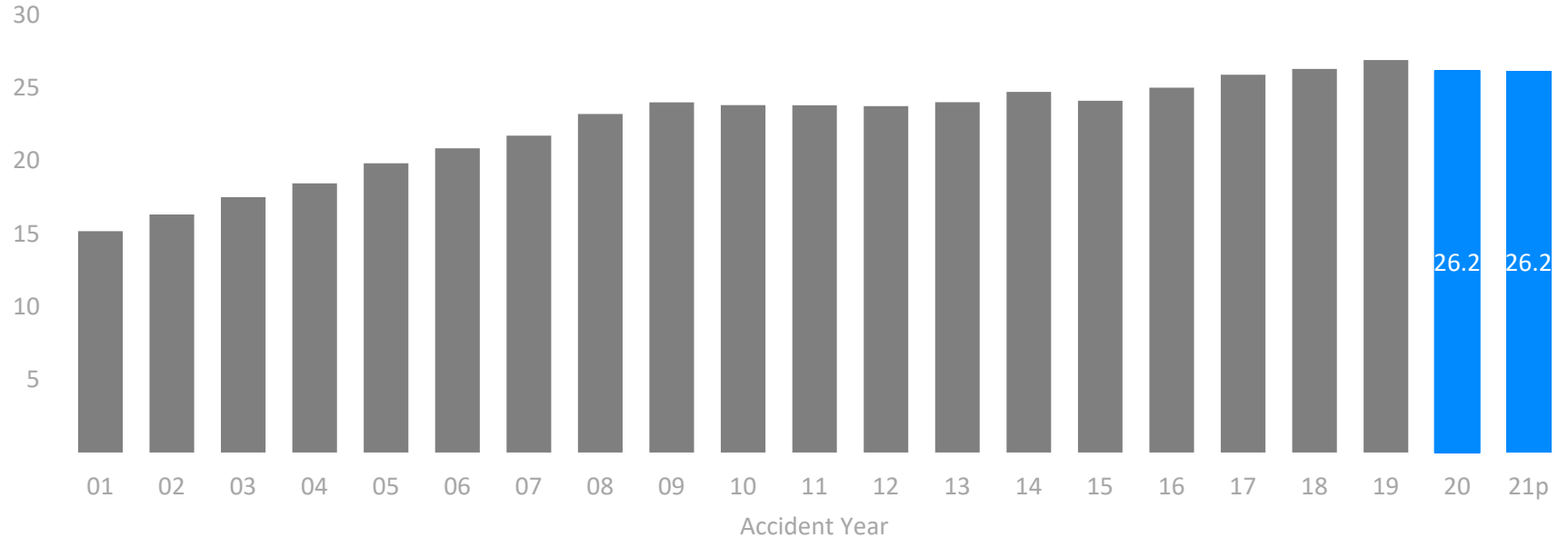
Includes all states where NCCI provides ratemaking services; NV is excluded through 2003, TX is excluded through 2006, and WV is excluded through 2010



WC Average Medical Lost-Time Claim Severity

Private Carriers and State Funds—NCCI States, Excludes COVID-19 Claims

Severity
(\$ Thousands)



p Preliminary, based on data valued as of 12/31/2021; excludes COVID-19 claims

Source: NCCI's Financial Call data, developed to ultimate, excludes high-deductible policies; based on data through 12/31/2020

Values displayed reflect the methodology underlying the most recent rate/loss cost filing

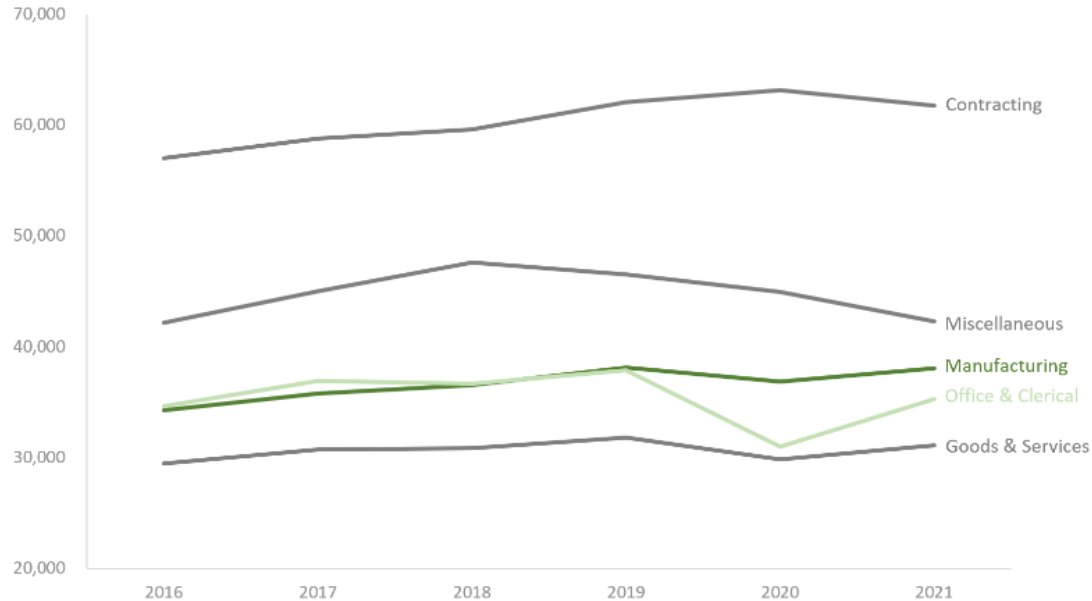
Includes all states where NCCI provides ratemaking services; NV is excluded through 2003, TX is excluded through 2006, and WV is excluded through 2010



WC Lost-Time Claim Severity by Industry Group

Average Lost-Time Claim Severity by Industry Group

Accident Year, Including COVID-19 Claims, First Report



p Preliminary, Includes COVID-19 claim experience

Source: Based on NCCI's Statistical Plan data at first report, premium adjusted to current wage and voluntary pure premium level, excludes high-deductible policies and COVID-19 claims

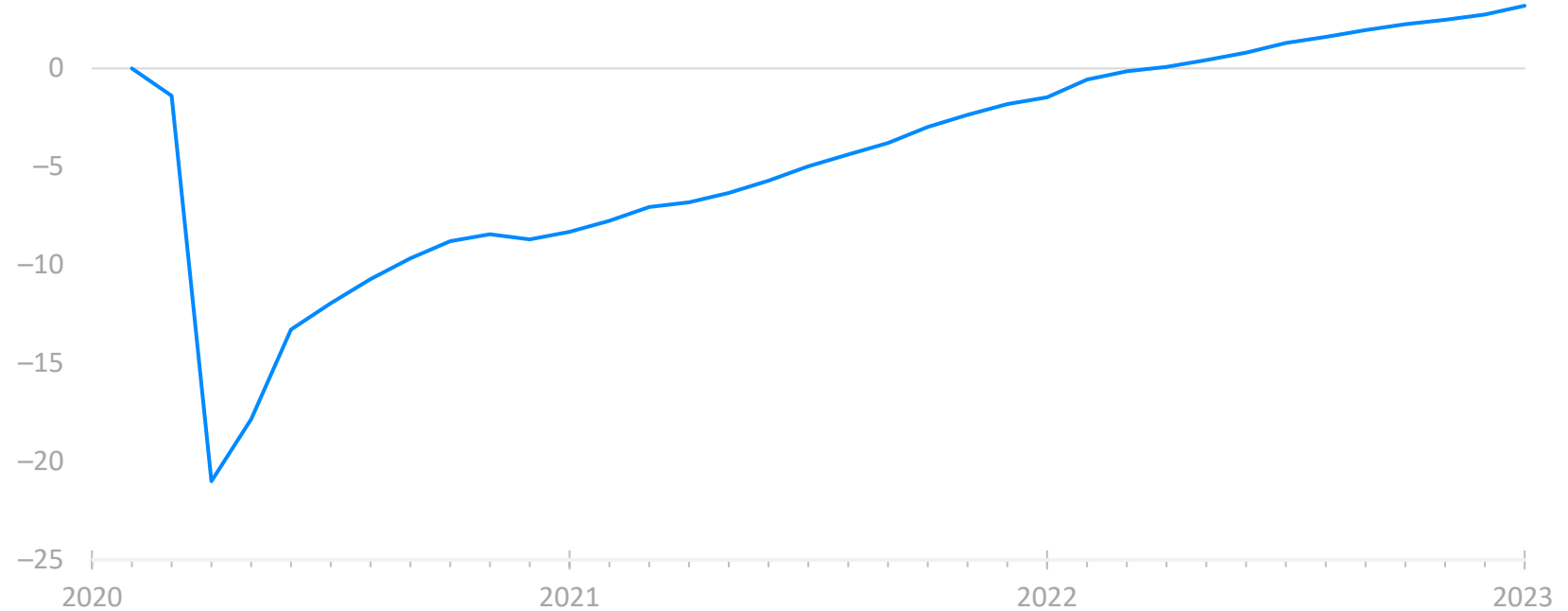
Includes all states where NCCI provides ratemaking services

