

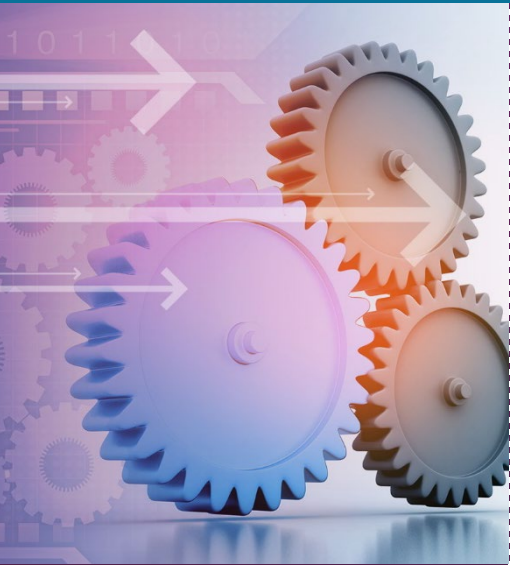
# Actuarial Perspective

**Alexsandra Bello, ACAS, MAAA**

Associate Actuary  
NCCI



# Agenda



State of Workers  
Compensation



State of  
Residual Market  
Pools



Large Loss  
Insights



Recent Pool  
Reserving  
Research



Black Lung  
Experience  
Over Time

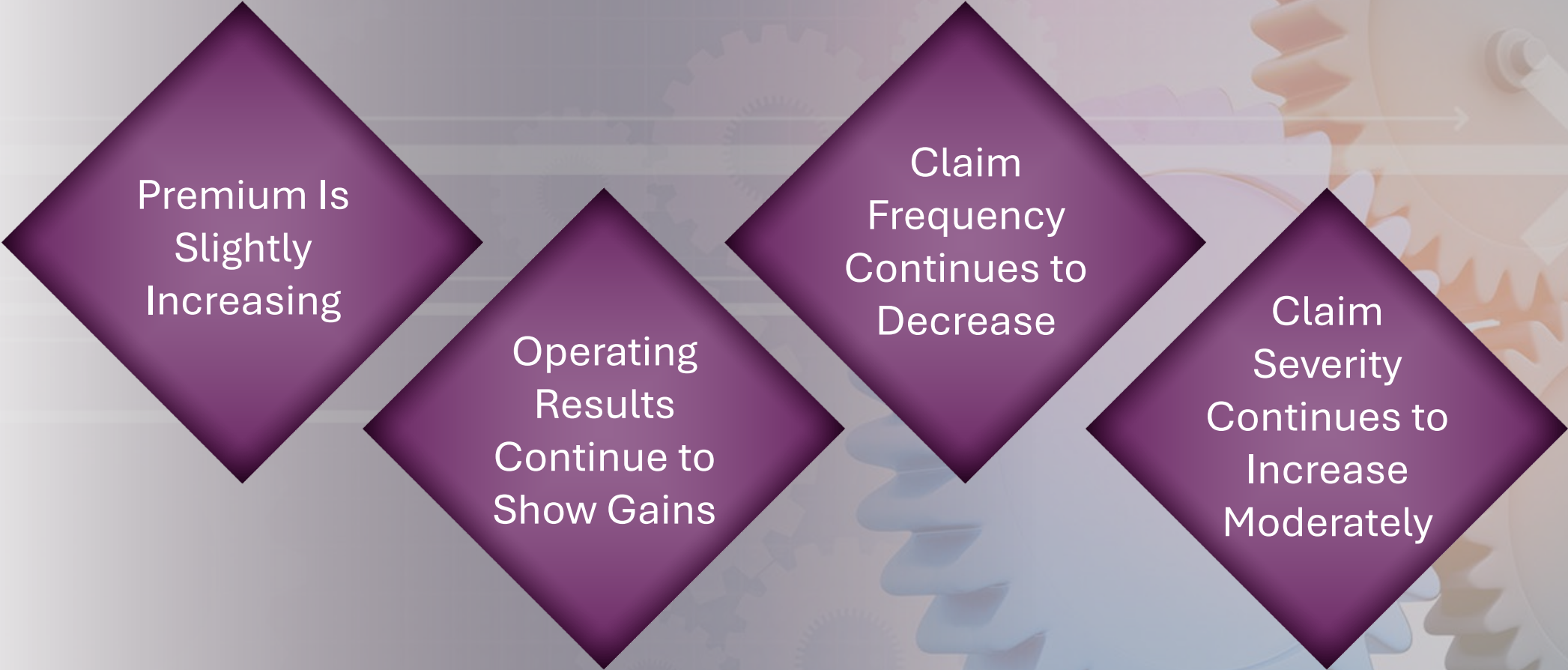




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# State of Workers Compensation (WC)

# State of WC Overview: Trends Continue



Premium Is  
Slightly  
Increasing

Operating  
Results  
Continue to  
Show Gains

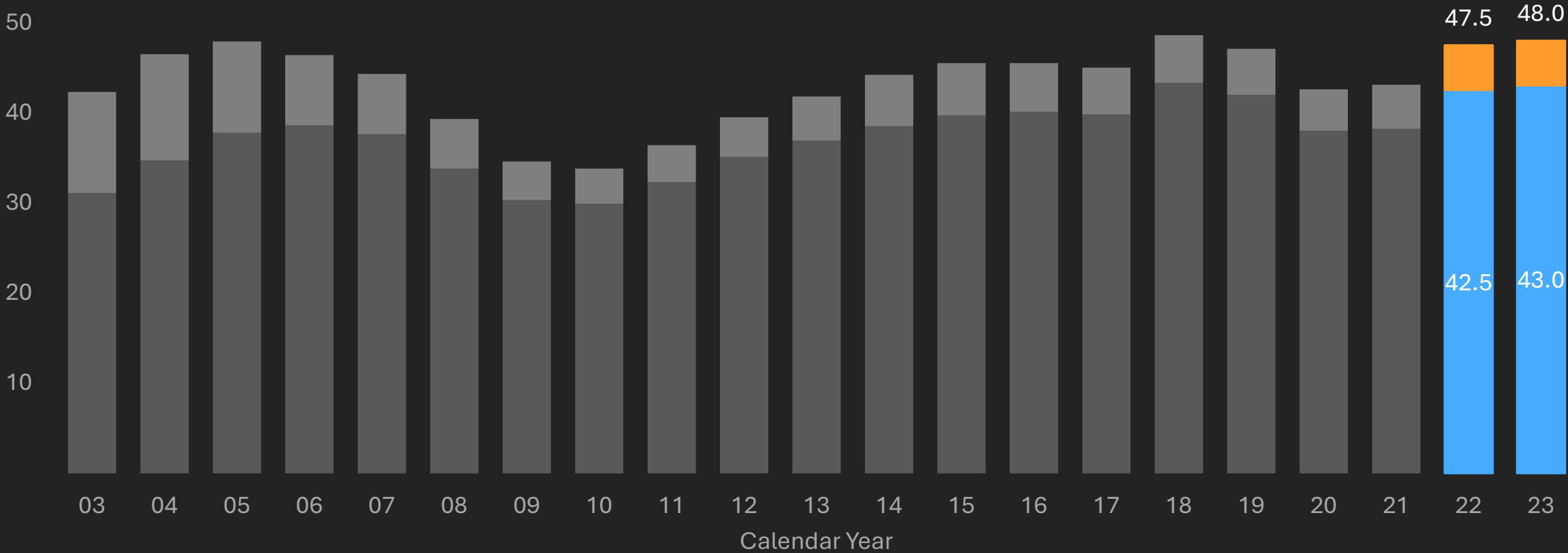
Claim  
Frequency  
Continues to  
Decrease

Claim  
Severity  
Continues to  
Increase  
Moderately

# WC Net Written Premium

Private Carriers and State Funds

\$ Billions



Source: NAIC's Annual Statement data

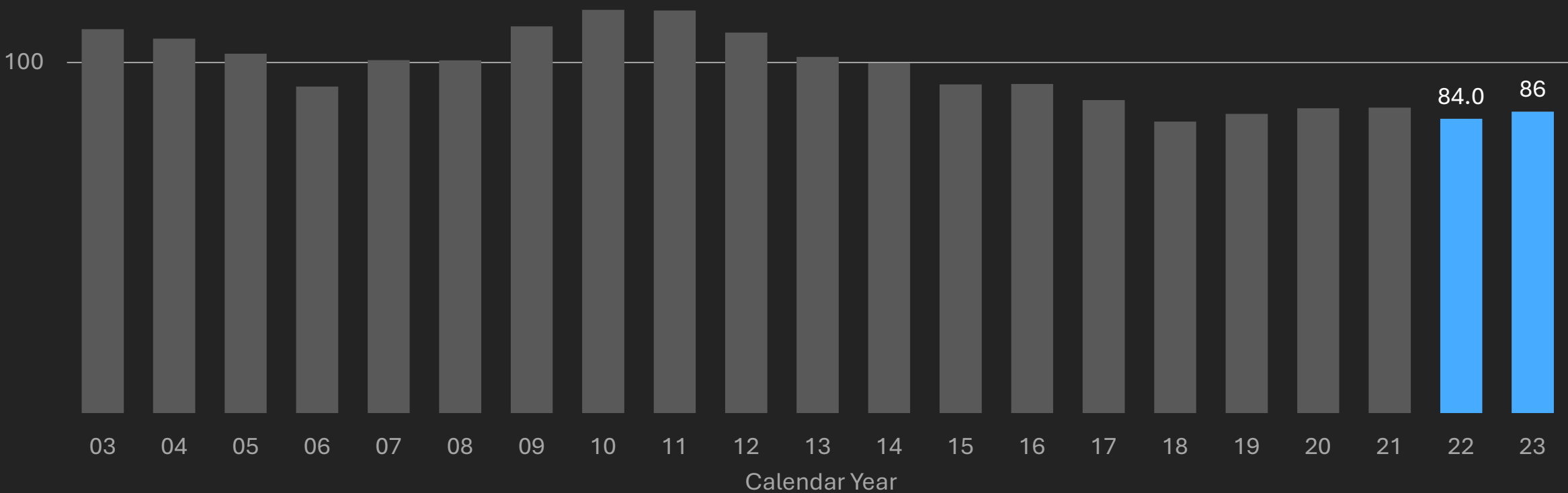
The following states are included in the respective calendar years in which they operate as state funds: AZ, CA, CO, HI, ID, KY, LA, MD, MO, MT, NM, OK, OR, RI, TX, and UT

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# WC Net Combined Ratio

Private Carriers

Percent

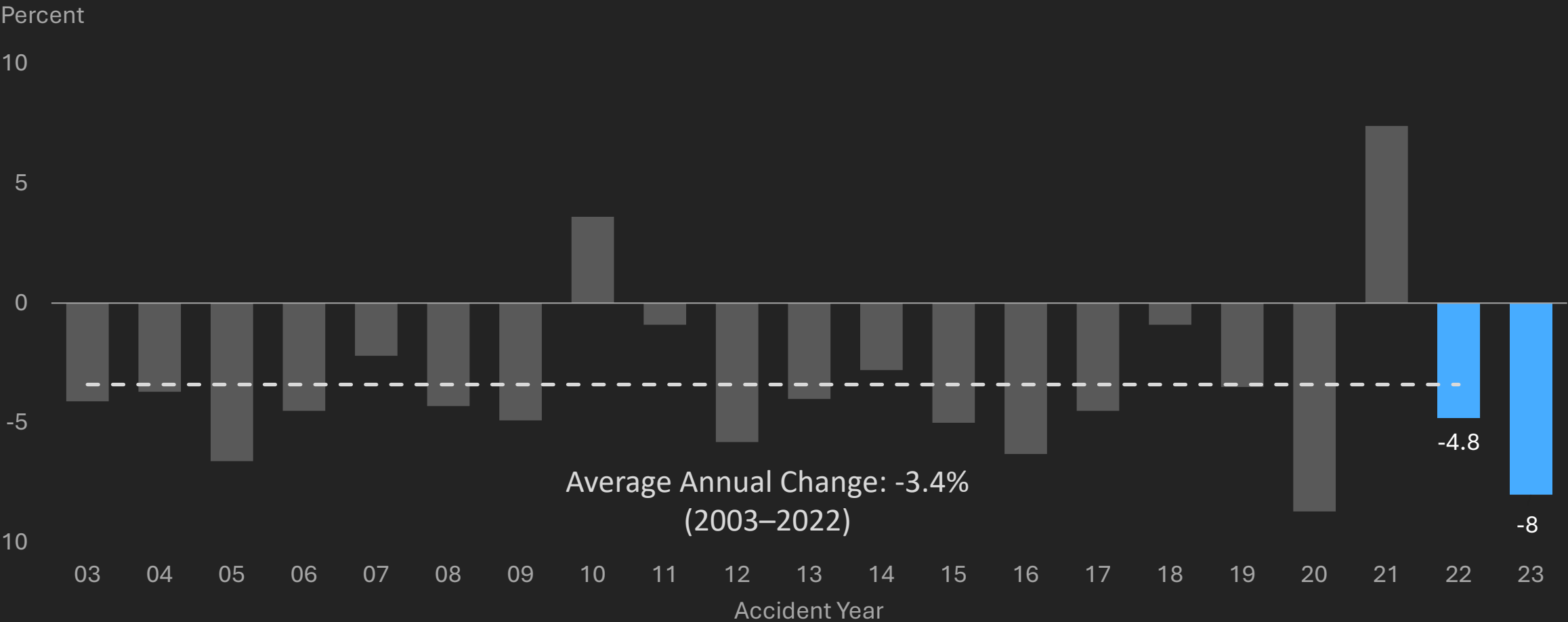


Source: NAIC's Annual Statement data

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# WC Lost-Time Claim Frequency

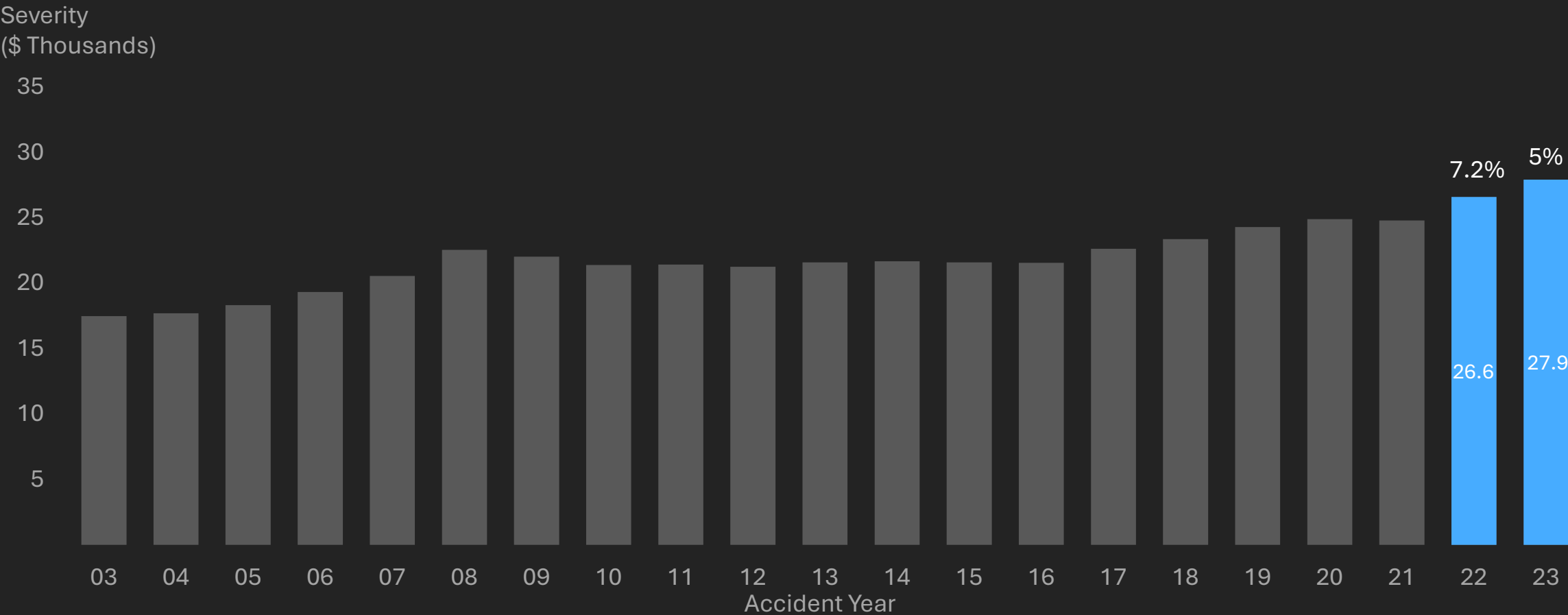
Change in Claims per \$1M Pure Premium, Private Carriers and State Funds—NCCI States



2010–2011 and 2019–2022 are adjusted to reflect the impact of changes in audit activity  
Accident Year 2023 based on data valued as of 12/31/2023; excludes COVID-19 claims through 7/1/2023  
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 12/31/2022; excludes COVID-19 claims  
Includes all states where NCCI provides ratemaking services; TX is excluded through 2006 and WV is excluded through 2011

# WC Average Indemnity Claim Severity

Private Carriers and State Funds—NCCI States

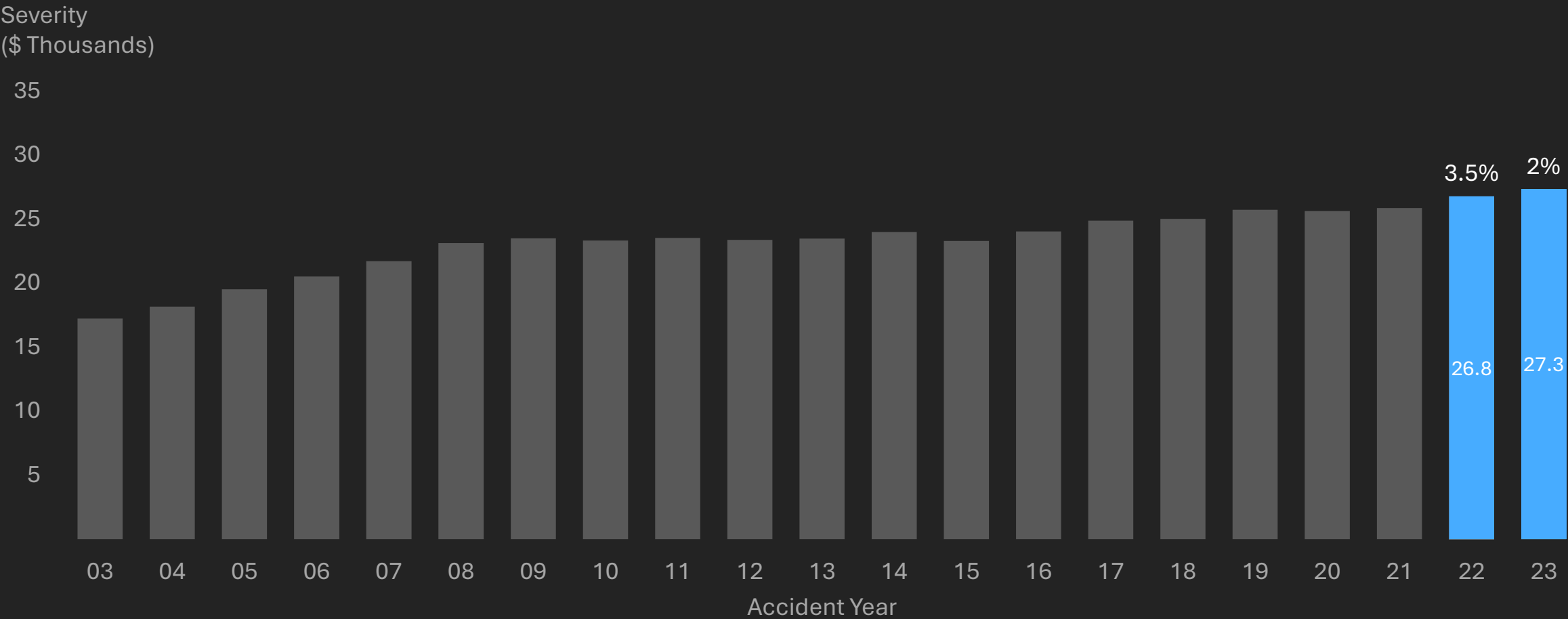


Accident Year 2023 based on data valued as of 12/31/2023; excludes COVID-19 claims through 7/1/2023  
NCCI's Financial Call data, developed to ultimate, excludes high-deductible policies; based on data through 12/31/2022; excludes COVID-19 claims  
Values displayed reflect the methodology underlying the most recent rate/loss cost filing  
Includes all states where NCCI provides ratemaking services; NV is excluded through 2003, TX is excluded through 2008, and WV is excluded through 2012