The Economy

Employment Gap Fully Closed in Mid-2022

Private Industry Employment Since the Pandemic's Start

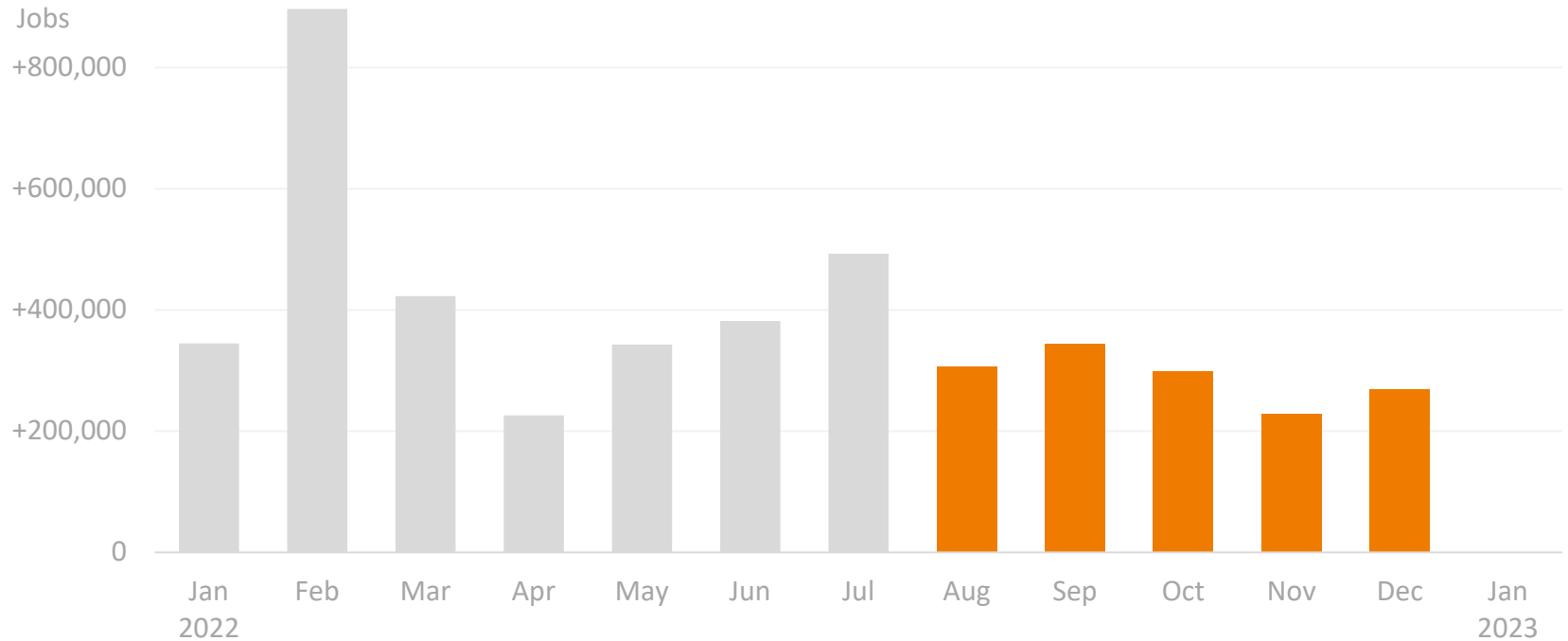
Millions



Source: US Bureau of Labor Statistics

Steady but Slower Job Growth in the Second Half of 2022

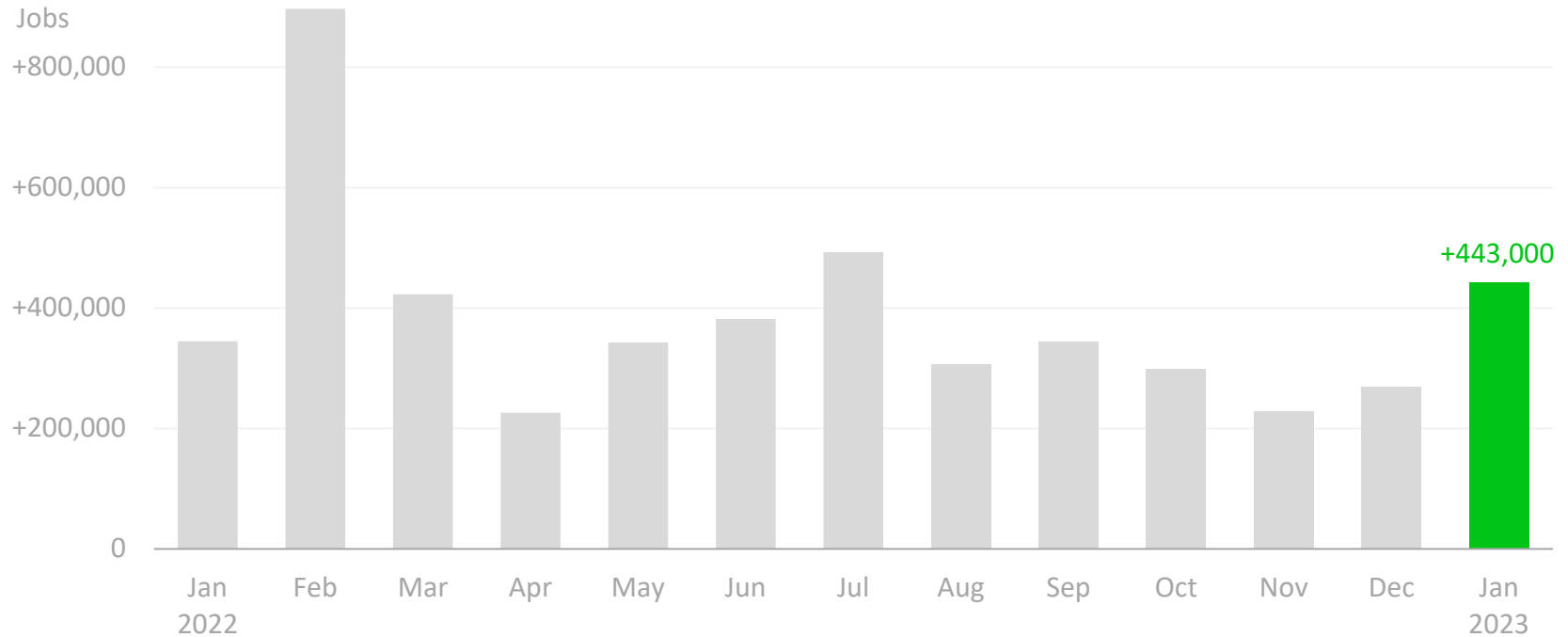
Monthly Change in Private Industry Employment



Source: US Bureau of Labor Statistics

...But a Big Employment Gain in January 2023

Monthly Change in Private Industry Employment



Source: US Bureau of Labor Statistics

Some Sectors Had Big Employment Changes

Cumulative Employment Changes Through January 2023

Sector	No. of Jobs	%
Professional and Business Services	+1,475,000	+6.9
Transportation, Warehousing, and Utilities	+962,500	+15.2
Health Care and Social Assistance	+278,400	+1.3
Construction	+276,000	+3.6
Financial Activities	+245,000	+2.8
Manufacturing	+214,000	+1.7
Information	+211,000	+7.3
Retail and Wholesale Trade	+110,800	+0.5
Educational Services	+82,500	+2.2
Mining and Logging	-55,000	-8.0
Other Services	-121,000	-2.0
Leisure and Hospitality	-495,000	-2.9
Total Private	+3,184,000	+2.5

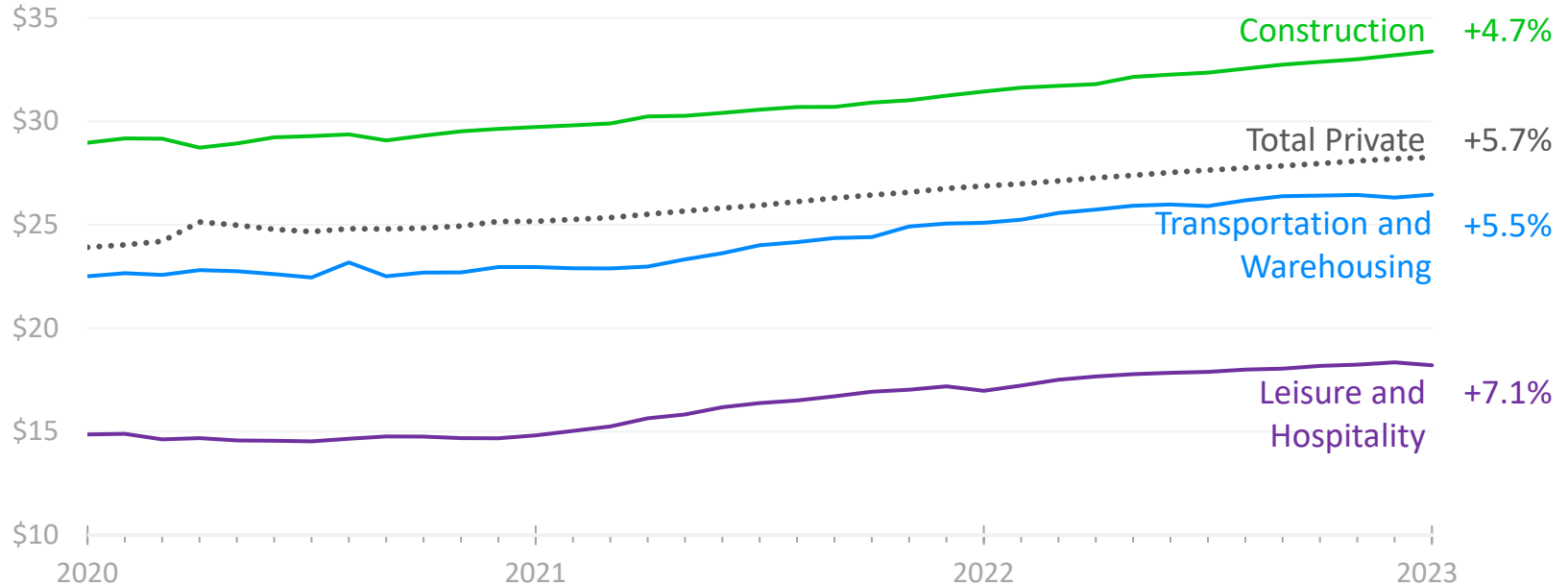