# WC Average Medical Lost-Time Claim Severity

Private Carriers and State Funds—NCCI States



Accident Year 2023 based on data valued as of 12/31/2023; excludes COVID-19 claims through 7/1/2023  
NCCI's Financial Call data, developed to ultimate, excludes high-deductible policies; based on data through 12/31/2022; excludes COVID-19 claims  
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 2008, and WV is excluded through 2012



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# State of Residual Market Pools



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# Residual Market Pools Overview: Remain Stable

Market Share  
Decreases

Premium Is  
Low and  
Stable

Claim  
Frequency in  
Line With  
Historical  
Average

Claim  
Indemnity  
Severity Is  
Stable

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# WC Residual Market Share

NCCI-Serviced WC Residual Market Pools

Percent

20

15

10

5

03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Calendar Year

6.1

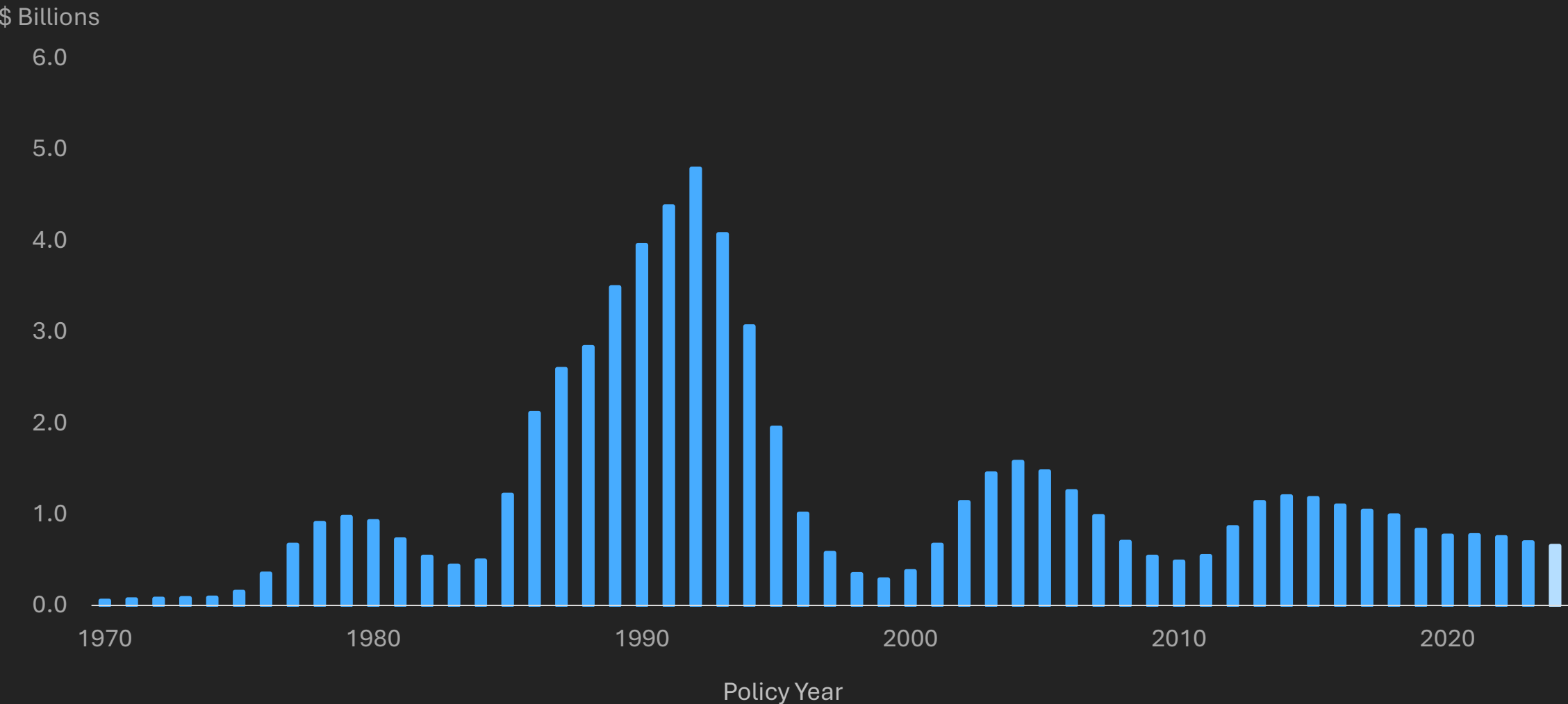
5

Source: NCCI's *Residual Market Management Summary*  
Includes Pool and direct assignment data for all NCCI-serviced WC Residual Market Pool states

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# Pool Premium Is Stabilizing

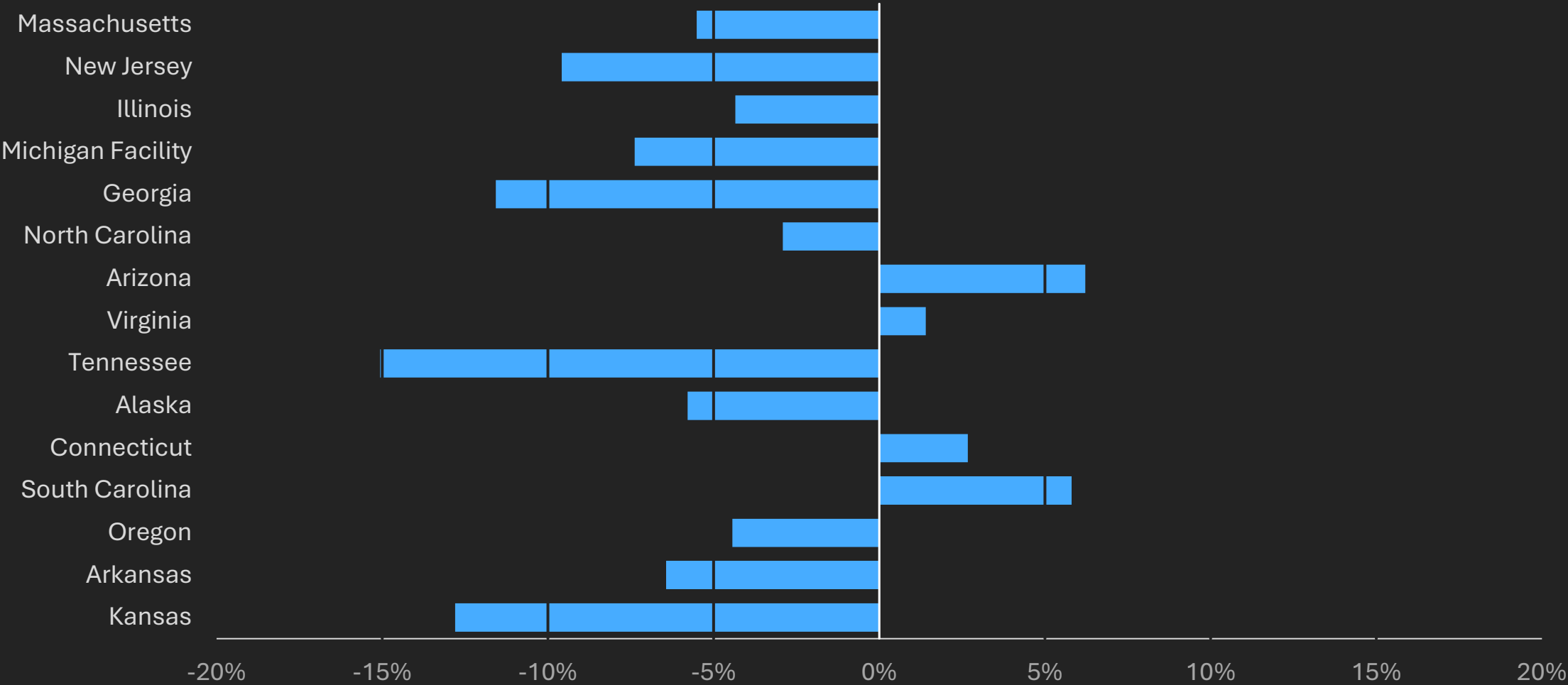


Includes all states where NCCI provides Pool Administration services  
Note: Traumatic only



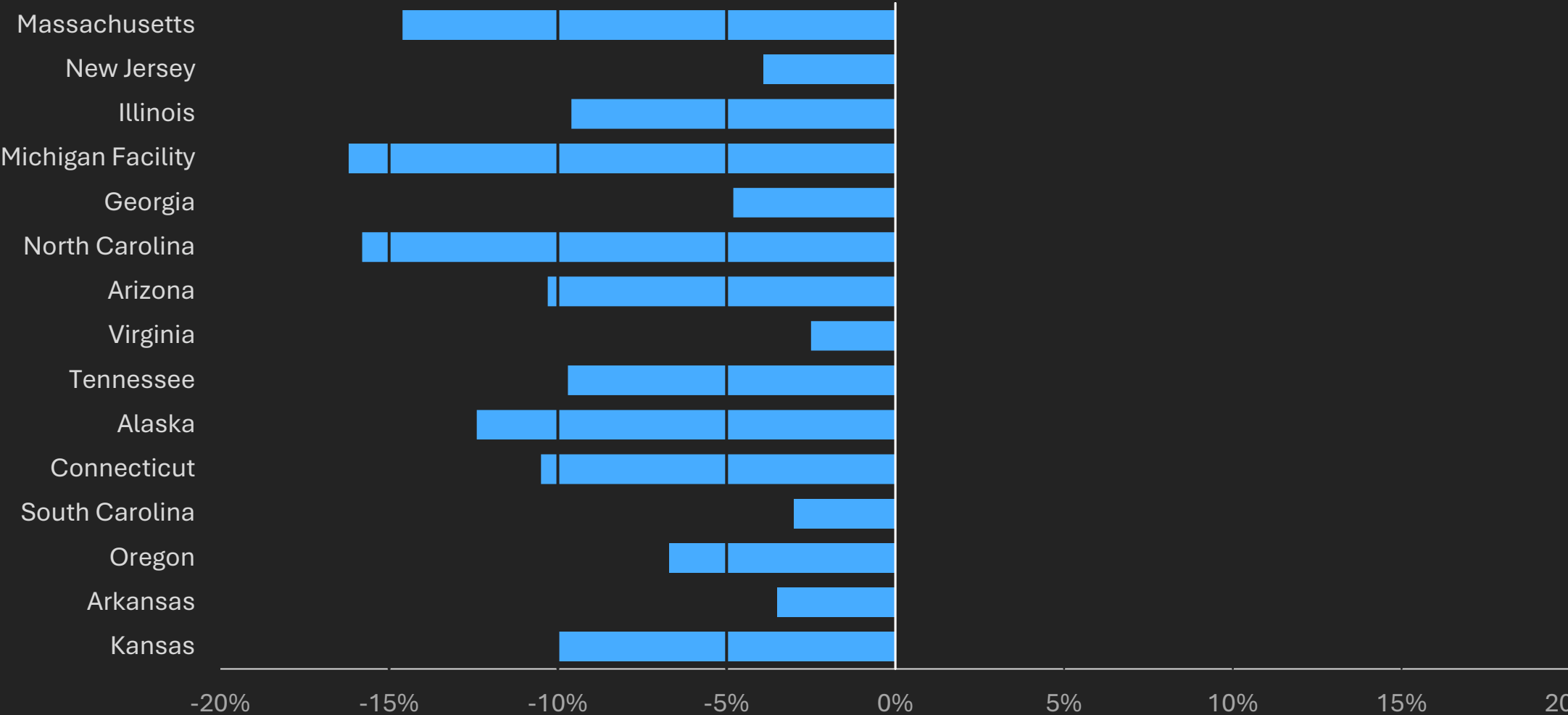
# Ultimate Premium Lower Compared to Prior Year

Policy Year 2024 vs. Policy Year 2023



Source: NCCI’s Pool Data, developed to ultimate; based on data through 9/30/2024  
Includes largest 15 states by premium volume where NCCI provides Pool Administration services  
Note: Traumatic only

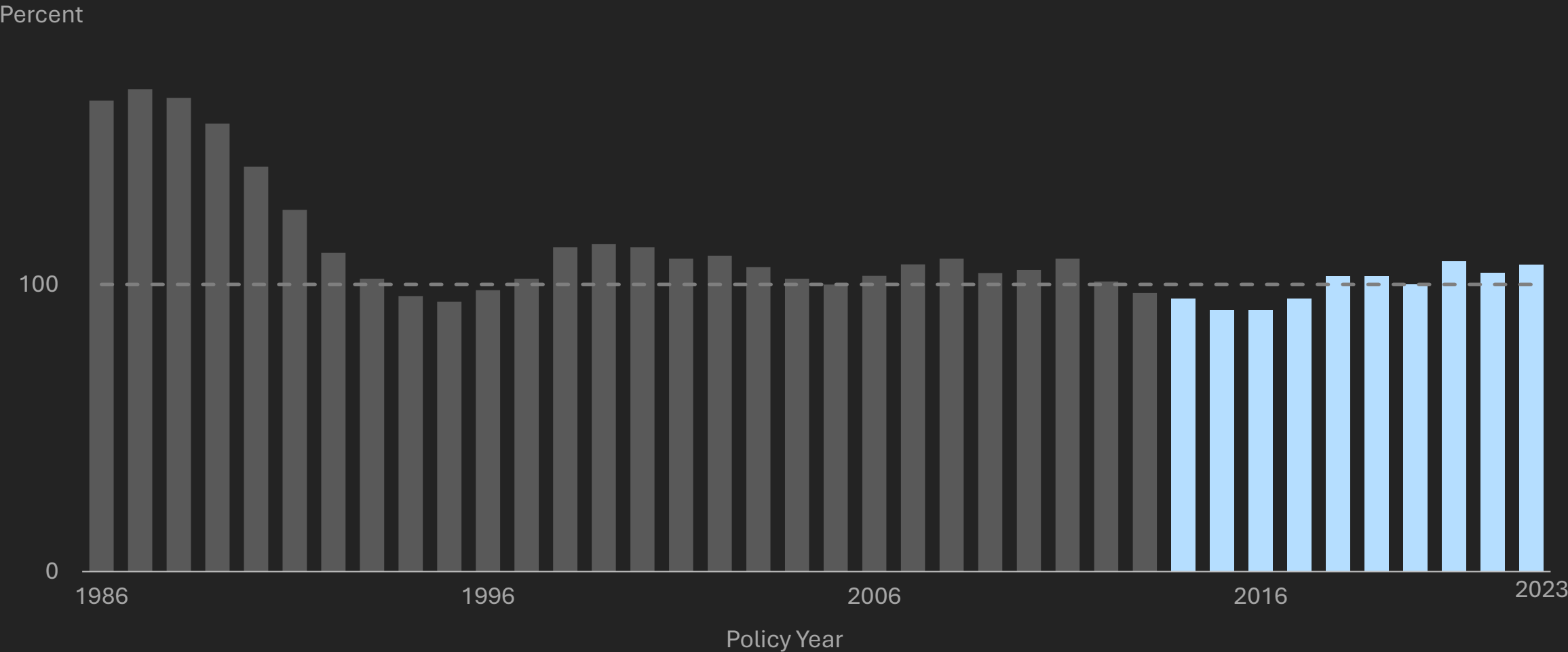
# Assigned Risk Rates Decreased in 2024



NJ, MA, and MI are premium level changes provided by the applicable Plan Administrator

# Combined Ratios as of 9/30/2024

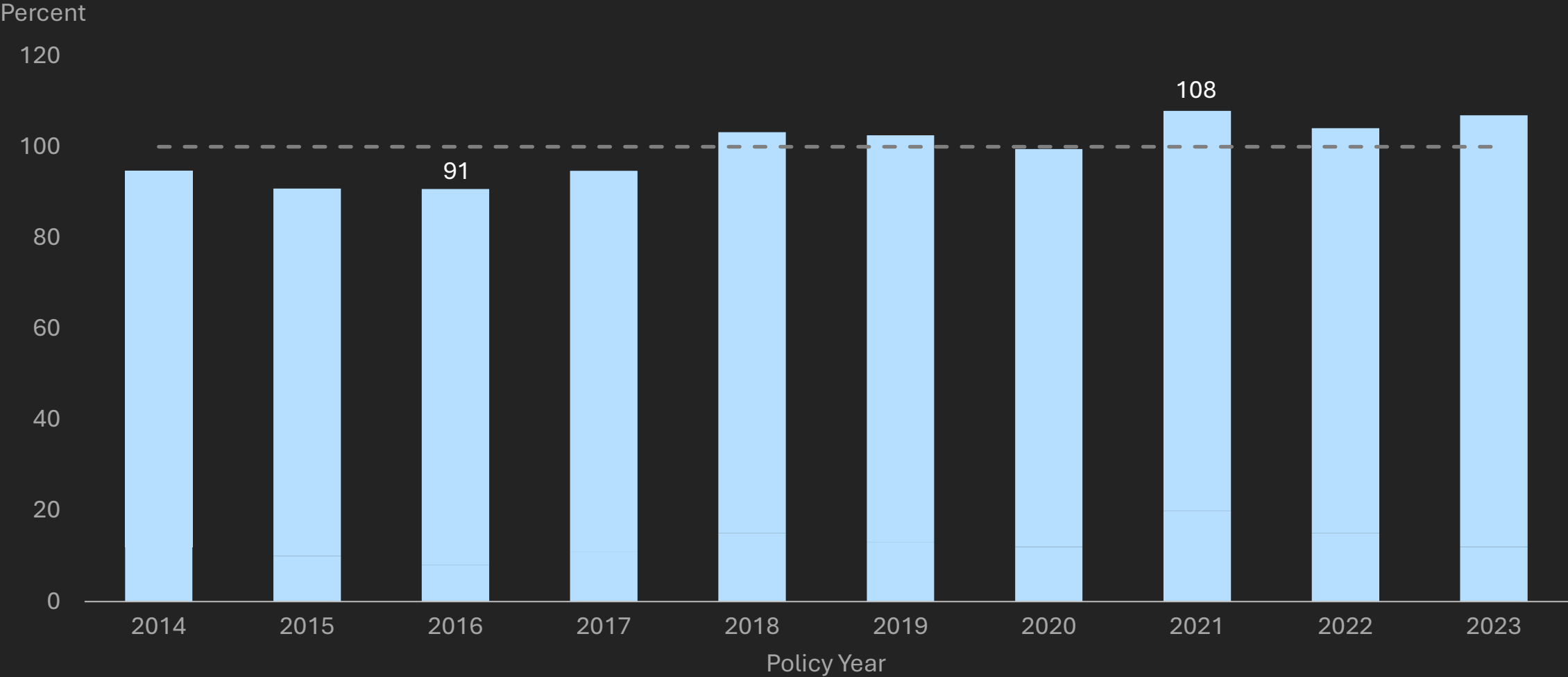
## NCCI-Serviced Workers Compensation Residual Market Pools



Policy Year 2023 is not yet complete  
Tennessee Reinsurance Mechanism experience is not included in the combined ratios above