Source: US Bureau of Labor Statistics

Wage Growth Is Still High

Production and Nonsupervisory Workers

Average Hourly
Earnings

Average Annual
Wage Growth

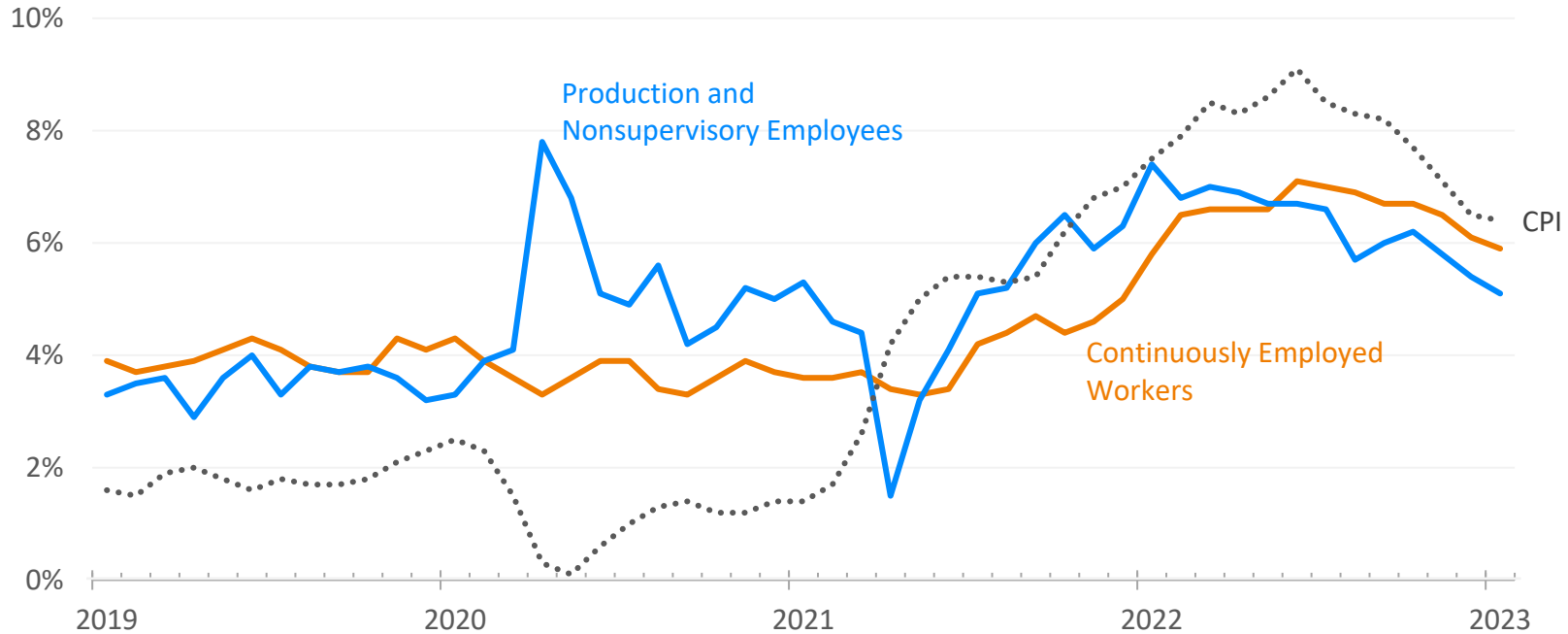


Source: US Bureau of Labor Statistics

Inflation

Wage Increases Are Not Keeping Up With Inflation

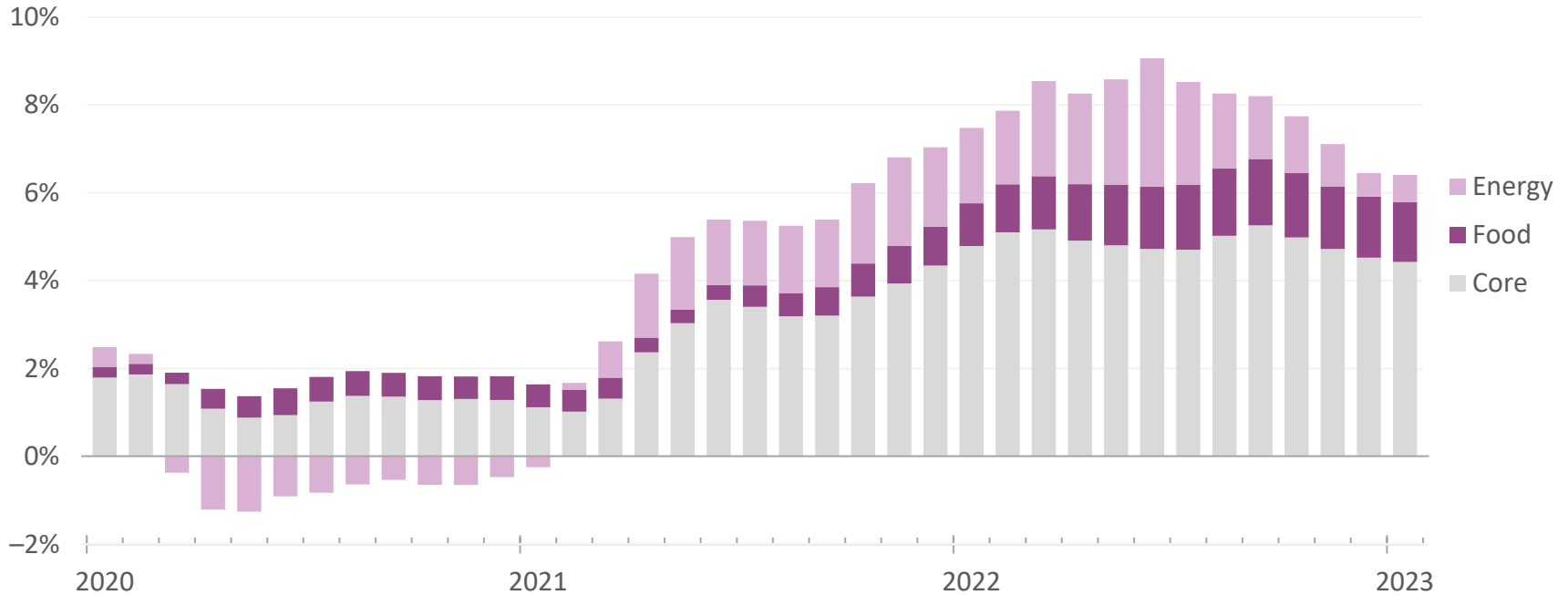
Hourly Earnings and Consumer Price Index (CPI), YoY Change



Sources: US Bureau of Labor Statistics; Atlanta Fed's Wage Growth Tracker

Core Inflation Is Declining Slowly

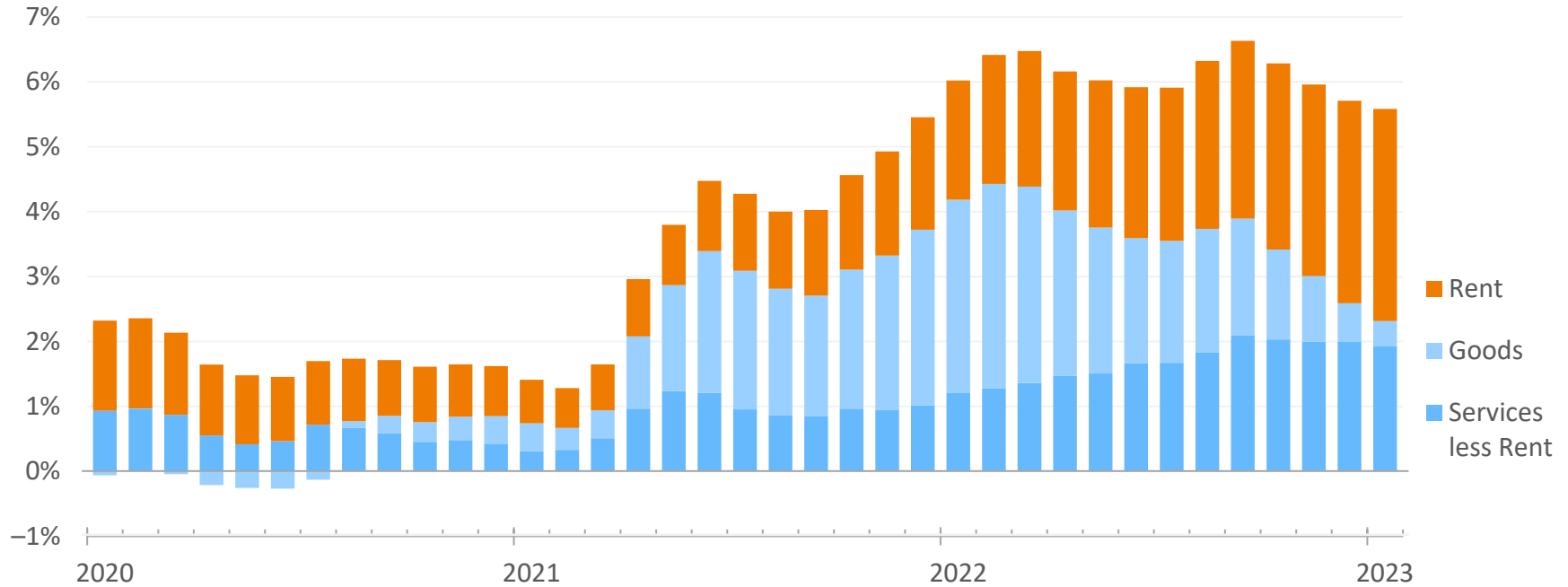
Total CPI Inflation and Components, YoY Change



Core CPI excludes food and energy
 Source: US Bureau of Labor Statistics

CPI for Goods Dropped in 2022, Services and Rent Did Not

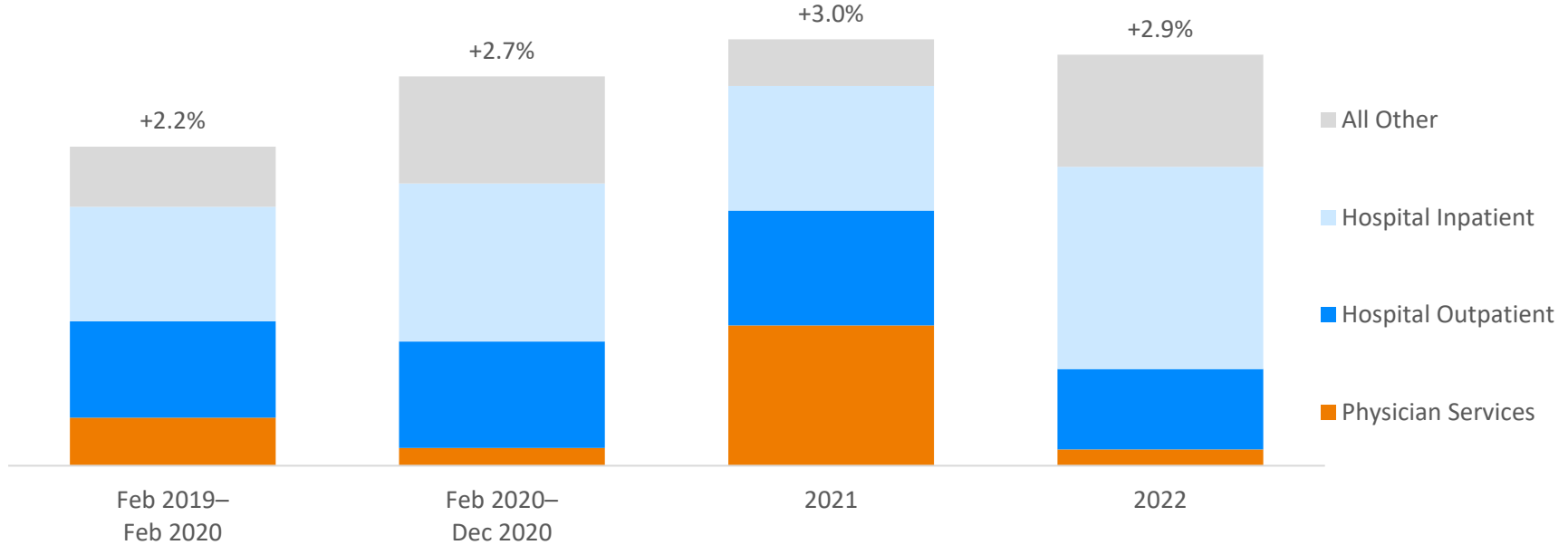
Core CPI Inflation and Components, YoY Change