# Combined Ratios as of 9/30/2024

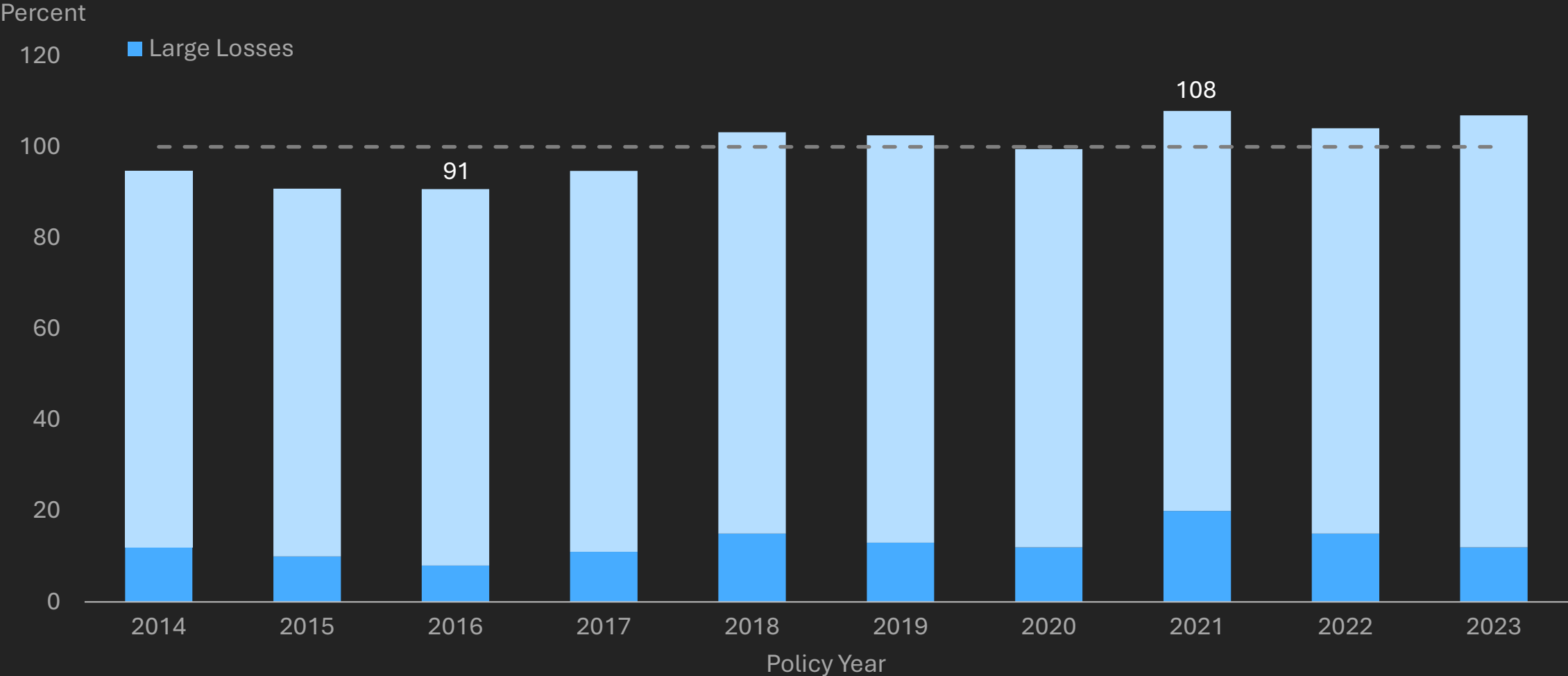
## NCCI-Serviced Workers Compensation Residual Market Pools



Policy Year 2023 is not yet complete  
Tennessee Reinsurance Mechanism experience is not included in the combined ratios above

# Combined Ratios as of 9/30/2024

## NCCI-Serviced Workers Compensation Residual Market Pools

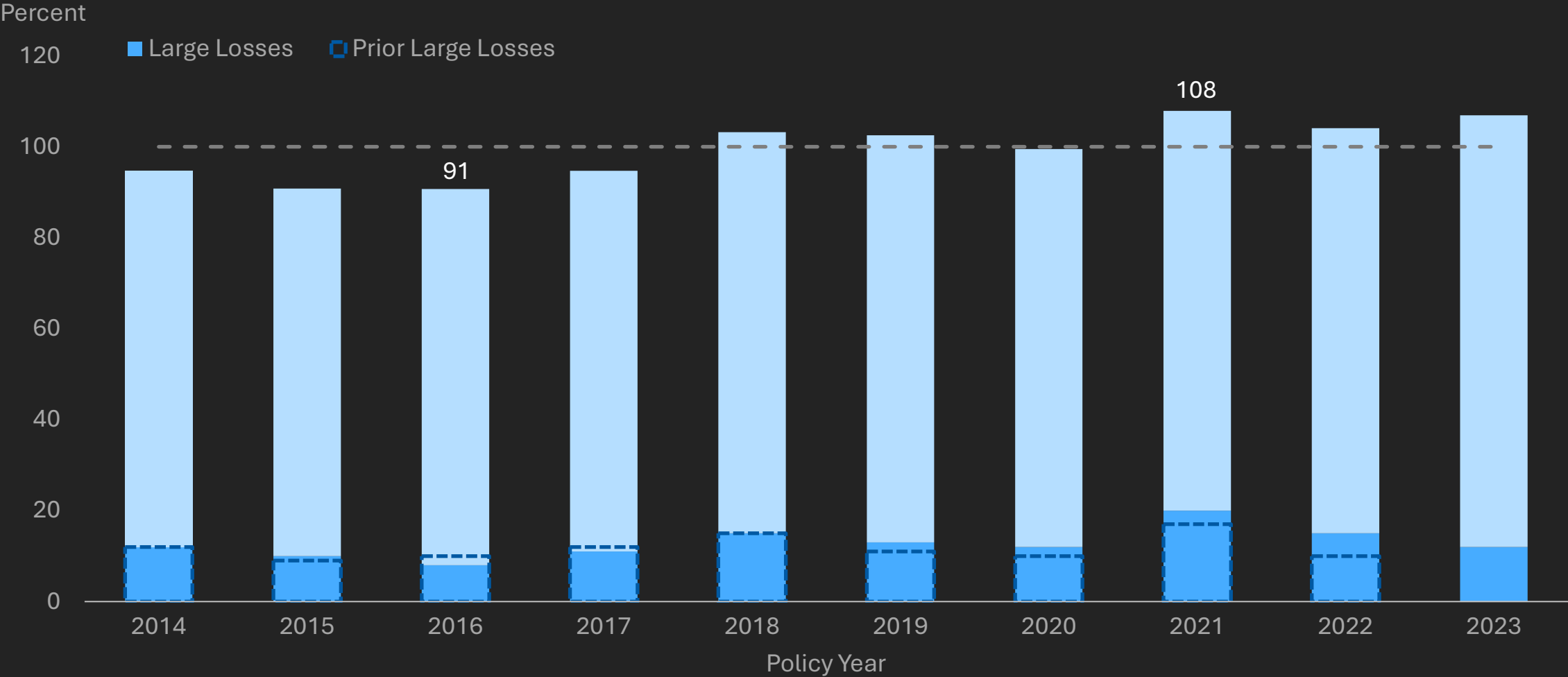


Policy Year 2023 is not yet complete  
Large Losses are claims greater than \$1 million  
Tennessee Reinsurance Mechanism experience is not included in the combined ratios above



# Combined Ratios as of 9/30/2024

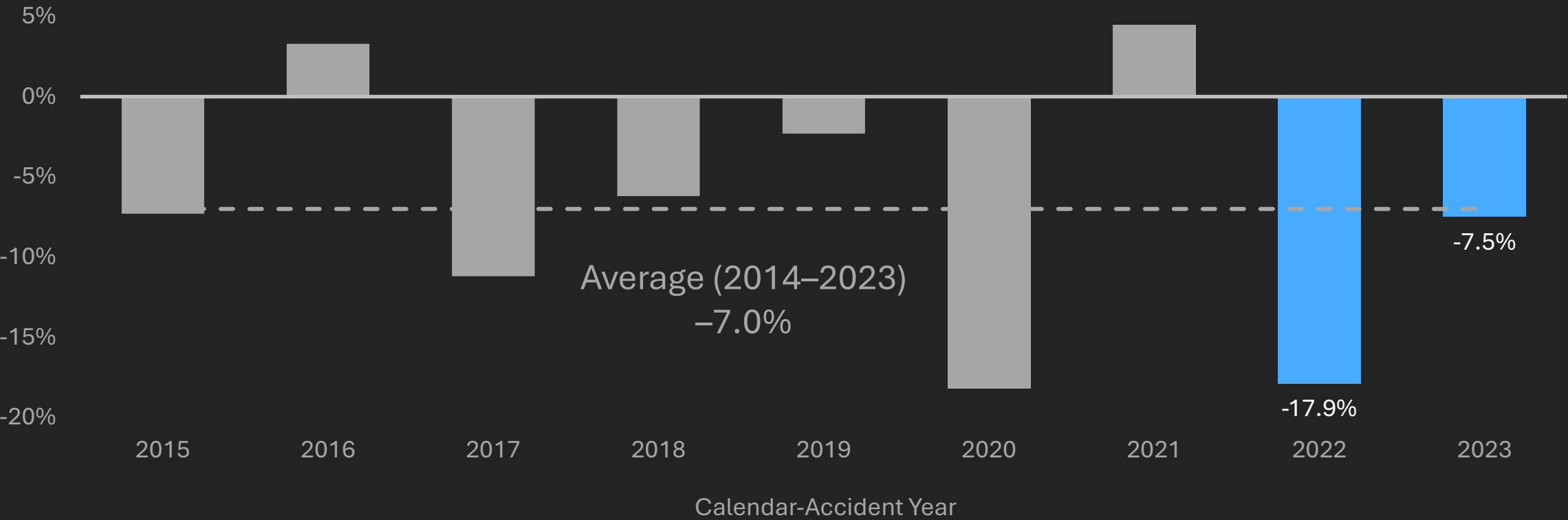
## NCCI-Serviced Workers Compensation Residual Market Pools



Policy Year 2023 is not yet complete  
Large Losses are claims greater than \$1 million  
Tennessee Reinsurance Mechanism experience is not included in the combined ratios above

# WC Lost-Time Claim Frequency

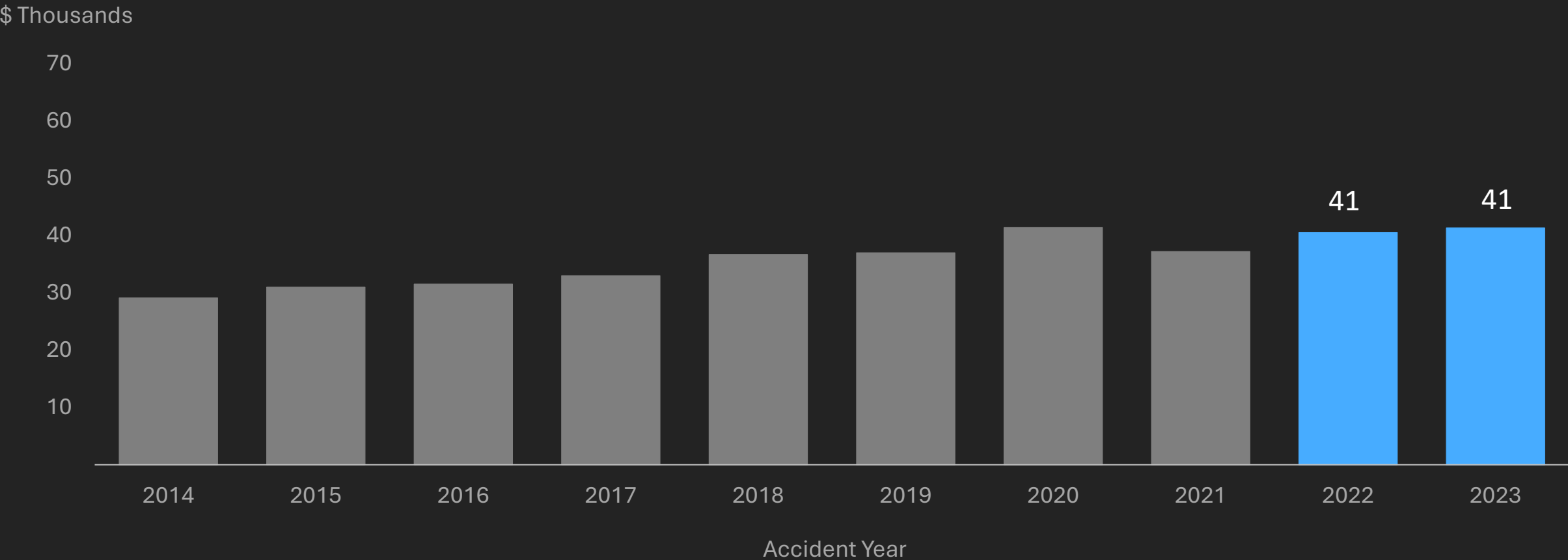
Claims per \$1M Pure Premium—NCCI Pool States



Source: NCCI’s Pool Data, on–leveled, developed to ultimate; based on data through 12/31/2023  
Includes all states where NCCI provides Pool Administration services; Tennessee and Tennessee Reinsurance Mechanism experience is excluded for 2014-2015  
Traumatic only

# WC Average Indemnity Claim Severity

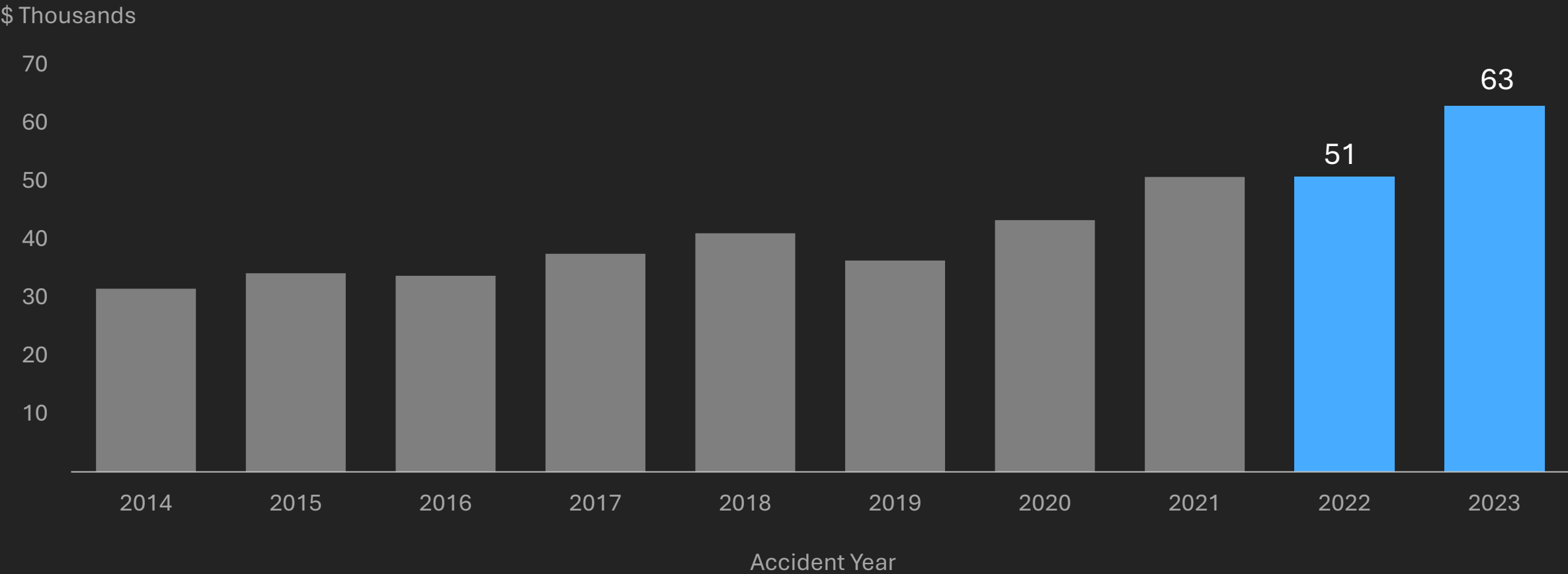
NCCI Pool States



Source: NCCI’s Pool Data, developed to ultimate; based on data through 12/31/2023  
Includes all states where NCCI provides Pool Administration services; Tennessee and Tennessee Reinsurance Mechanism experience is excluded for 2014–2015  
Traumatic only

# WC Average Medical Lost-Time Claim Severity

NCCI Pool States



Source: NCCI’s Pool Data, developed to ultimate; based on data through 12/31/2023  
Includes all states where NCCI provides Pool Administration services; Tennessee and Tennessee Reinsurance Mechanism experience is excluded for 2014–2015  
Traumatic only

# History of Booked Loss Reserves at 9/30

NCCI-Serviced Workers Compensation Residual Market Pools  
Loss Reserves (Case Outstanding + IBNR\*)

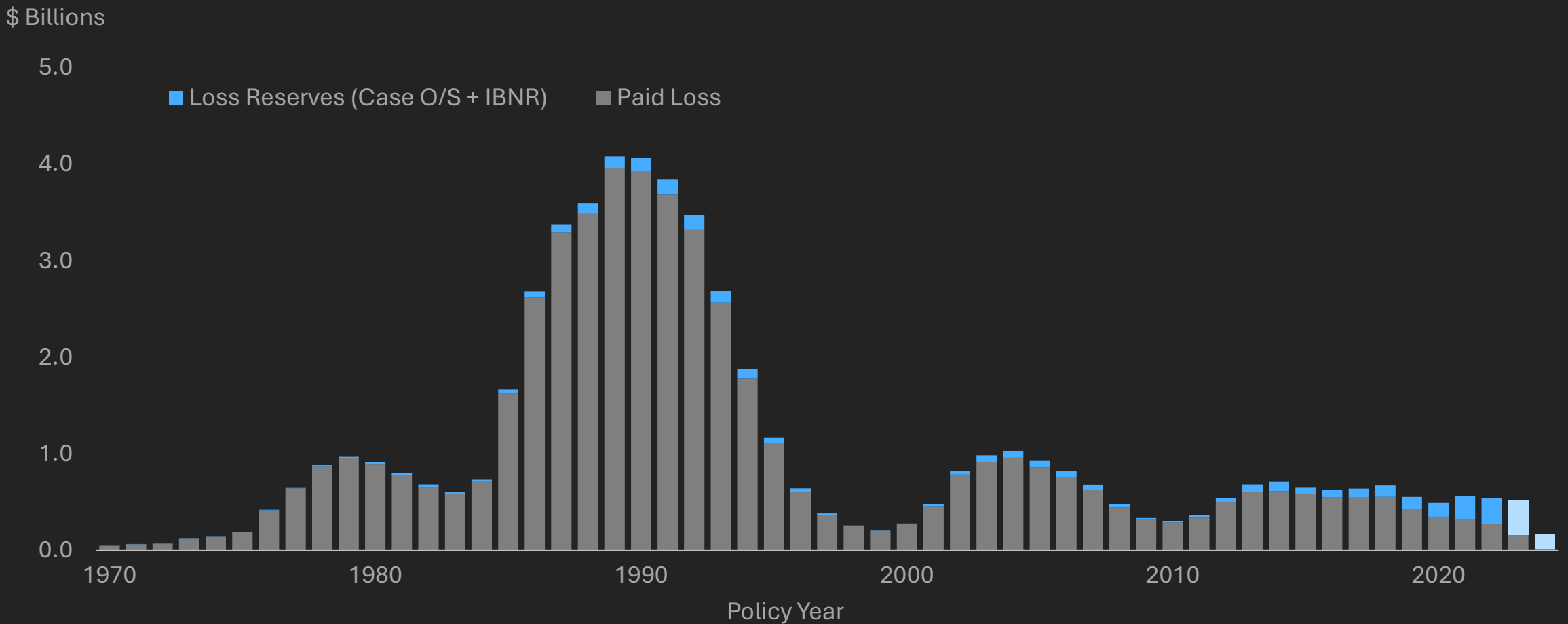


\*Incurred But Not Reported  
Loss reserves for the Tennessee Reinsurance Mechanism are included beginning with Third Quarter 2015



# Booked Ultimate Losses as of 9/30/2024

NCCI-Serviced Workers Compensation Residual Market Pools

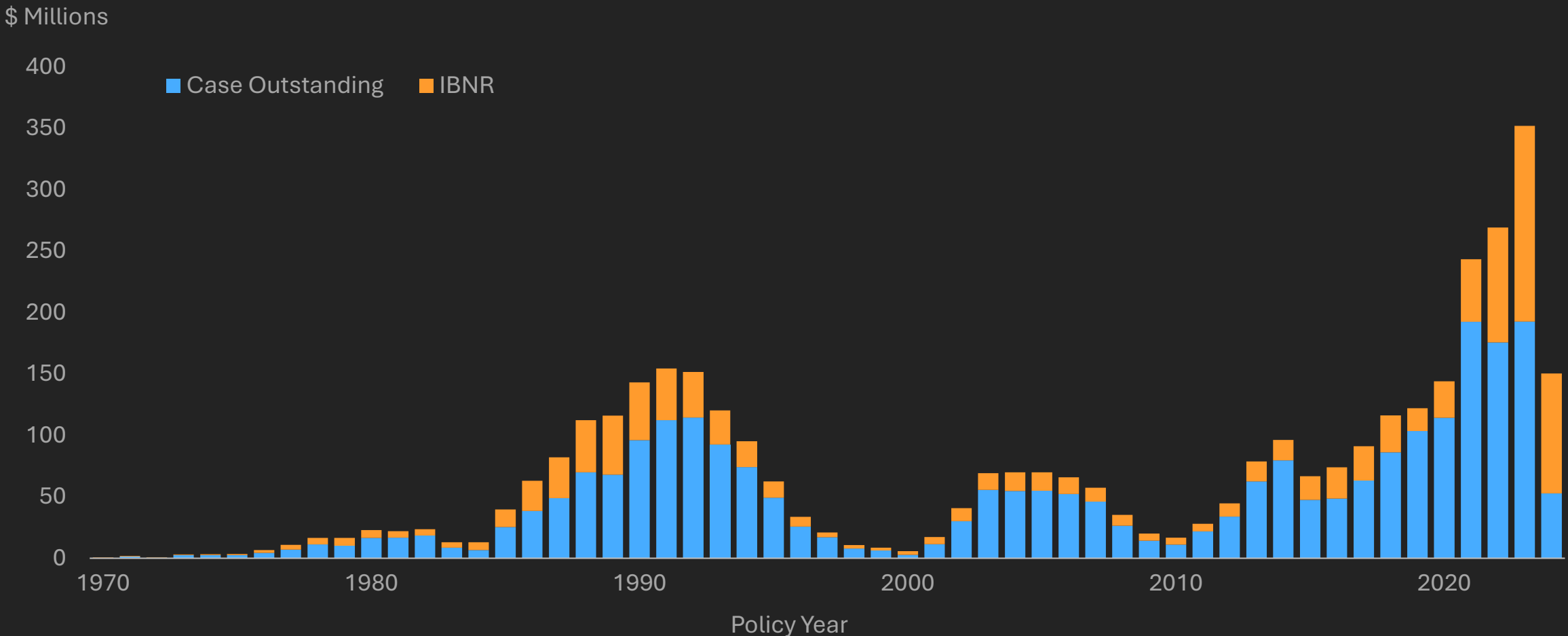


Policy Years 2023 and 2024 are not fully earned

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# Booked Loss Reserves as of 9/30/2024

## NCCI-Serviced Workers Compensation Residual Market Pools



Policy Years 2023 and 2024 are not fully earned

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# Large Loss Insights



# INSURANCE

# Large Loss Overview

Large Loss  
Share

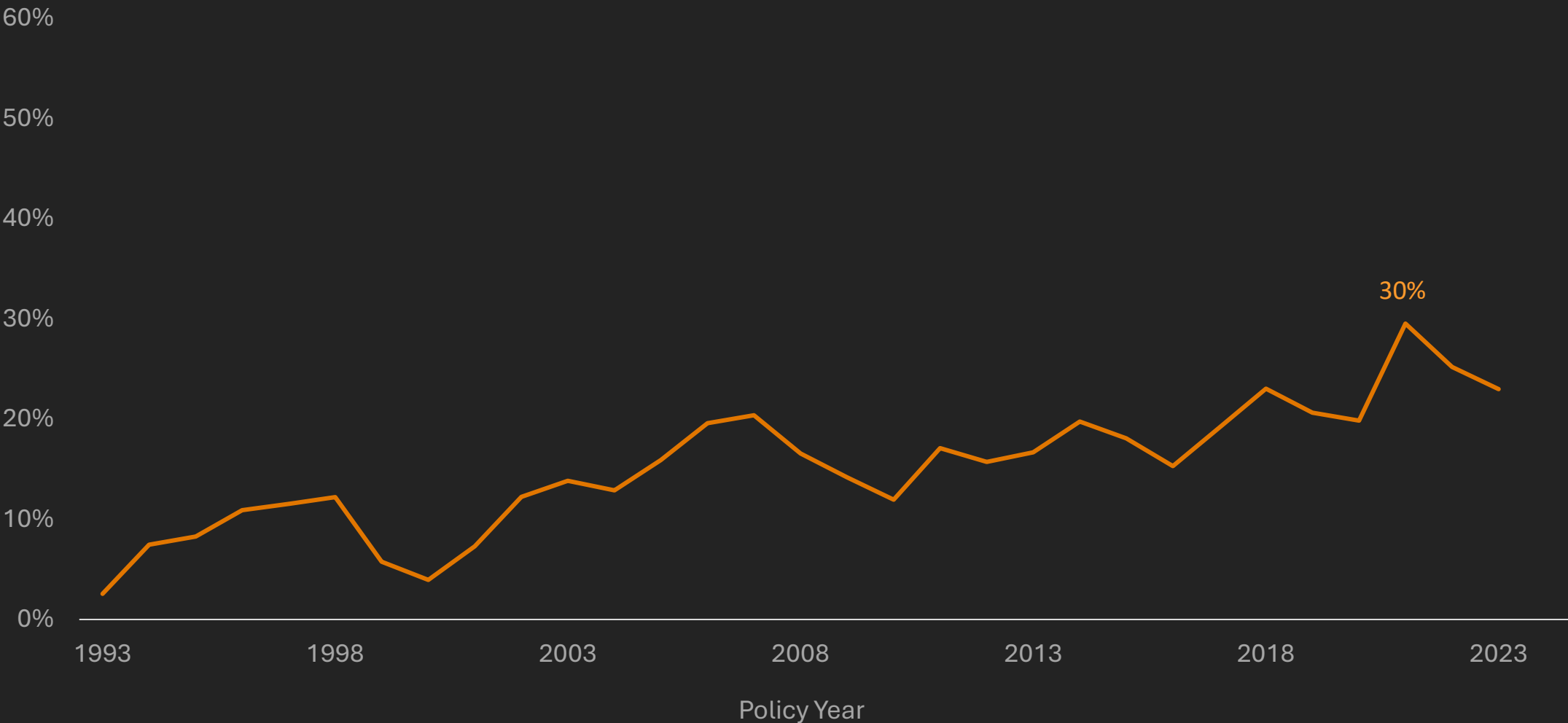
Top 10  
Claims

Indemnity vs.  
Medical  
Distribution

Hazard  
Groups

# Large Loss Share of Total Loss

Policy Years 1993–2024



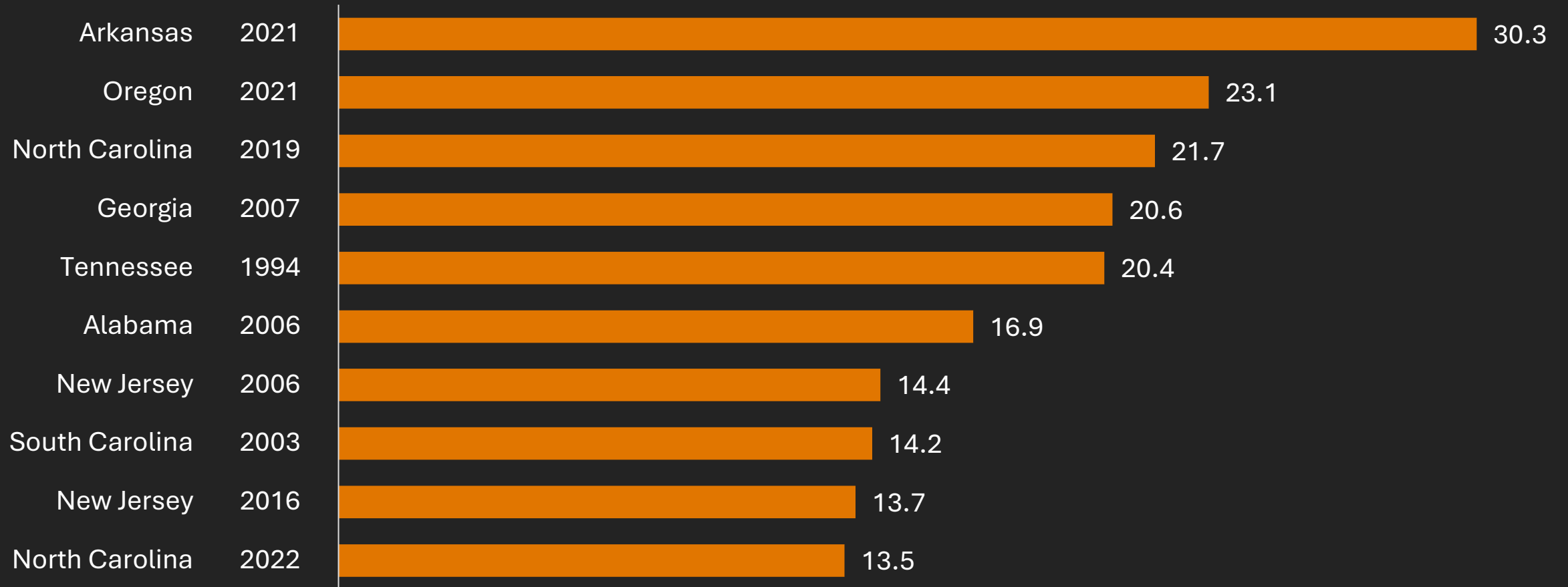
Source: NCCI's Pool Data, based on data as of 9/30/2024  
Traumatic only

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# Top 10 Large Losses

Policy Years 1993–2024



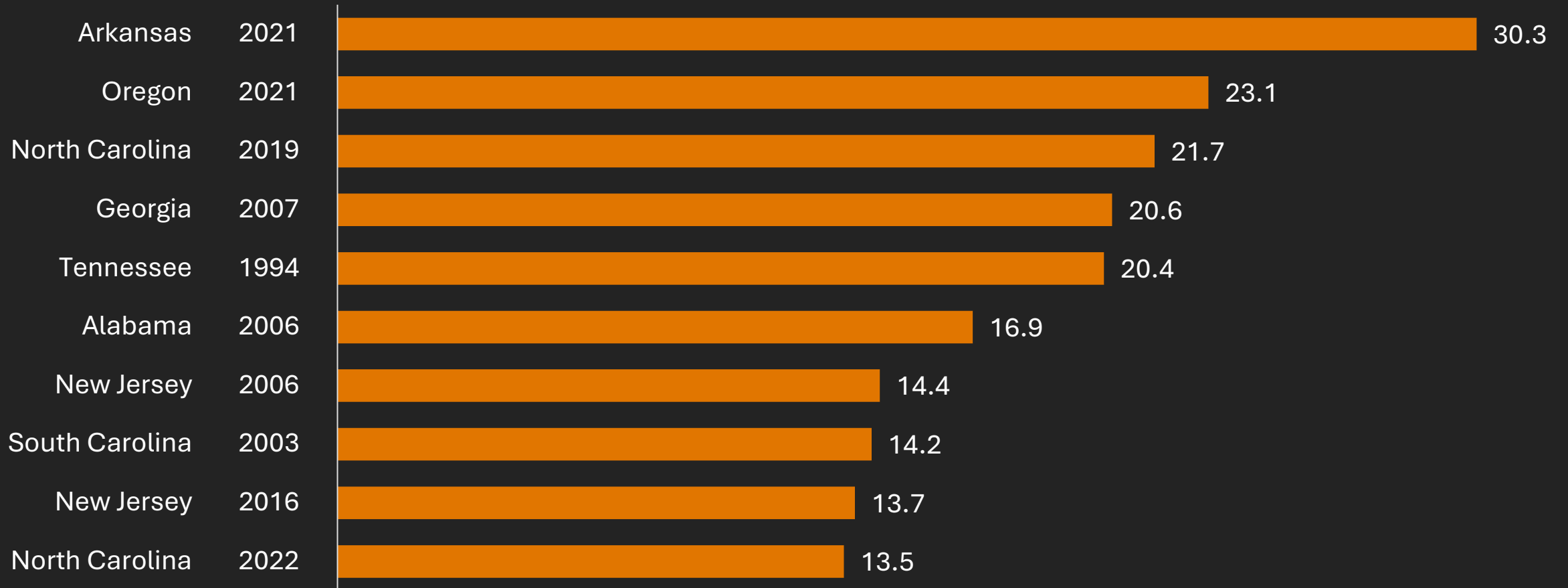
Source: NCCI's Pool Data, based on data as of 9/30/2024  
Traumatic only

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# Top 10 Large Losses

Policy Years 1993–2024



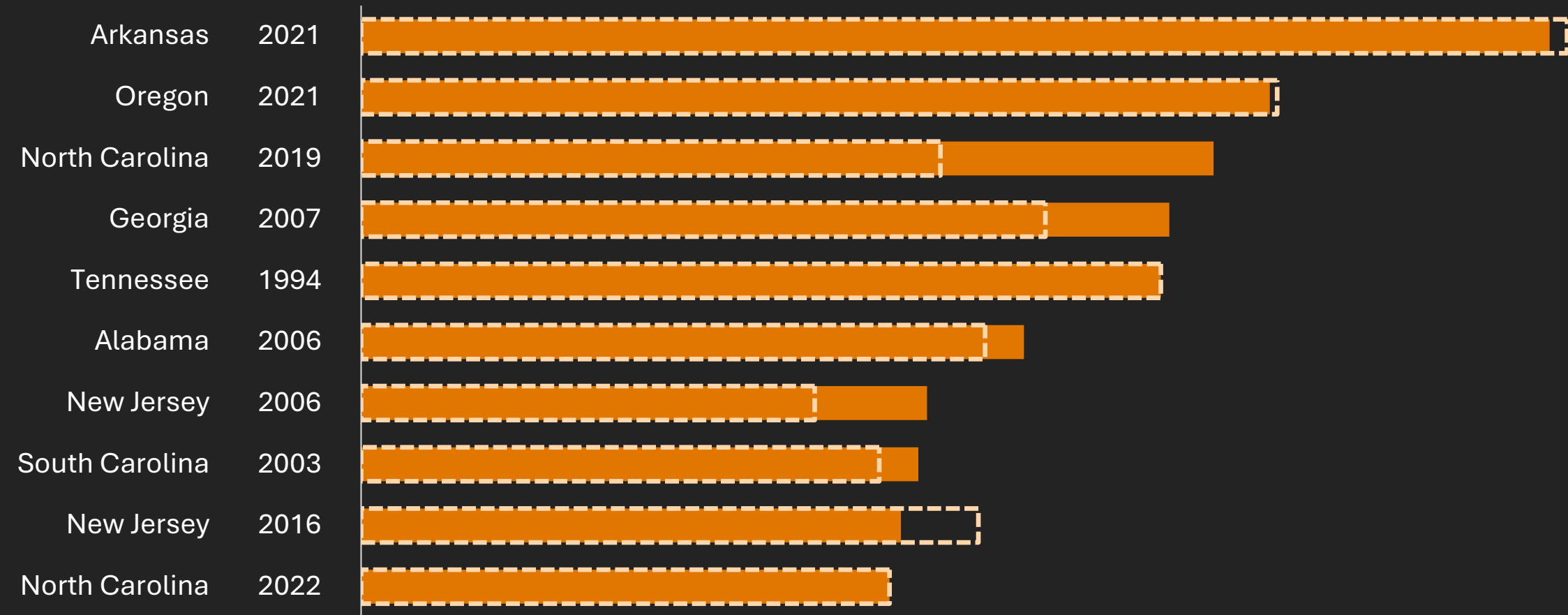
Sources: NCCI's Pool Data and NCCI's Statistical Plan data, based on data as of 9/30/2024  
Traumatic only

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# Changes in Top 10 Large Losses