Source: US Bureau of Labor Statistics; NCCI

Health Care Inflation

Health Care PPI and Components, Annualized Changes

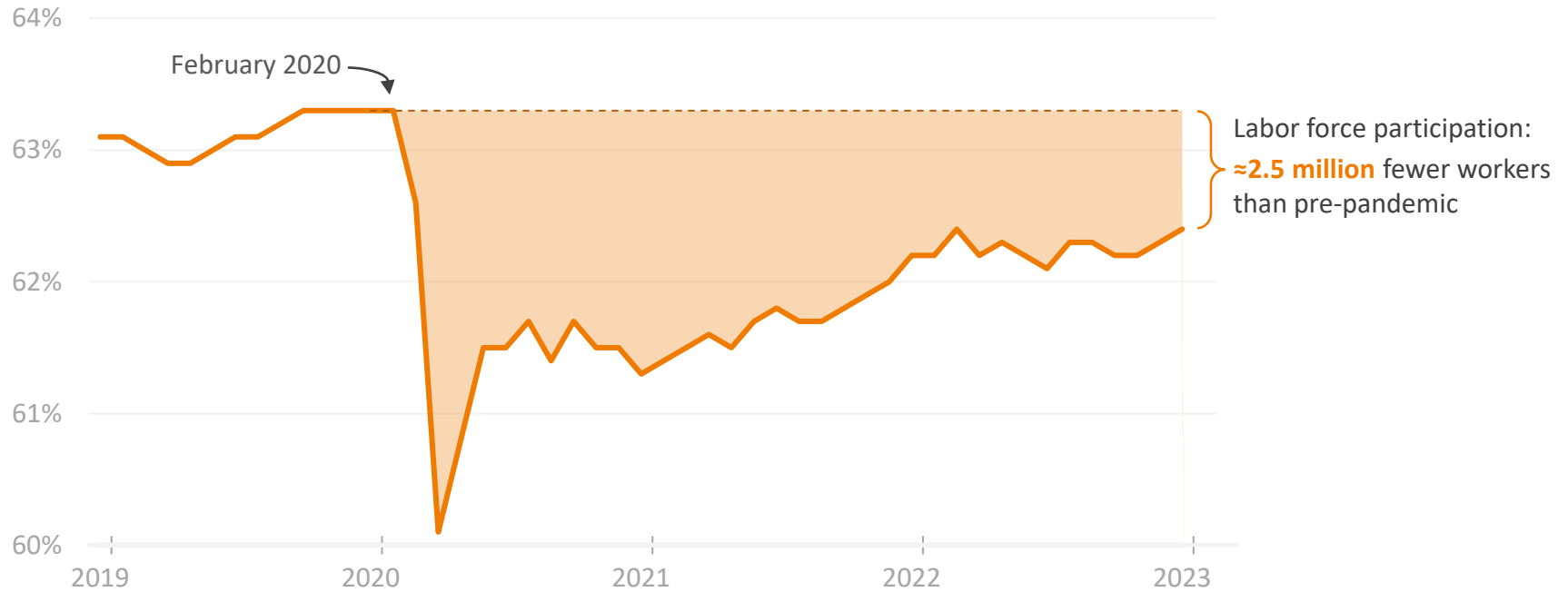


Source: US Bureau of Labor Statistics

Shifting Workforce

Labor Force Participation Remains Below Pre-Pandemic Rate

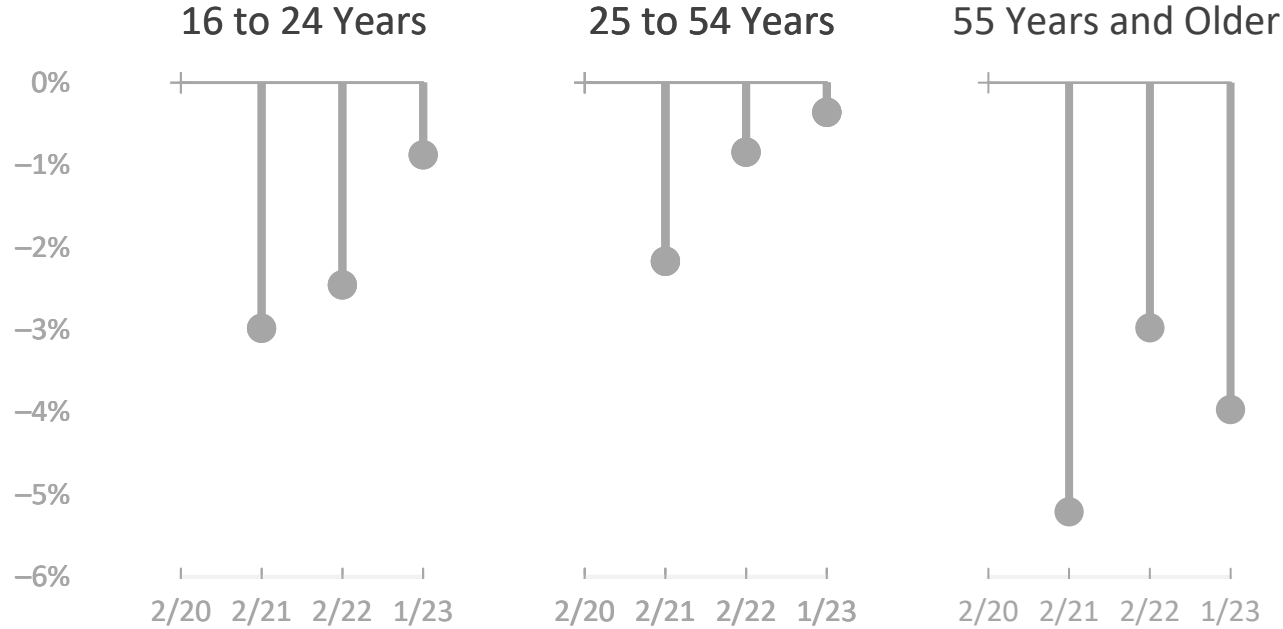
Labor Force Participation Rate



Source: US Bureau of Labor Statistics

Older Workers Slowest to Return to the Labor Force

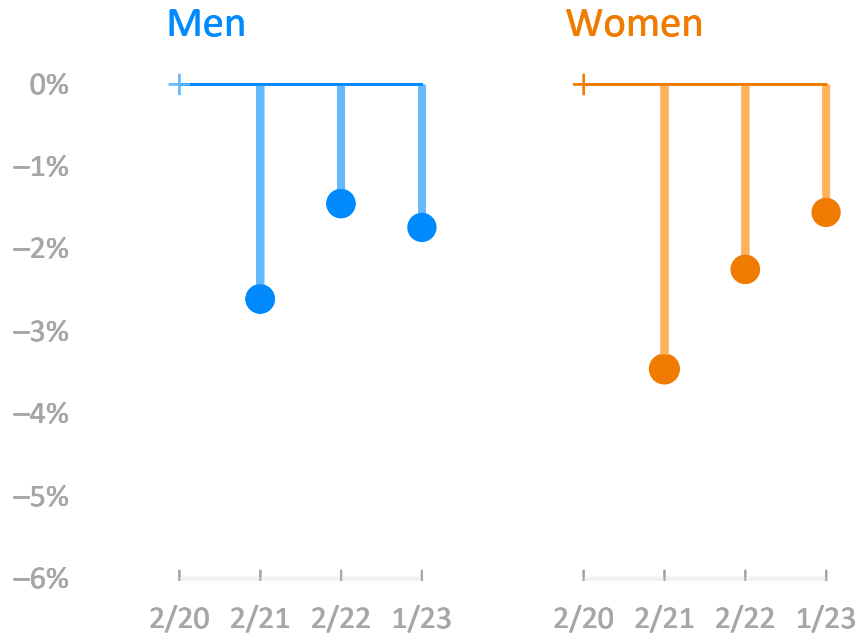
Change in the Labor Force Participation Rate Since February 2020