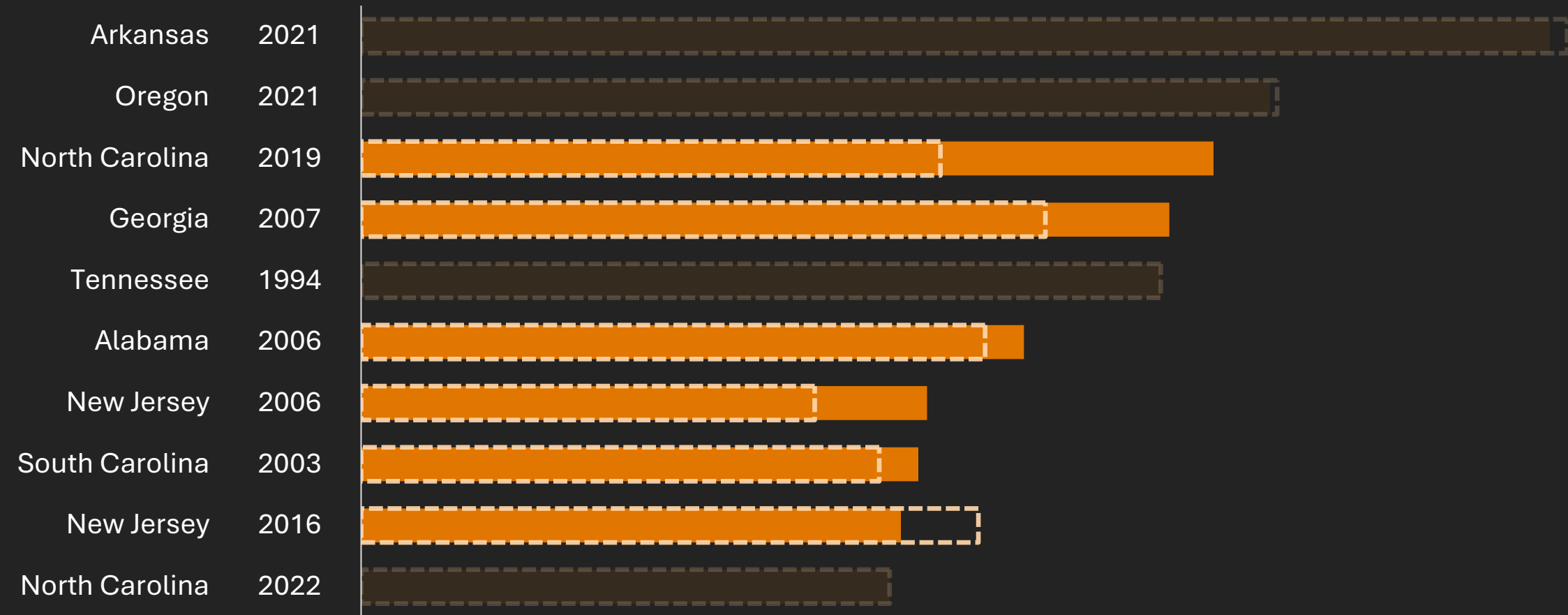
Policy Years 1993–2024



Source: NCCI's Pool Data, based on data as of 9/30/2024  
Traumatic only

# Changes in Top 10 Large Losses

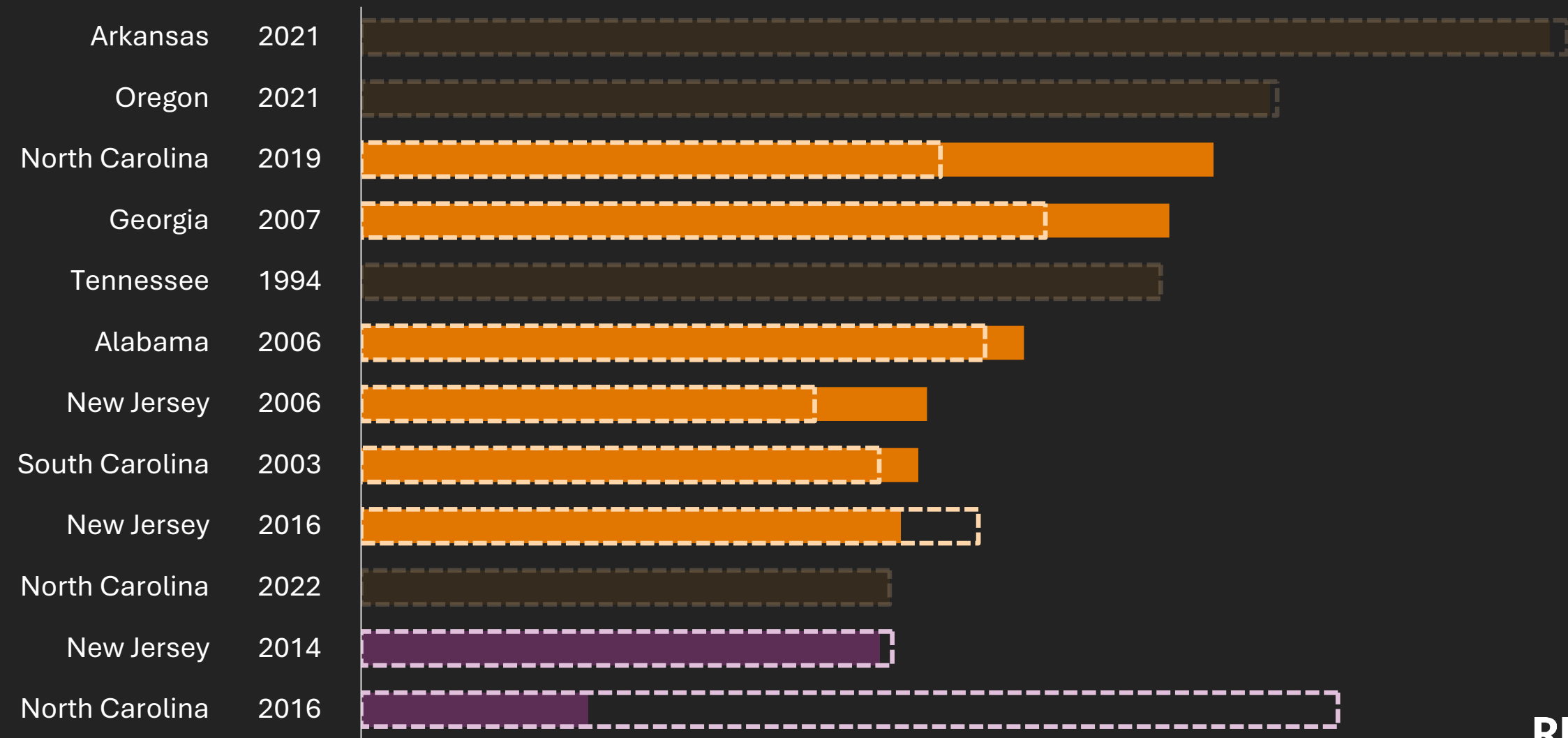
Policy Years 1993–2024



Source: NCCI's Pool Data, based on data as of 9/30/2024  
Traumatic only

# Changes in Top 10 Large Losses

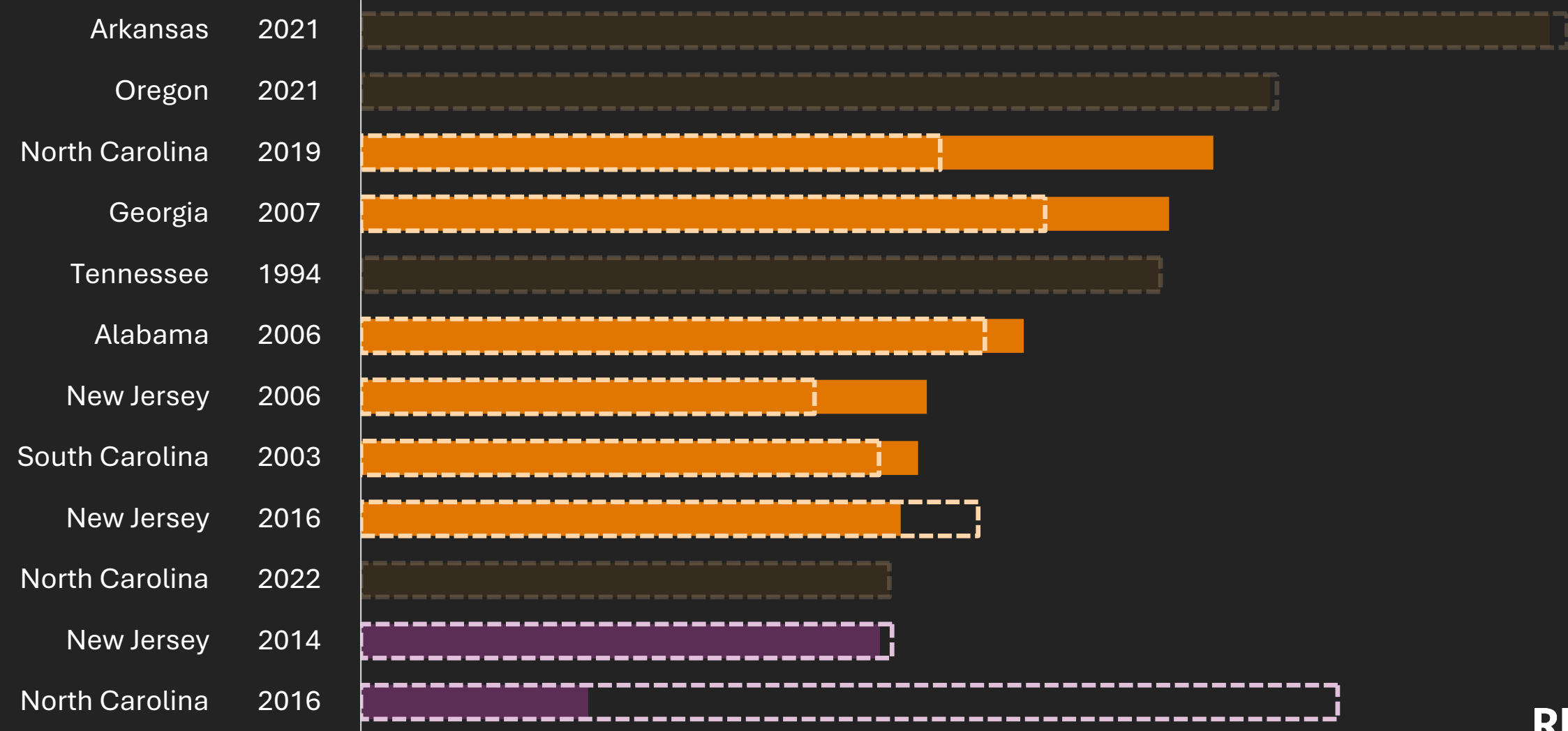
Policy Years 1993–2024



Source: NCCI's Pool Data, based on data as of 9/30/2024  
Traumatic only

# Changes in Top 10 Large Losses

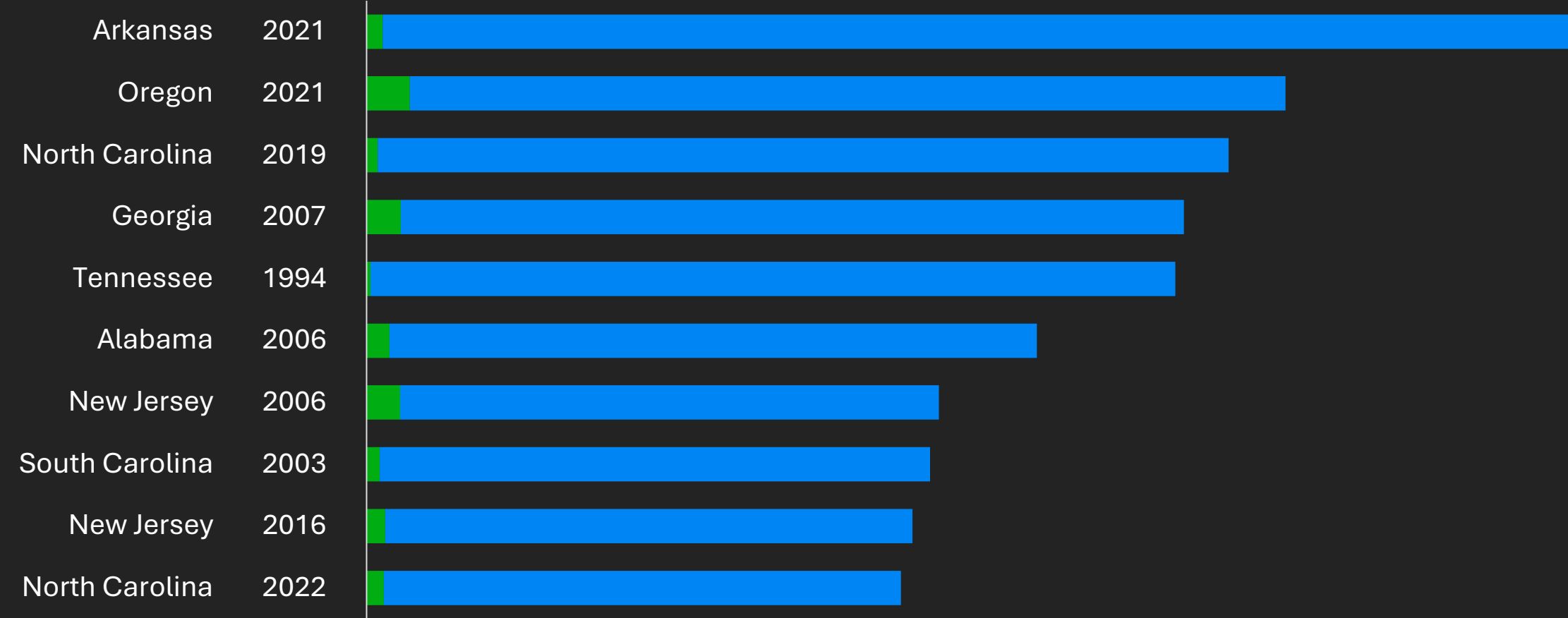
Policy Years 1993–2024



Source: NCCI's Pool Data, based on data as of 9/30/2024  
Traumatic only

# Top 10 Large Losses: Indemnity vs. Medical Distribution

Policy Years 1993–2024

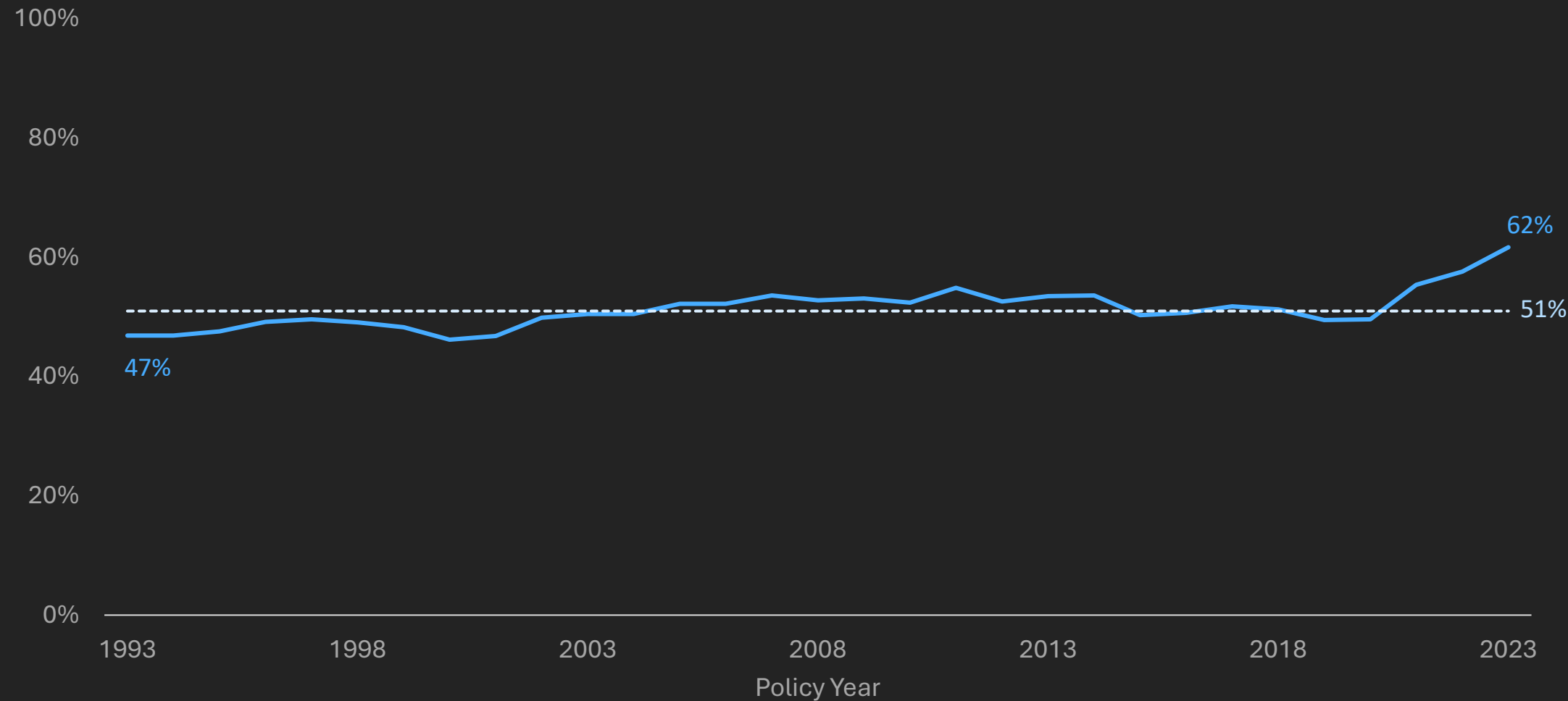


Source: NCCI's Pool Data, based on data as of 9/30/2024  
Traumatic only

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# Medical Share of Reported Losses Over Time

Total Incurred Loss



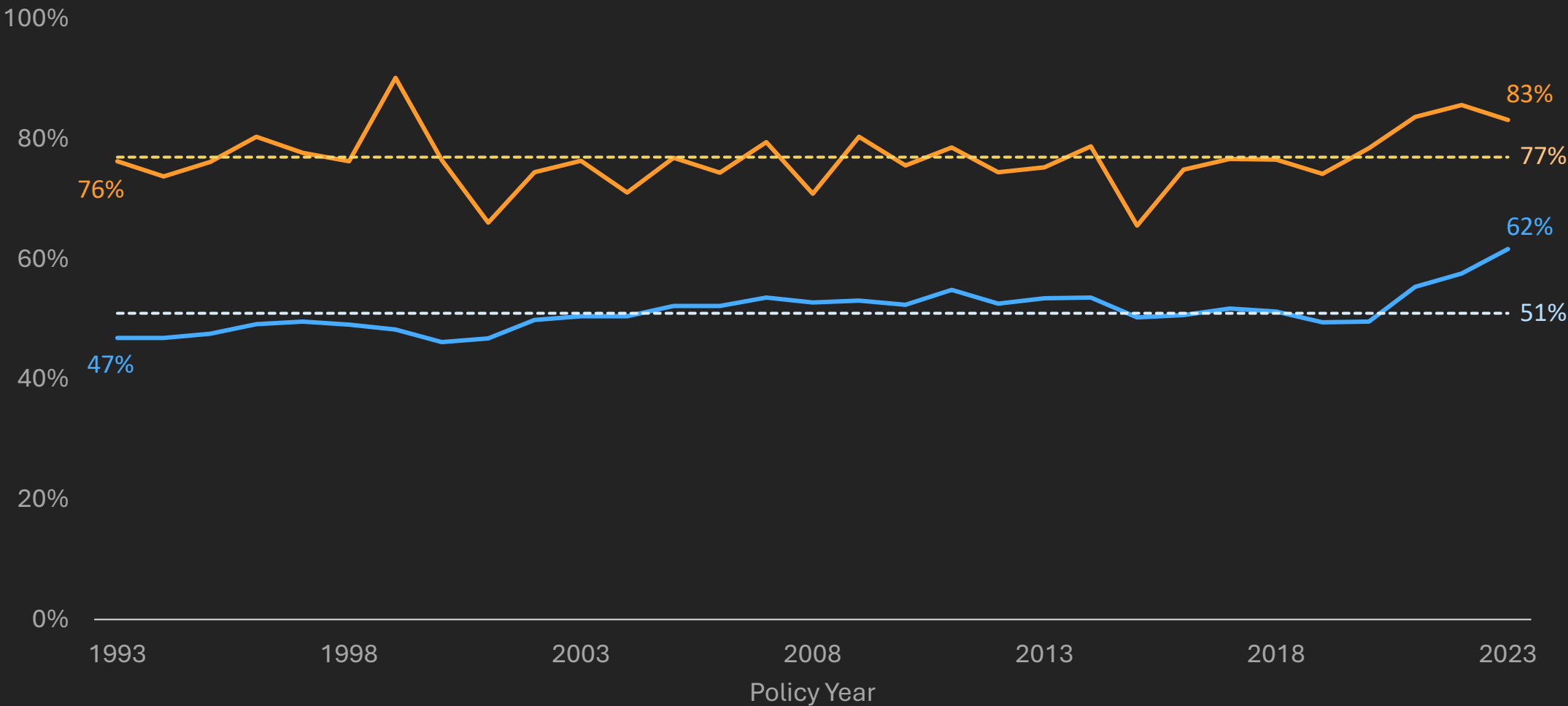
Source: NCCI's Pool Data, based on data through 9/30/2024  
Traumatic only

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# Medical Share of Reported Losses Over Time

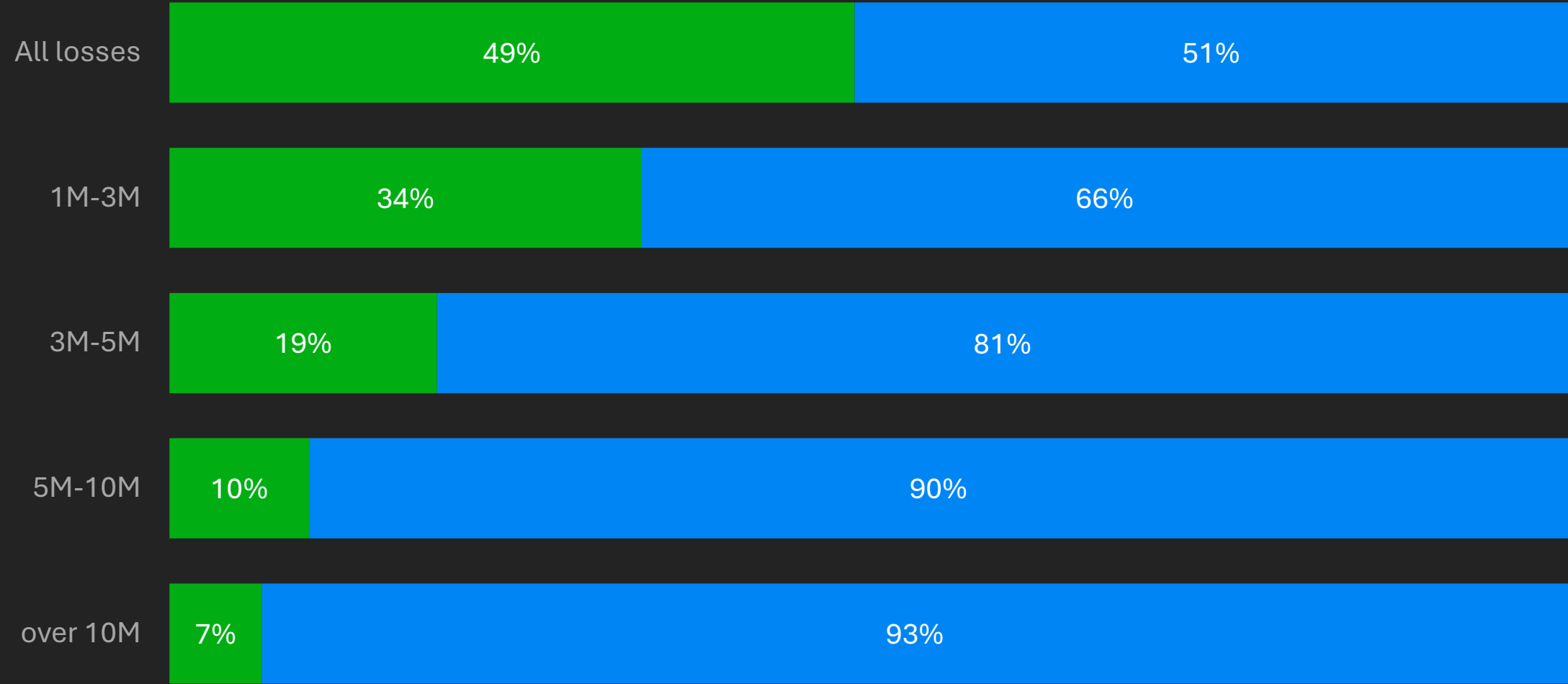
Total Incurred Loss vs. Large Losses



Large Losses are claims greater than \$1 million  
Source: NCCI's Pool Data, based on data through 9/30/2024  
Traumatic only

# Indemnity vs. Medical Split Across Large Loss Layers

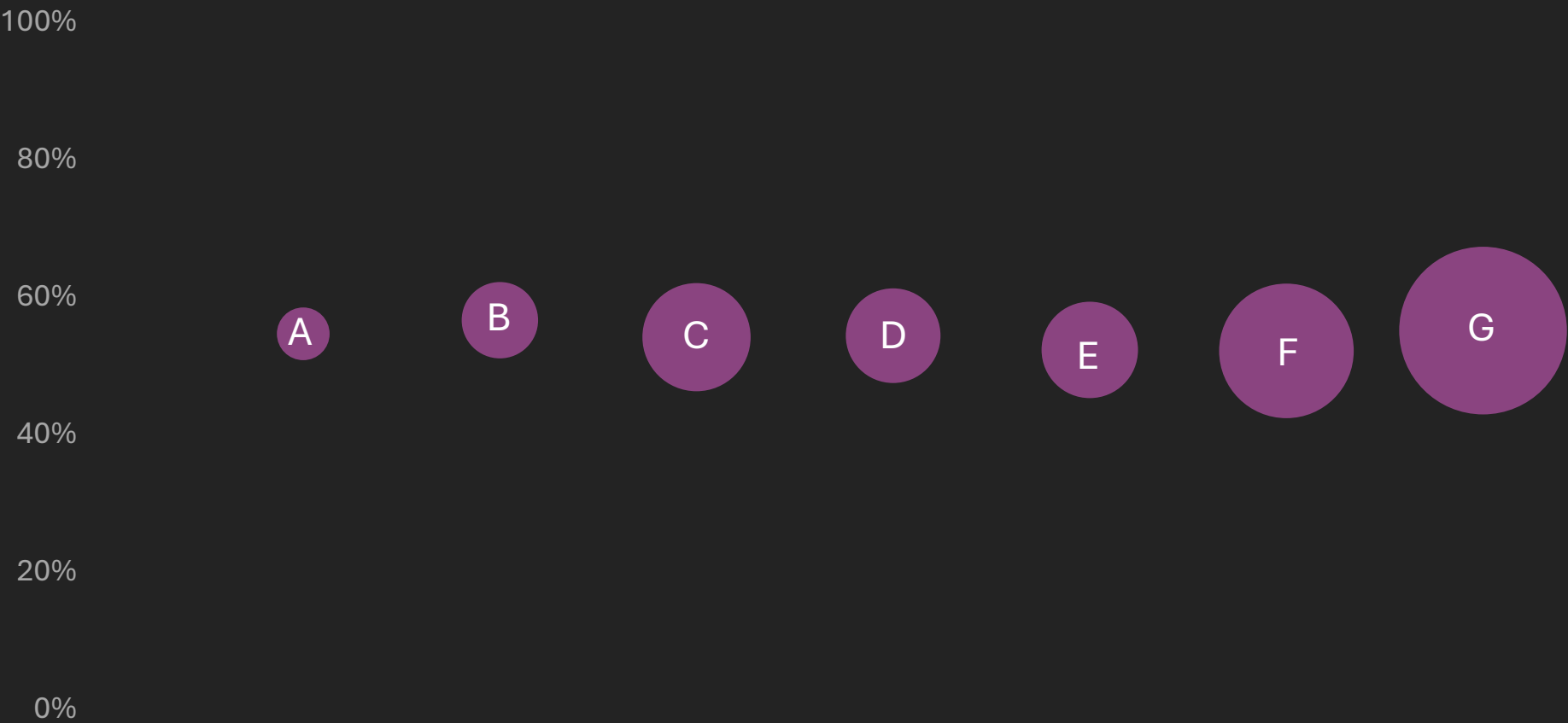
Policy Years 1993–2023



Large Losses are claims greater than \$1 million  
Source: NCCI's Pool Data, based on data as of 9/30/2024  
Traumatic only

# Medical Share of Reported Losses by Hazard Group

Policy Years 2000–2023



Source: NCCI’s Statistical Plan data, based on data as of 2/7/2025  
Includes all assigned risk lost-time claim data for states NCCI provides ratemaking services

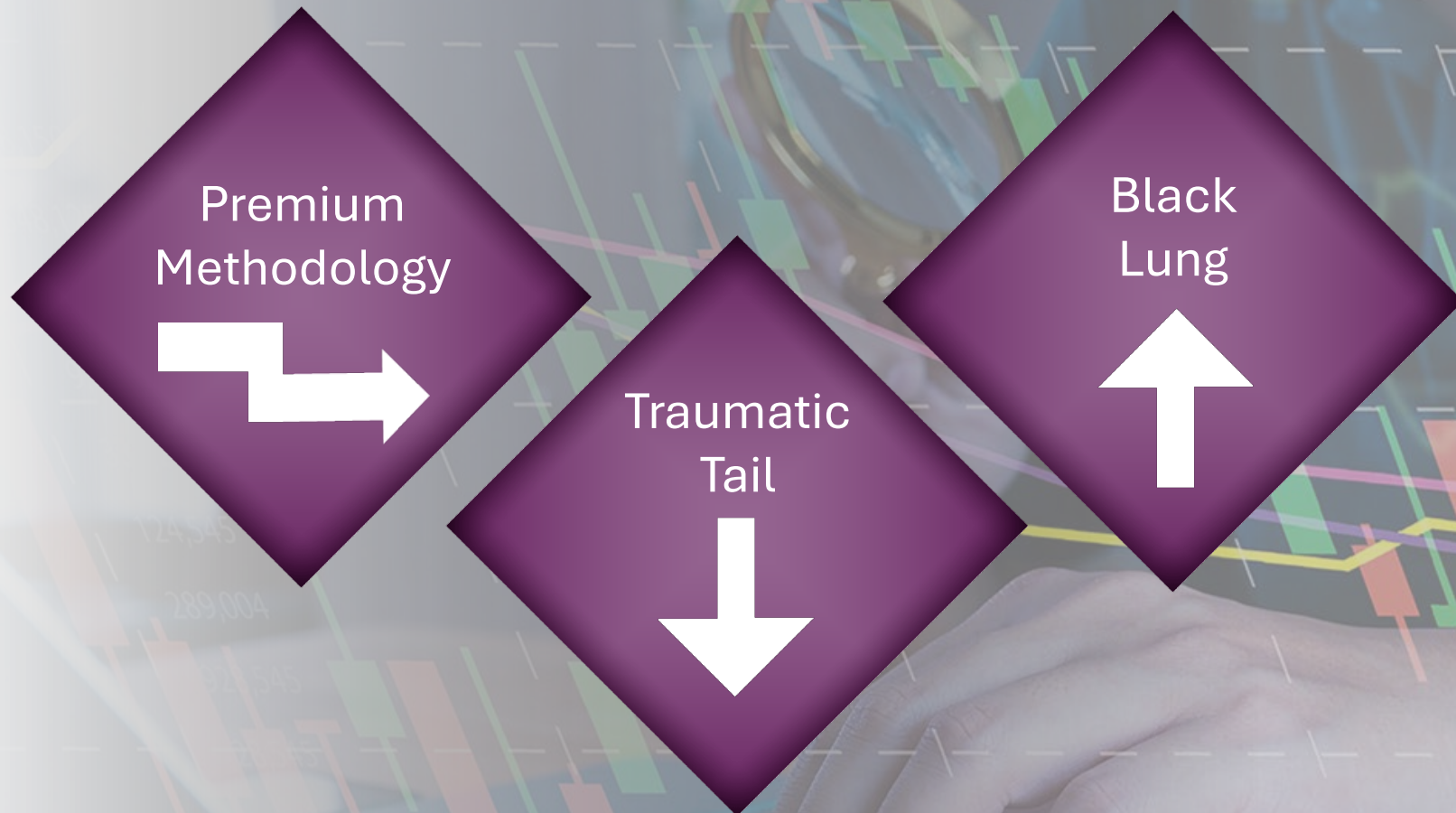


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# Recent Pool Reserving Research



# Recent Pool Reserving Research





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# Black Lung Experience Over Time



# Overview: Black Lung Remains Active in the National Pool

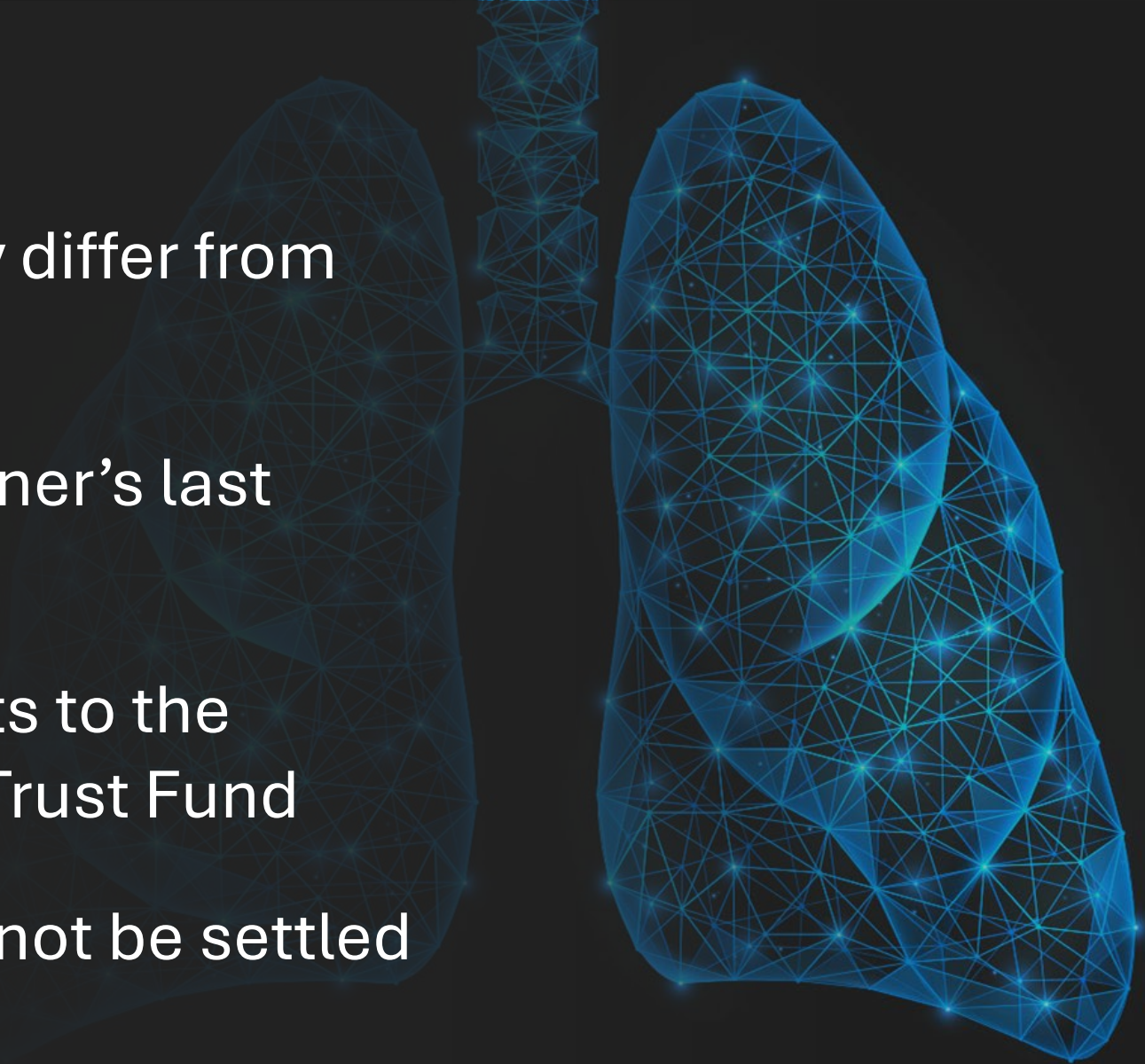
Majority of  
Exposure From  
Older Policy  
Years

Increase in  
Exposure From  
Recent Policy  
Years

Loss Activity  
From Older  
Policy Years

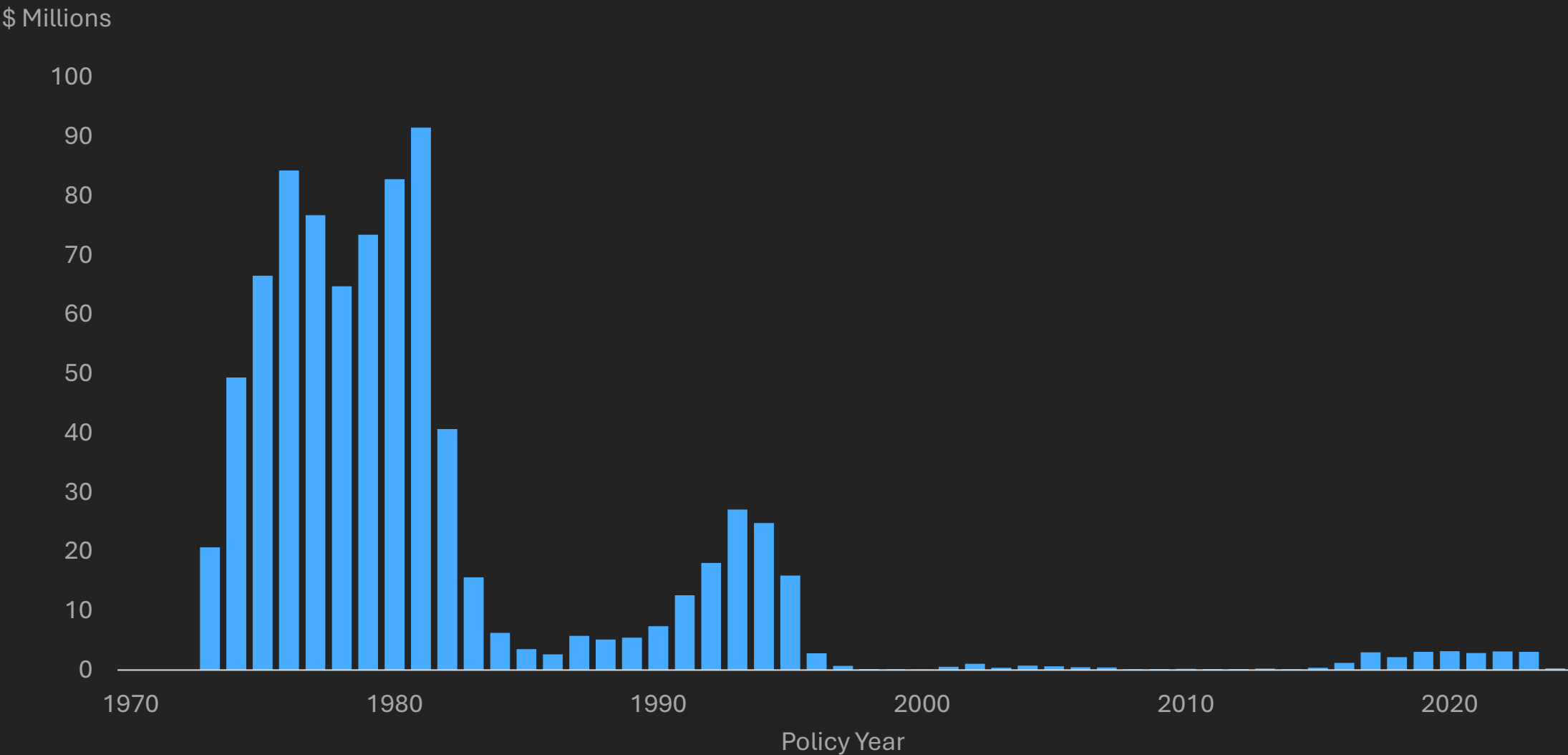
# Background on Black Lung

- Black lung claims significantly differ from traumatic claims
- Liability is assigned to coal miner's last employer
- National Pool reimburses costs to the Federal Black Lung Disability Trust Fund
- Federal black lung claims cannot be settled