Source: US Bureau of Labor Statistics

Women Are Returning to the Workforce

Change in the Labor Force Participation Rate Since February 2020

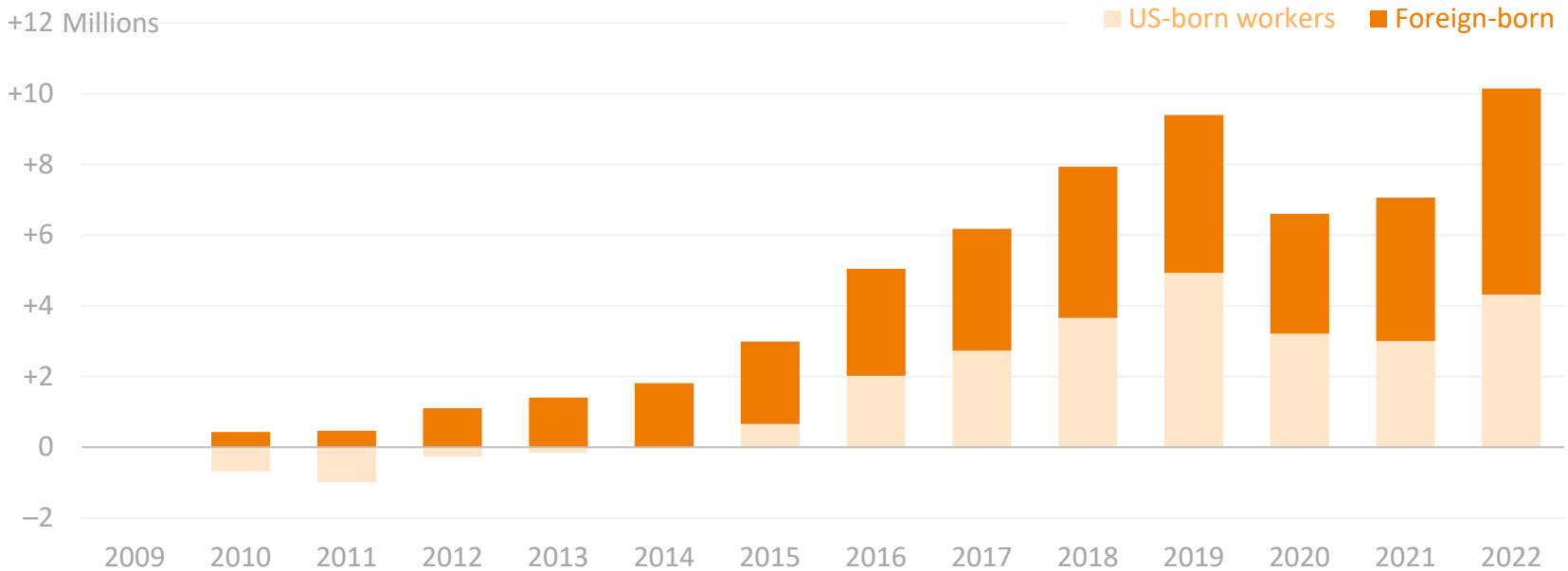


January 2023: The change in labor force participation since February 2020 is now similar for **men** and **women**

Source: US Bureau of Labor Statistics

Foreign-Born Workers Make Outsized Contributions to Labor Force Growth

Cumulative Growth in the US Labor Force Since the Great Recession



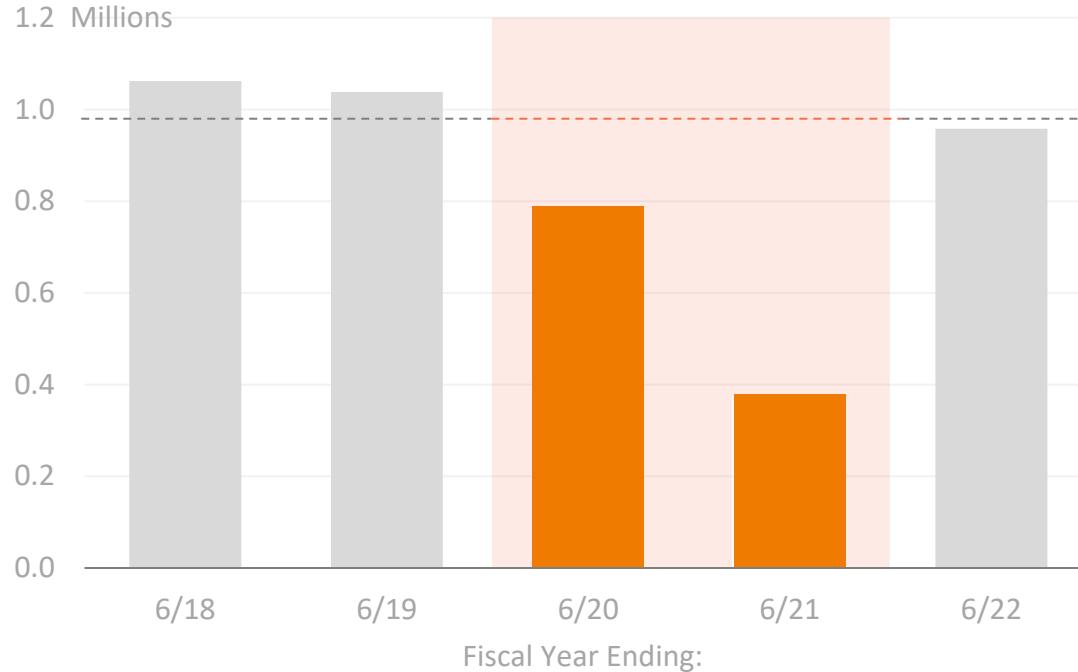
Source: US Bureau of Labor Statistics

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Immigration Slowed Substantially During the Pandemic