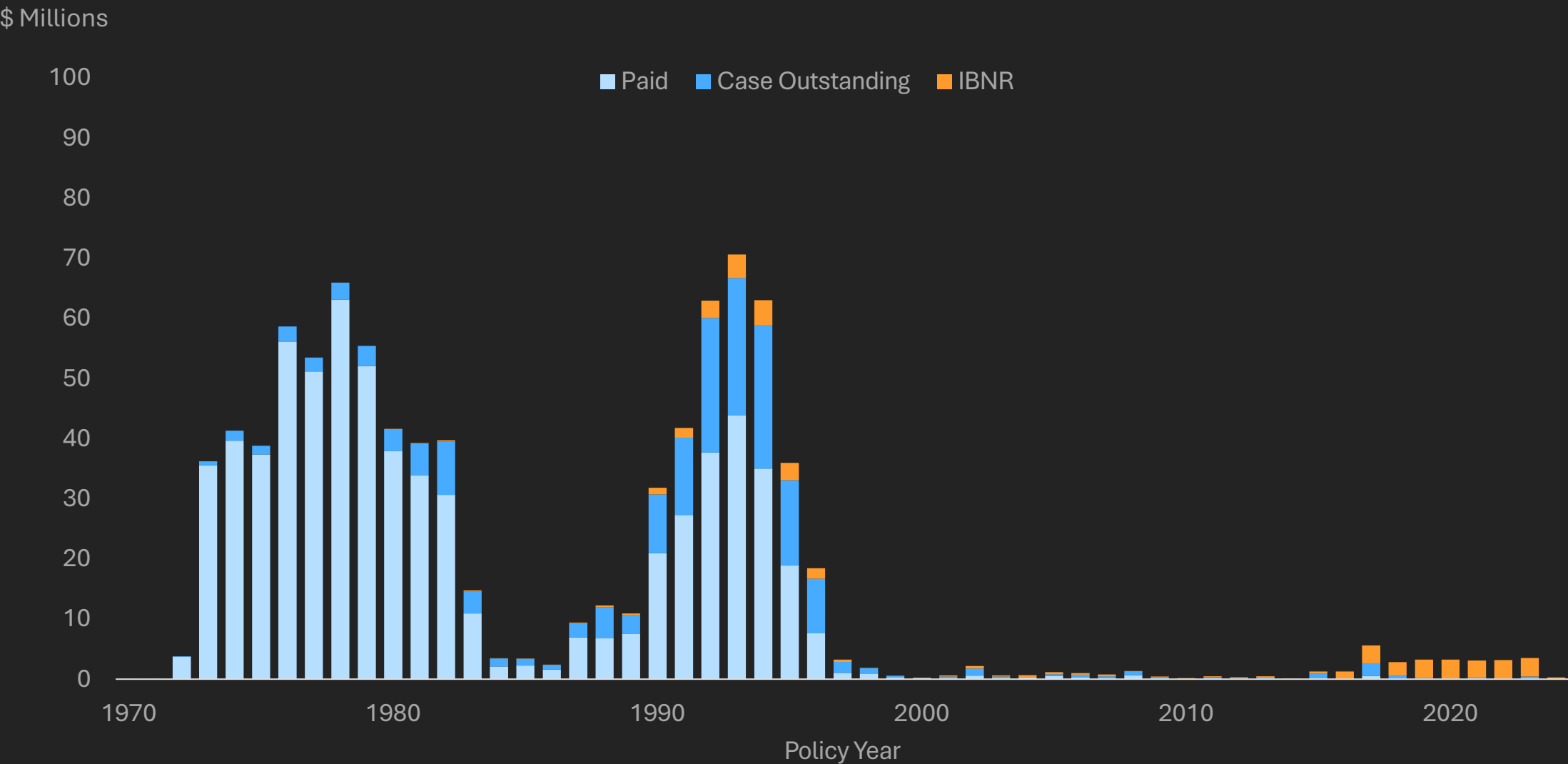


# Black Lung Earned Premium in the National Pool as of 9/30/2024



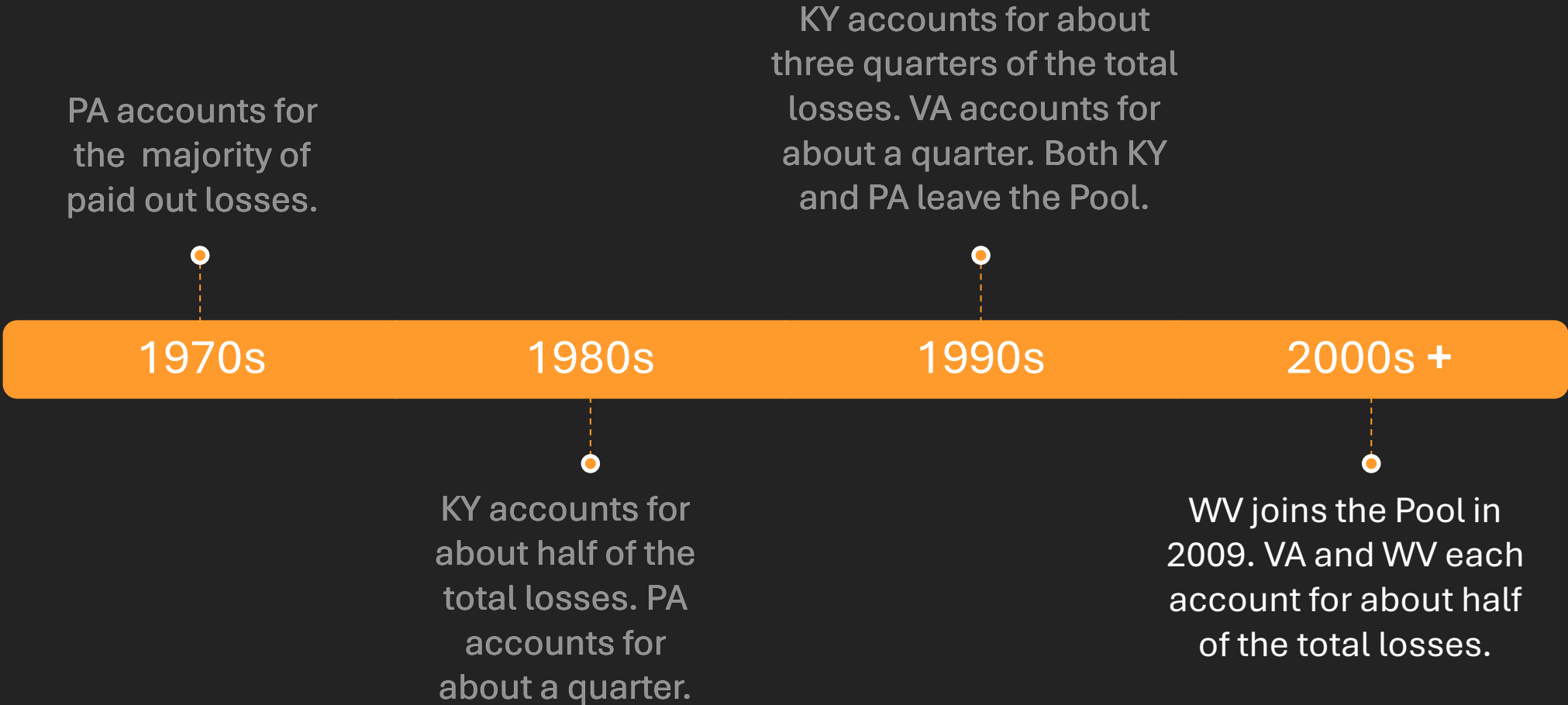
Source: NCCI's Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only  
Policy Years 2023 and 2024 are not fully earned

# Black Lung Ultimate Losses in the National Pool as of 9/30/2024



Source: NCCI's Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only

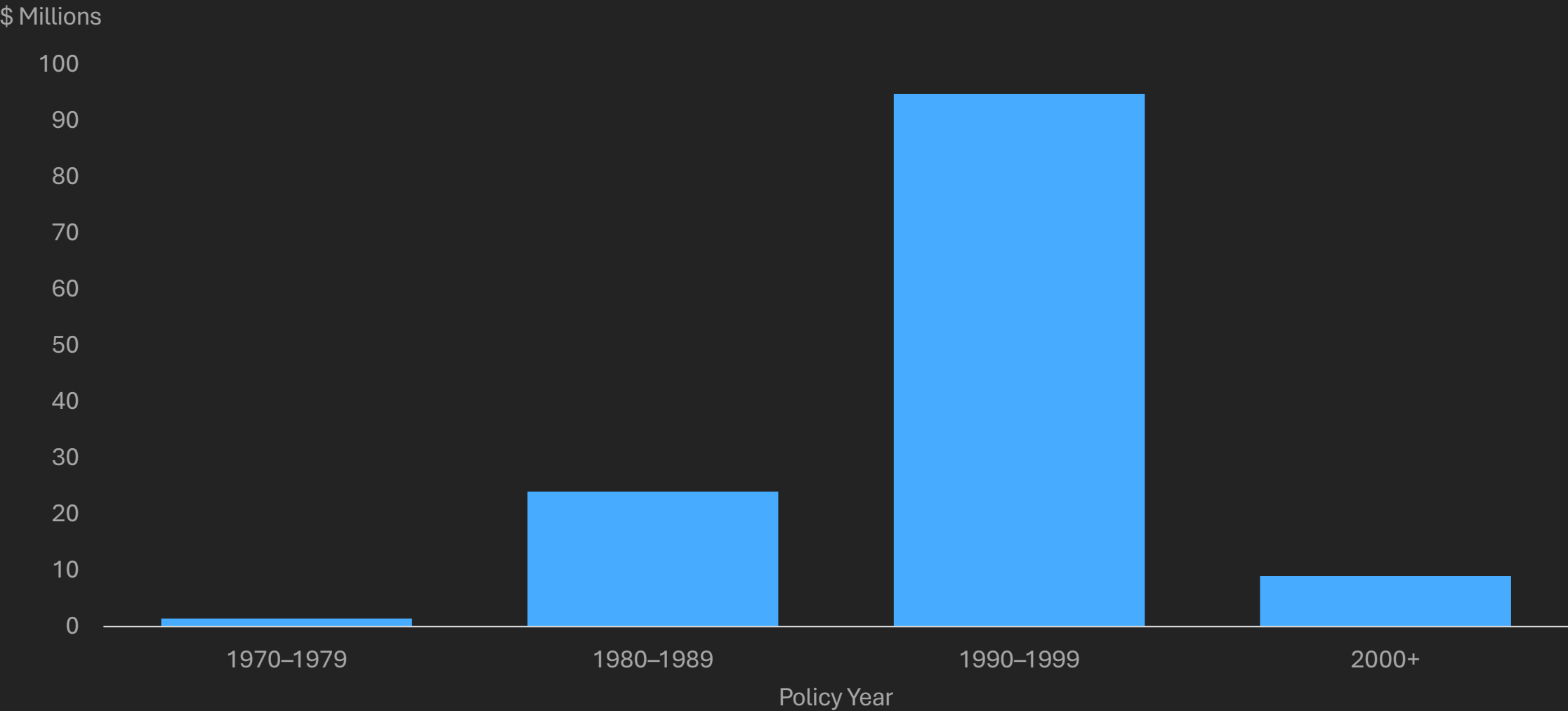
# State Contributors to the Black Lung Loss Activity by Policy Years



Source: NCCI’s Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only

# Reported Paid + Case Difference Between 12/31/2016 and 9/30/2024

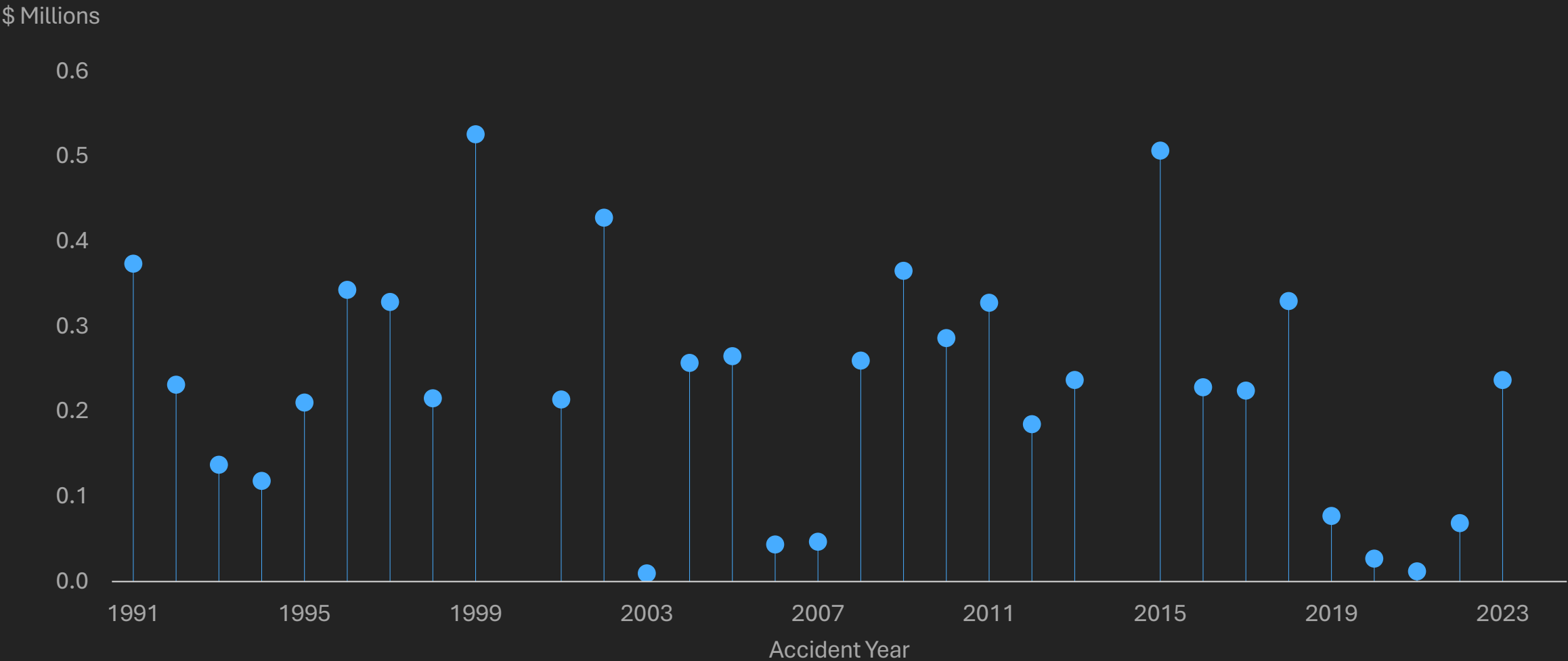
## Policy Years 1970-2024



Source: NCCI's Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only

# Reported Paid + Case Claim Severity by Accident Year

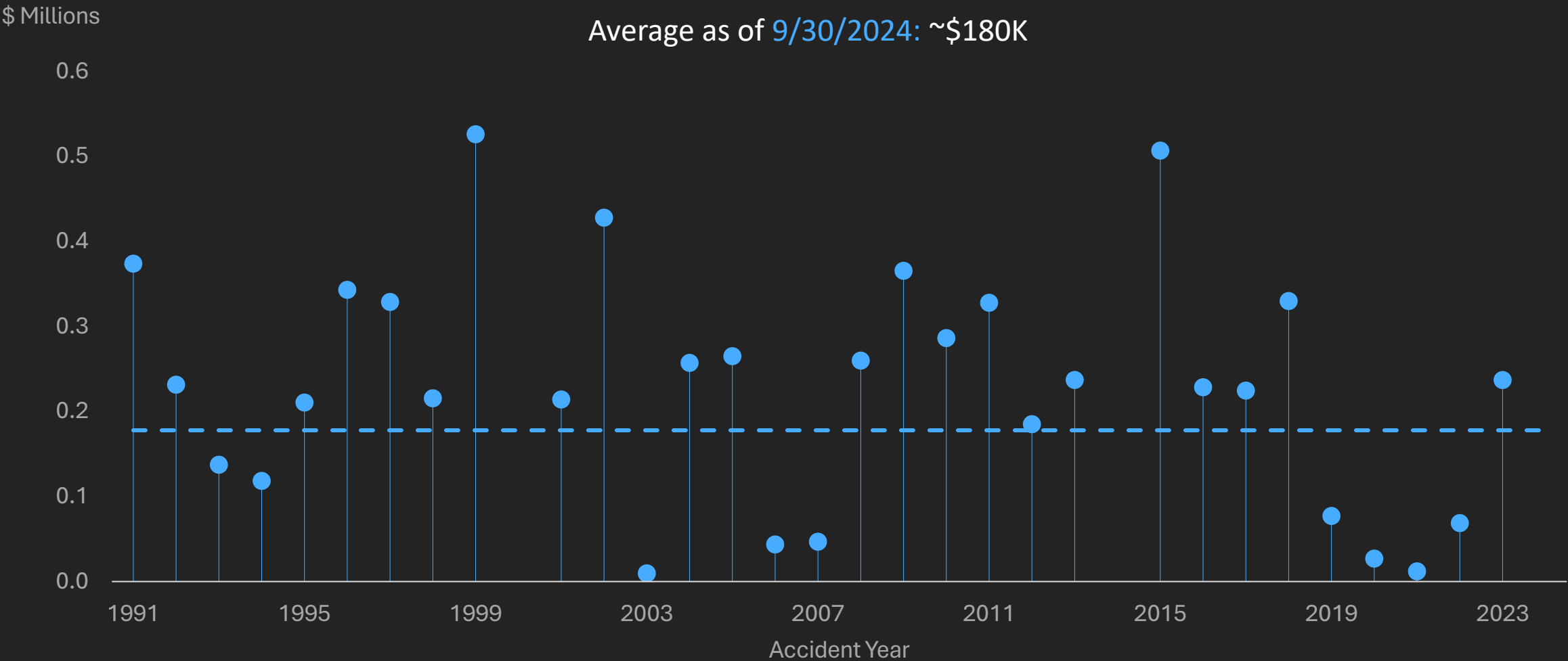
Accident Years 1991–2024



Source: NCCI’s Pool Data, based on data through 12/31/2016 and 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only  
Claim counts include lost-time claims only  
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# Reported Paid + Case Claim Severity by Accident Year

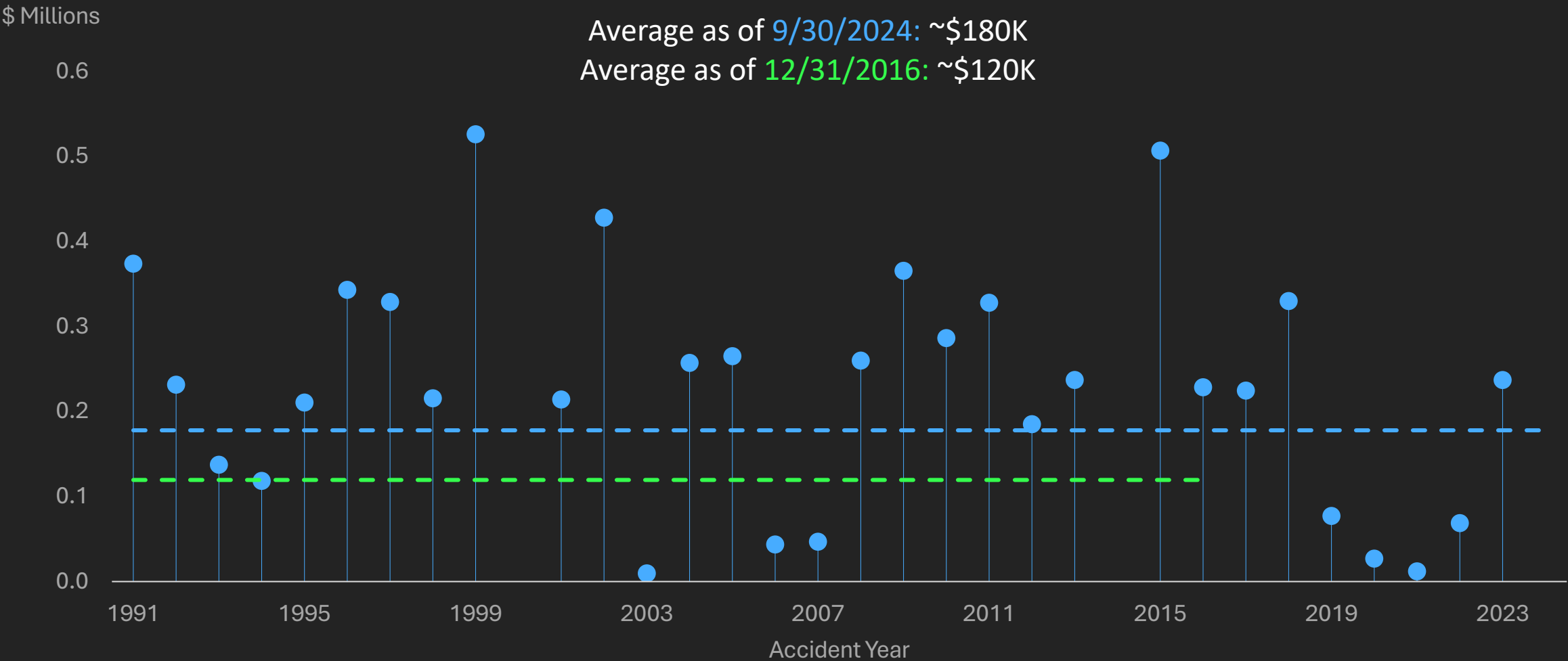
Accident Years 1991–2024



Source: NCCI's Pool Data, based on data through 12/31/2016 and 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only  
Claim counts include lost-time claims only  
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# Reported Paid + Case Claim Severity by Accident Year

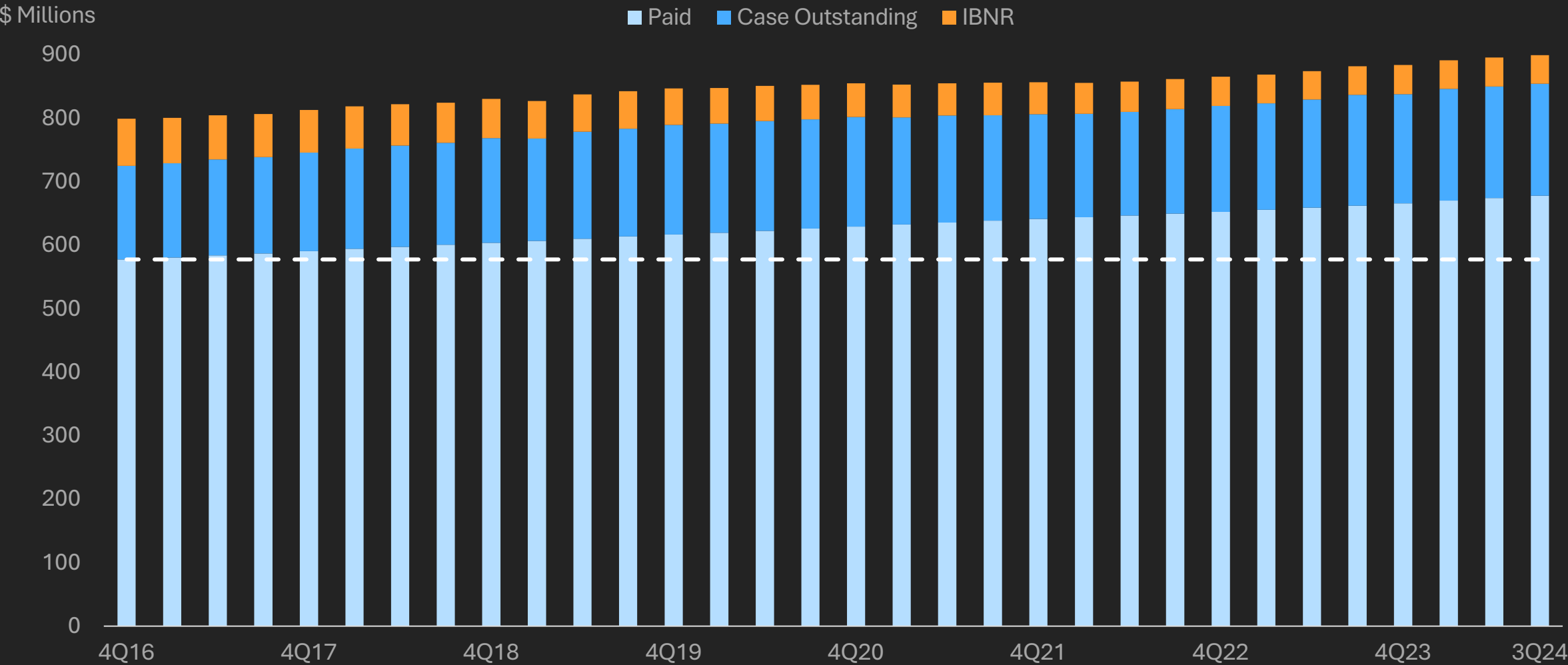
Accident Years 1991–2024



Source: NCCI's Pool Data, based on data through 12/31/2016 and 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only  
Claim counts include lost-time claims only  
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# Cumulative Ultimate Losses by Quarter Valuation

Policy Years 1970–2024

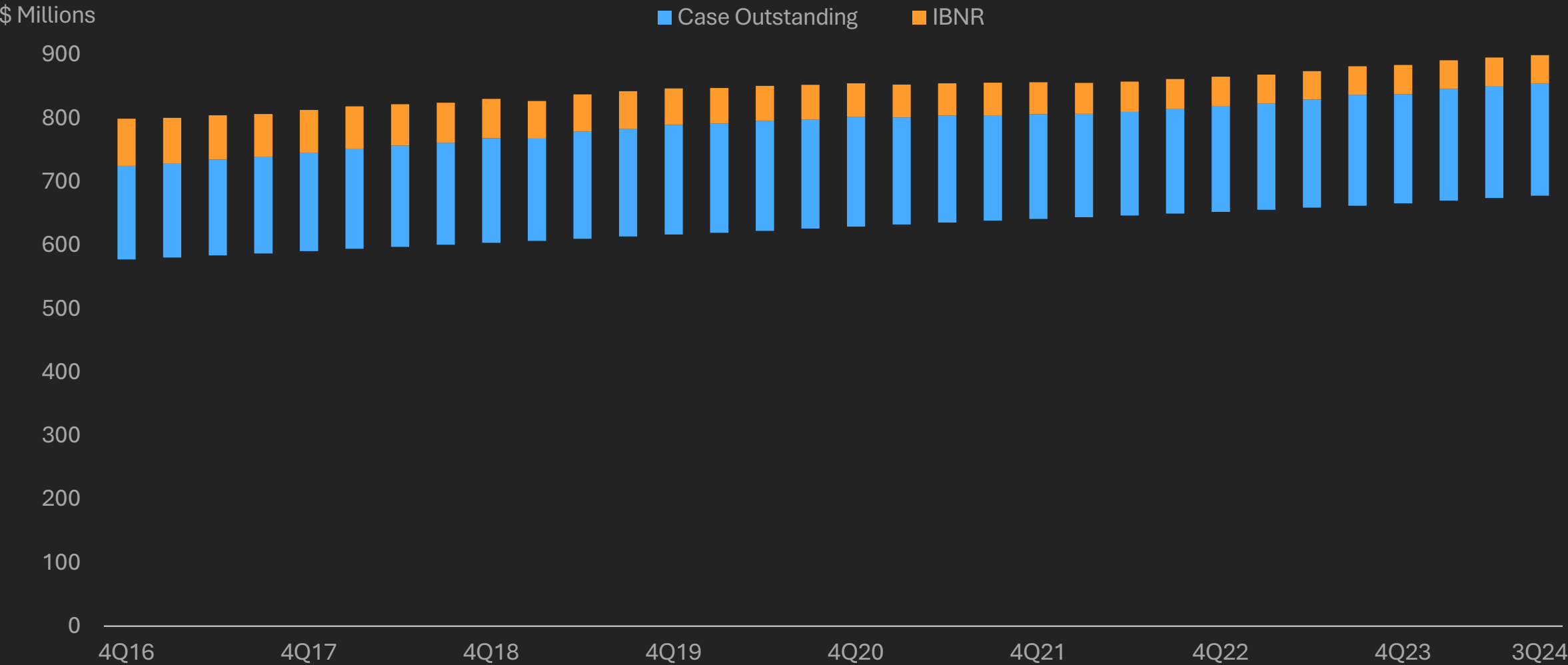


Source: NCCI's Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only



# Cumulative Reserves by Quarter Valuation

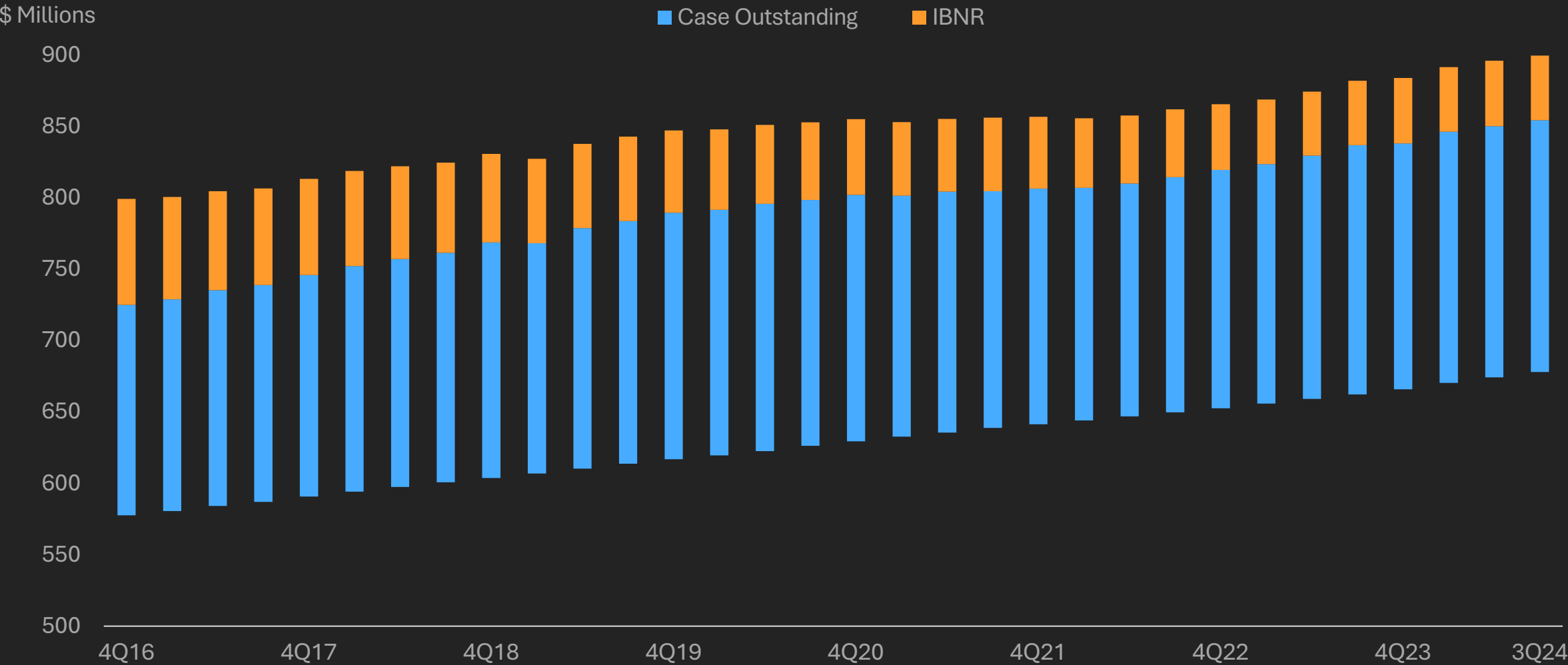
Policy Years 1970–2024



Source: NCCI’s Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only

# Cumulative Reserves by Quarter Valuation

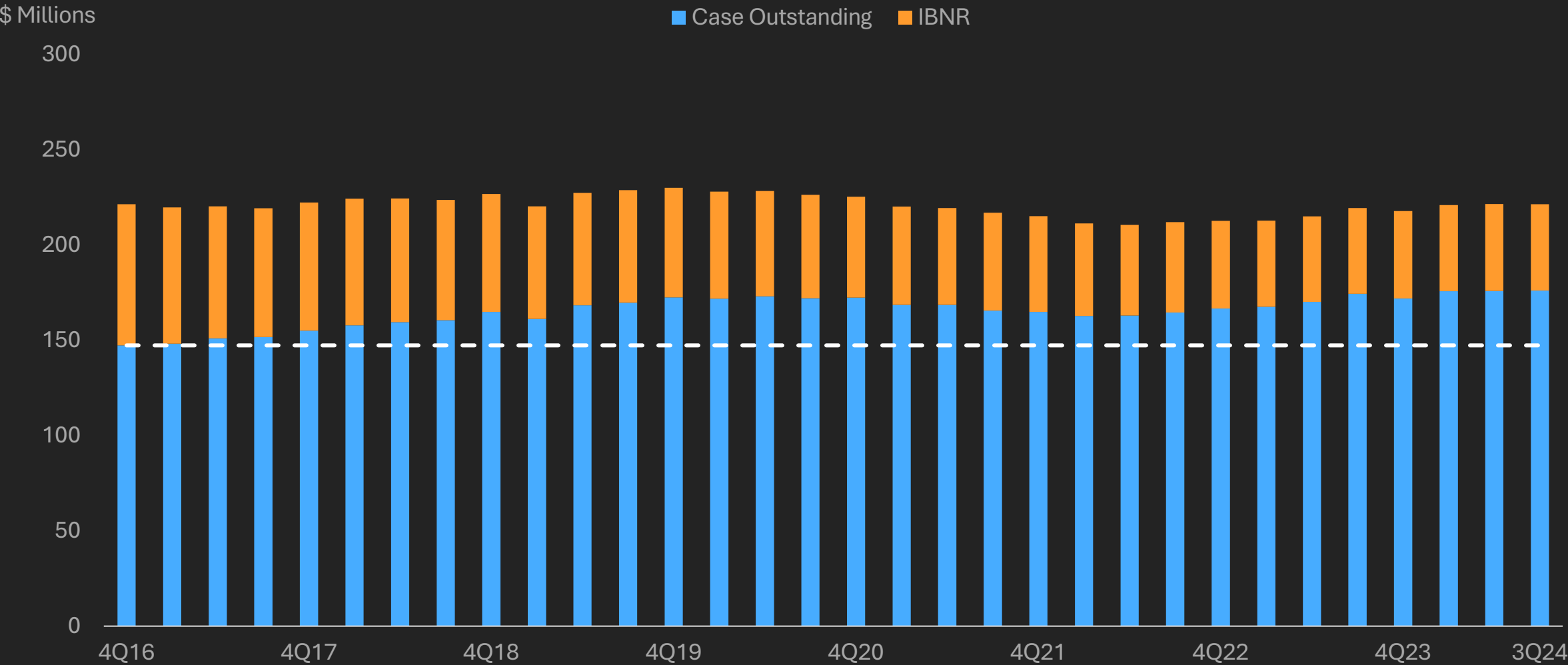
Policy Years 1970–2024



Source: NCCI’s Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only

# Cumulative Reserves by Quarter Valuation

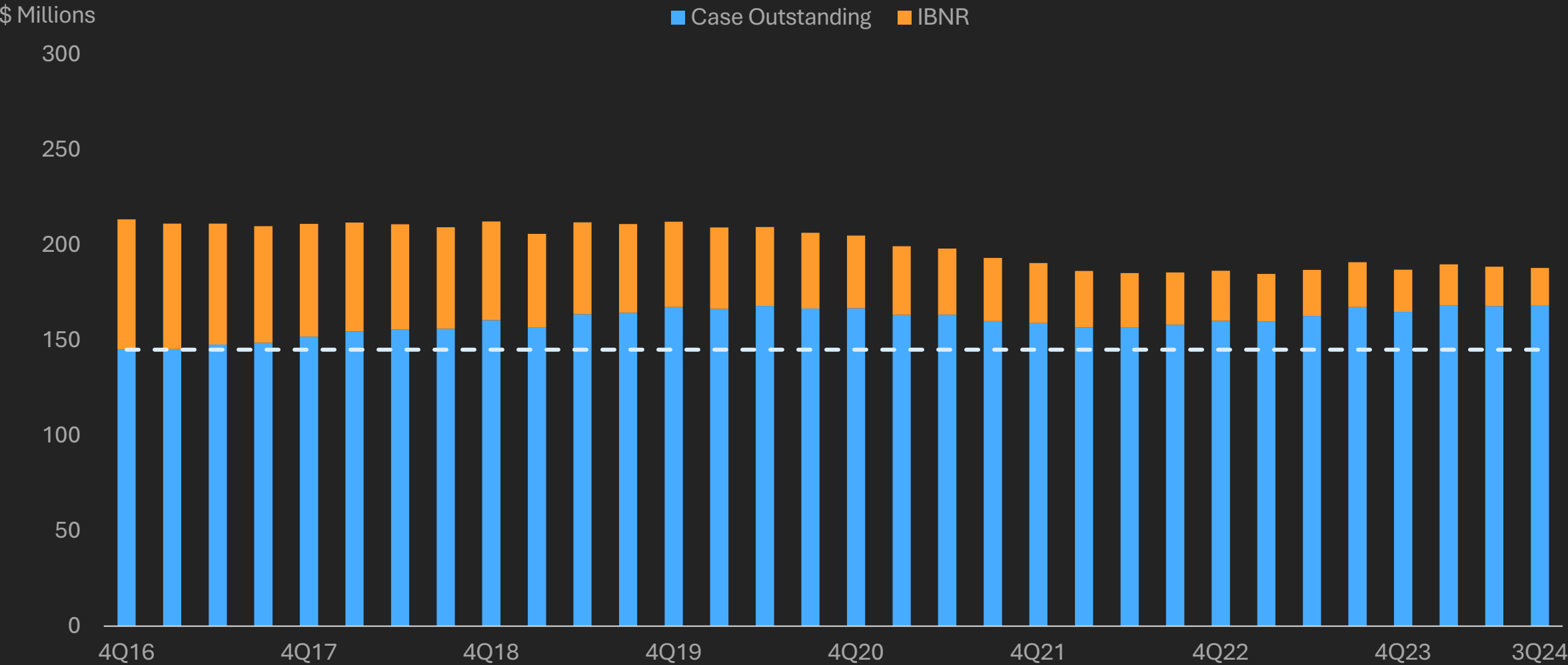
Policy Years 1970–2024



Source: NCCI’s Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only

# Cumulative Reserves by Quarter Valuation

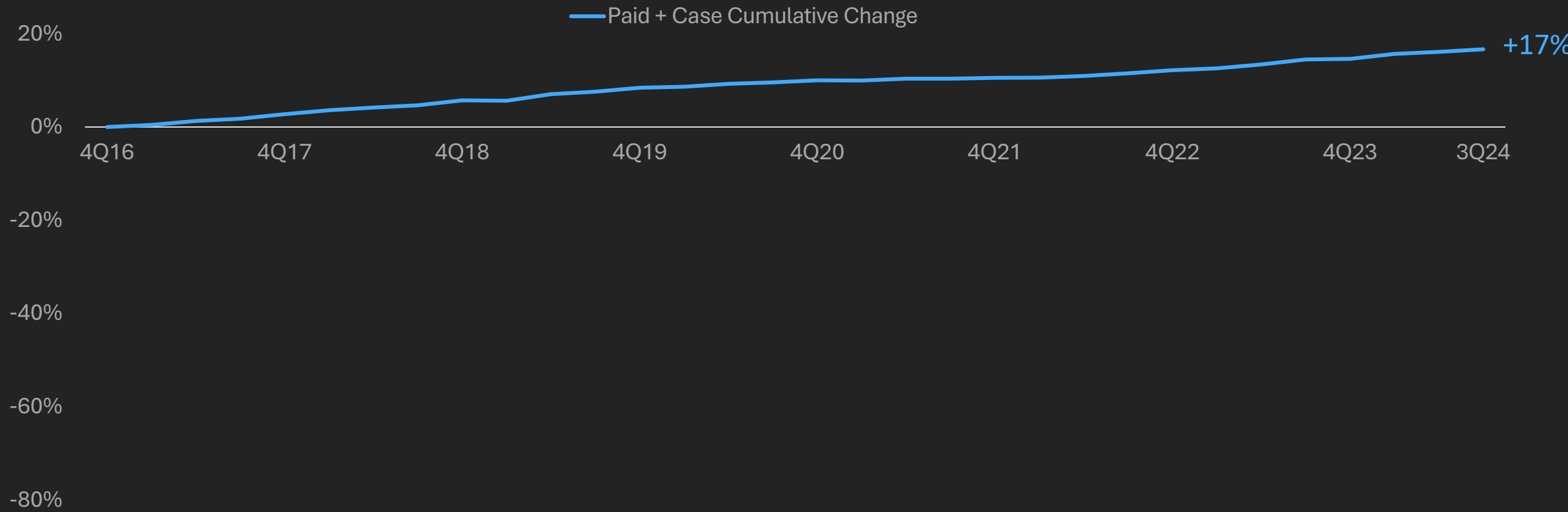
Limited to Policy Years 1970–1999



Source: NCCI’s Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only

# Cumulative Change in Reported Paid + Case

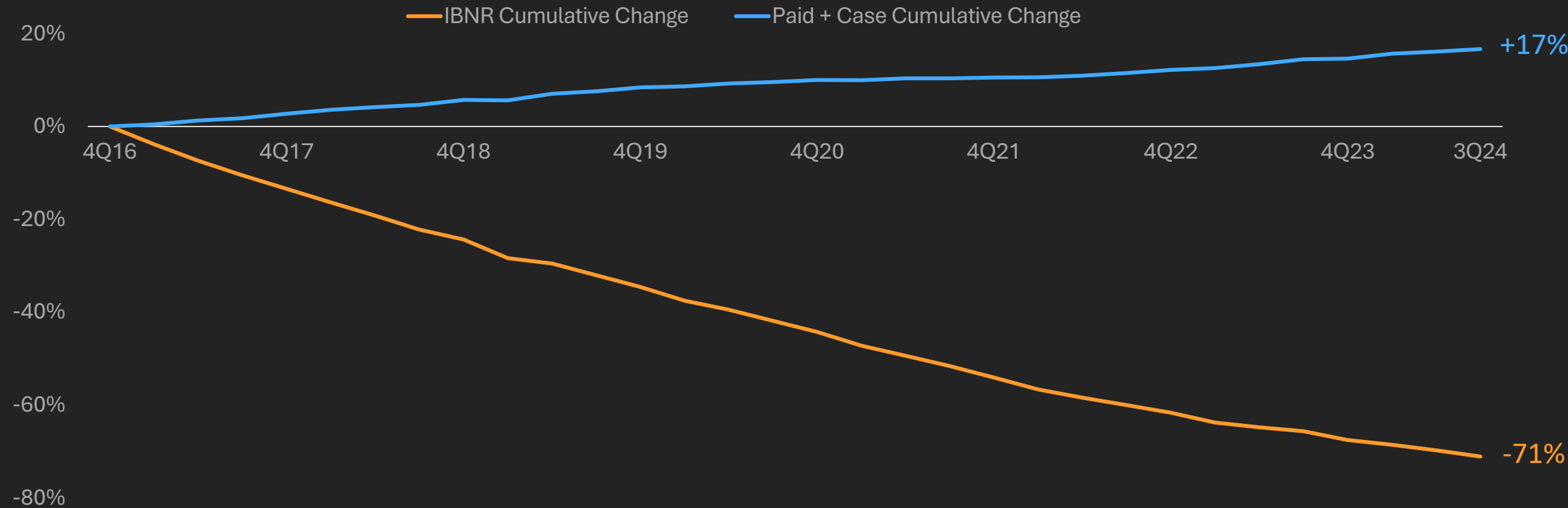
Limited to Policy Years 1970–1999 and Indexed to 4Q16 valuation



Source: NCCI’s Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only

# Cumulative Change in IBNR From Current Methods

Limited to Policy Years 1970–1999 and Indexed to 4Q16 valuation



Source: NCCI's Pool Data, based on data through 9/30/2024  
Includes states where NCCI provides Pool Administration services; National Pool states only  
Coal Mine Black Lung only

# Conclusion: Black Lung in the National Pool

- Late maturity loss development continues to increase black lung losses
- Uptick in black lung exposure in recent years – VA and WV
- Reviewed actuarial methodologies and modeling techniques:
  - Updated current black lung methodologies
  - More IBNR to be booked
  - Decreased rate at which IBNR is released

# Key Takeaways

Premium  
Is Stable

Medical Is  
Majority of Large  
Losses

Market Share  
Remains Small  
and Manageable

Operating Results  
Are Close to  
Breakeven

IBNR Is Shifting  
From Traumatic  
to Black Lung

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