Work and Immigrant Visas Issued

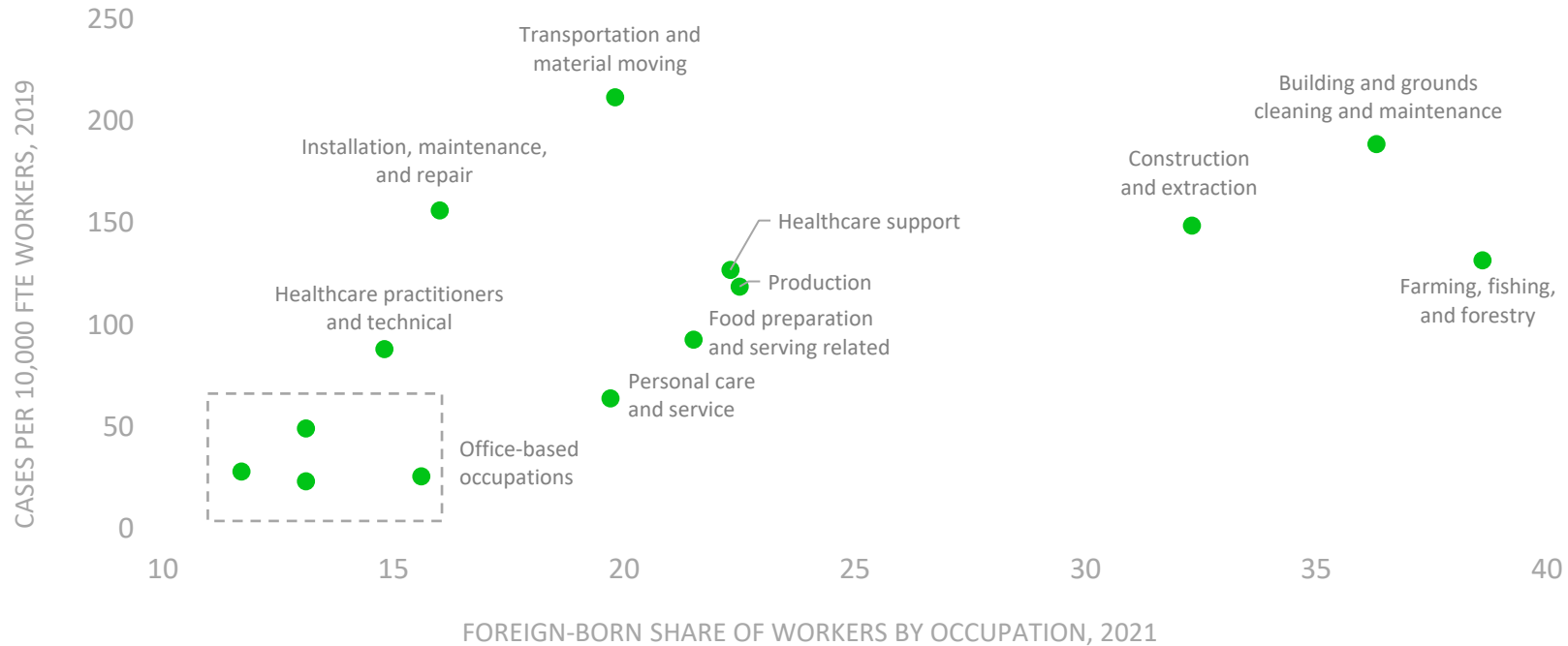


In **2020** and **2021**, immigration dropped below the historical average

Fiscal year (FY) values represent July 1–June 30; for example, FY 2020 covers the period July 1, 2019–June 30, 2020
Source: US Census Bureau

Worker Occupation, Birthplace, and Frequency

Foreign-Born Share of Workers in Relation to Workplace Frequency by Occupation



Workplace-related injury and illness cases with days away from work per 10,000 full-time equivalent (FTE) workers

Office-based occupations include professional, sales, management, and administrative occupations

Source: US Bureau of Labor Statistics

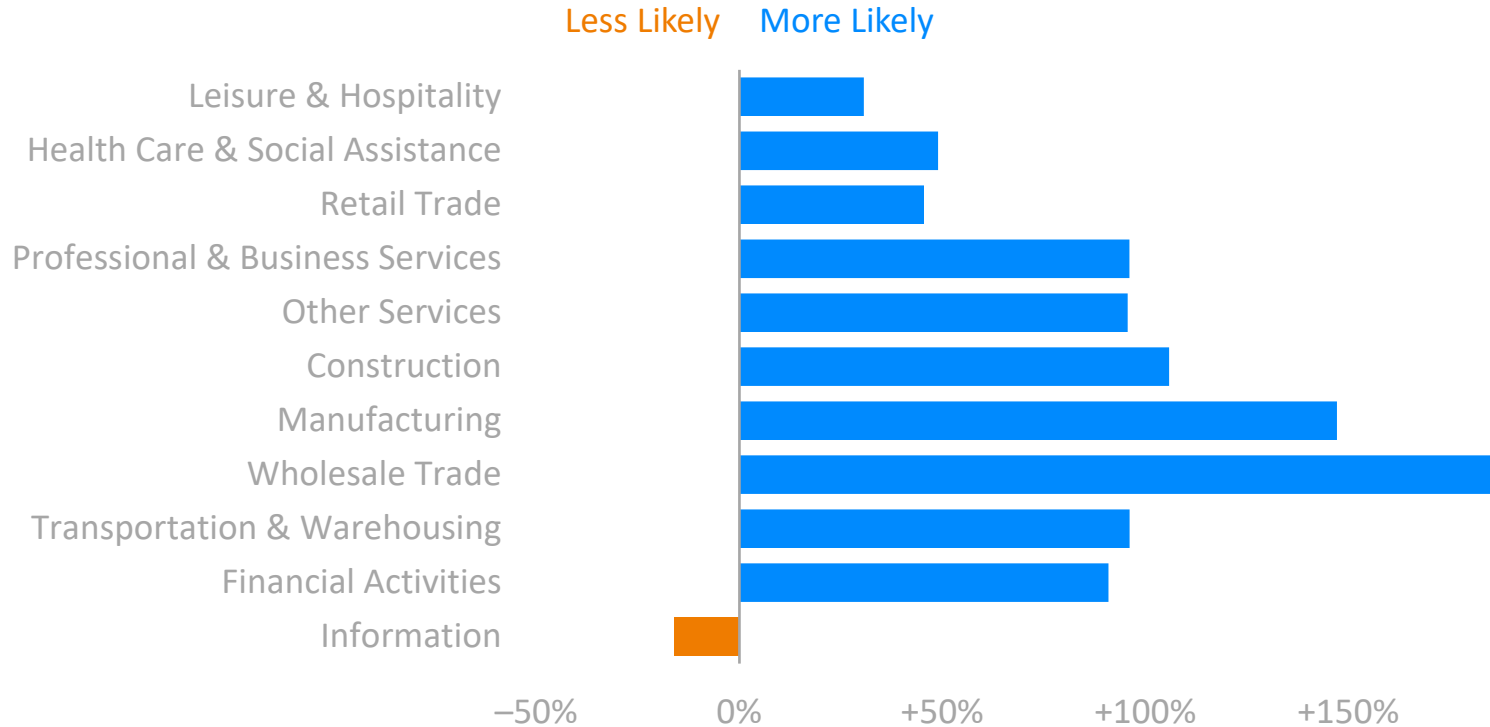
Great Reshuffle: Workers Compensation Impacts

- Changing industry mix
- More remote work
- More short-tenured workers
- Is the Great Reshuffle over?



Short-Tenure Workers: Comparative Injury Frequency

Injury Frequency Relative to Full-Tenure Workers

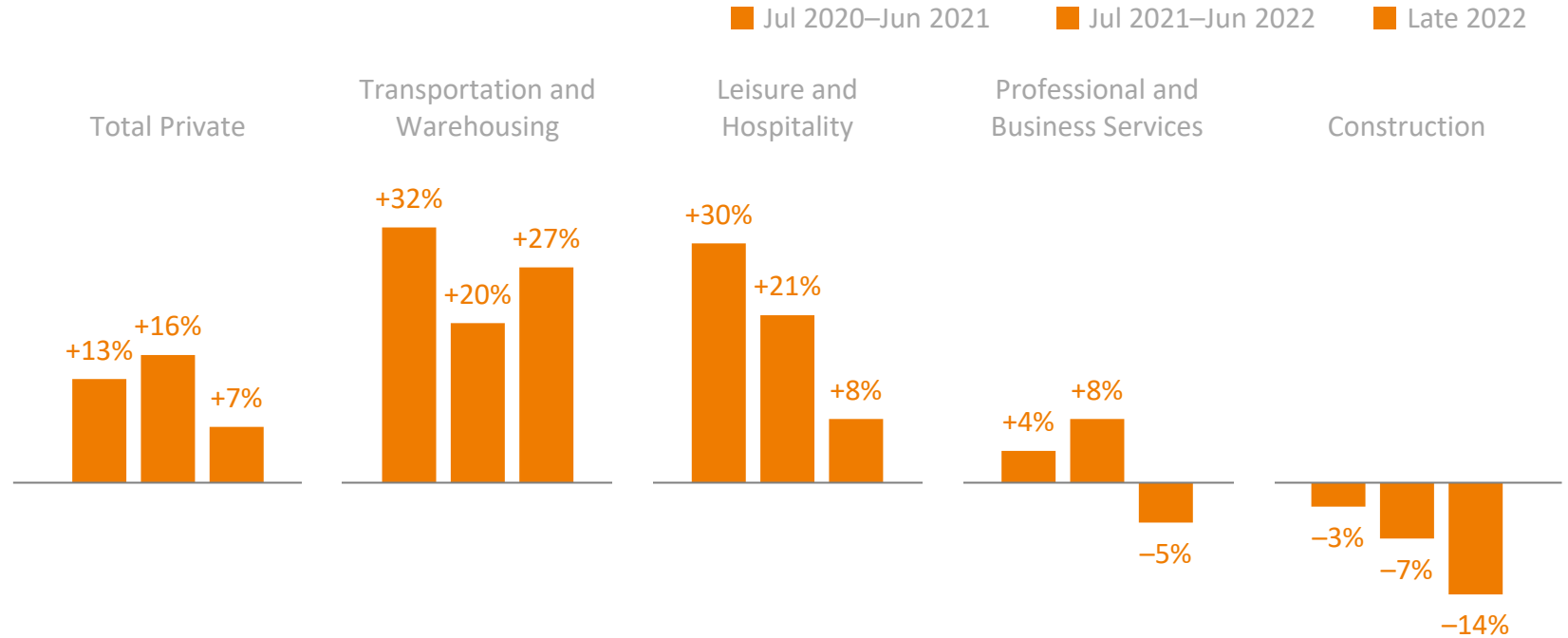


Sources: US Bureau of Labor Statistics; IPUMS–CPS; IPUMS–ACS; NCCI

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Hiring Slowed in Late 2022

Hire Rates Compared to Pre-Pandemic Average



Source: US Bureau of Labor Statistics

Relative Frequency by Industry Group

Per \$1M Premium



Source: Based on Accident Year 2020 data from NCCI's Statistical Plan for all jurisdictions where NCCI provides ratemaking services. Excludes COVID-19 and high-deductible experience.

Impact on Aggregate Frequency by Component

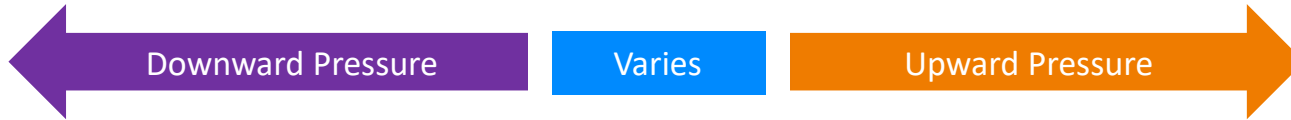
Remote Work



Many office employees are now **working remotely**, which is expected to put **downward pressure** on overall frequency.

Short-Tenure Workers

An increase in the number of **short-tenure** workers is expected to put **upward pressure** on overall frequency.



Industry Mix

The changing **industry mix** may **increase or decrease** frequency, depending on 1) which **sectors** are changing and by how much, and 2) the selected frequency **metric**.



Learn More on ncci.com

The screenshot shows the NCCI website homepage. At the top left is the NCCI 100 Years logo with the tagline 'The Source You Trust'. To the right is a search bar and a navigation menu with links for 'About Us', 'Careers', 'Contact Us', 'Learning Center', 'Log In', and 'My Profile'. Below the navigation is a secondary menu with links for 'Data Reporting', 'Industry Information', 'Residual Markets', 'Underwriting', 'Agents/Brokers', and 'Insights'. The main banner features the text 'Build Your Ratemaking and Actuarial Toolbox' over a background of financial charts. Below the banner is a row of six buttons: 'Order Mods and Worksheets', 'Look Up a Class Code or Rate', 'Access Data Reporting Resources', 'Access Circulars', 'Access Manuals', and 'Submit an Assigned Risk Application'. The page is divided into three columns of content tiles. The first column, 'SOLUTIONS', includes a tile for 'Our latest enhancements' with a laptop image and a link to 'Get Quick Access to Rate Filing Details Through State Insight'. The second column, 'ABOUT US', features a large 'NCCI's HISTORY 1923-2023' tile celebrating 100 years of excellence. The third column, 'INSIGHTS', includes a tile for 'Spotlight on key issues' with an image of workers and a link to 'An Interactive View of Workers Compensation Frequency and Severity'. A second row of tiles includes 'EVENTS AND PROGRAMS' with a 'COVID-19 and Work Comp—Phase II of the Multibureau Study', 'LEARNING CENTER' with 'Announcing NCCI Academy', and 'COVID-19 Resource Center' with 'COVID-19 and Workers Compensation: What You Need to Know'.

Thought Leadership

WORKERS COMPENSATION INSIGHTS

RESEARCH & BRIEFS | REGULATORY & LEGISLATIVE | LEGAL | ECONOMIC & FINANCIAL | WHAT'S TRENDING

COVID-19 and Workers Compensation - Phase II of the Multi-Bureau Collaboration

2022 Regulatory and Legislative Trends

Court Case Update, Arizona - December 2022

Quarterly Economics Briefing (QEB) - Q3 2022

An Interactive View of Workers Compensation Frequency and Severity

Topic

- AIS
- Automation
- COVID-19
- Court Cases
- Economics
- Financial
- Indemnity
- Industry
- Labor Market
- Marketing
- Medical
- Ostioid
- Prescription Drugs
- QEB
- Success Stories

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Format

- Article
- PDF
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An Interactive View of Workers Compensation Frequency and Severity

By Carolyn Wise and Kevin Ferris
December 15, 2022
The COVID-19 pandemic and its economic impacts have had both direct and indirect effects on the workers compensation industry. This article provides an overview of countrywide changes in lost-time claim frequency and severity.

Annual Insights Symposium 2023

By NCCI Insights
December 13, 2022
AIS 2023 will take place May 8 - 10, 2023, at the JW Marriott Grande Lakes in Orlando. Join us as we mark our 100th anniversary and our role as The Source You Trust. For more details on the program agenda, scheduled speakers, and FAQs, check out [ncci.com](#).

Familiar Challenges With New Wrinkles: Workers Compensation Executives Share Their Top Concerns

By NCCI Insights
December 13, 2022
Heading into its centennial year, NCCI reveals the results of its annual survey of top insurance executives. See what concerns are top of mind as we approach 2023.

Court Case Update, Arizona - December 2022

By NCCI Insights
December 15, 2022
The Supreme Court of Arizona upheld the constitutionality of a WC statute that limits WC claims for mental illnesses.

COVID-19 and Workers Compensation RESOURCE CENTER

[Click here](#)

MEET NCCI'S THOUGHT LEADERS

TWEETS BY @NCCI

Tweets from @NCCI

NCCI @NCCI - Jan 9

Join several independent bureaus and NCCI to discuss the recently completed Phase II Multi-Bureau Evaluation of #COVID19 and the

Related Content on NCCI.com

2022 State of the Line

2023 Marks Critical Milestone for Workers Compensation

Familiar Challenges with New Wrinkles: Workers Compensation Executives Share Their Top Concerns

The Great Reshuffle in Labor Markets

Quarterly Economic Briefings

Workers Compensation Frequency and Severity - An Interactive View