

MANAGING EXTREMES

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WORKERS COMPENSATION - THE DEVIL'S BUSINESS?

CAGNY

June 1 2012



Topics

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- Quick rehash of NCCI issues symposium
 - Market overview
 - Items of interest
- Willis-RAND study impact of healthcare reform on WC

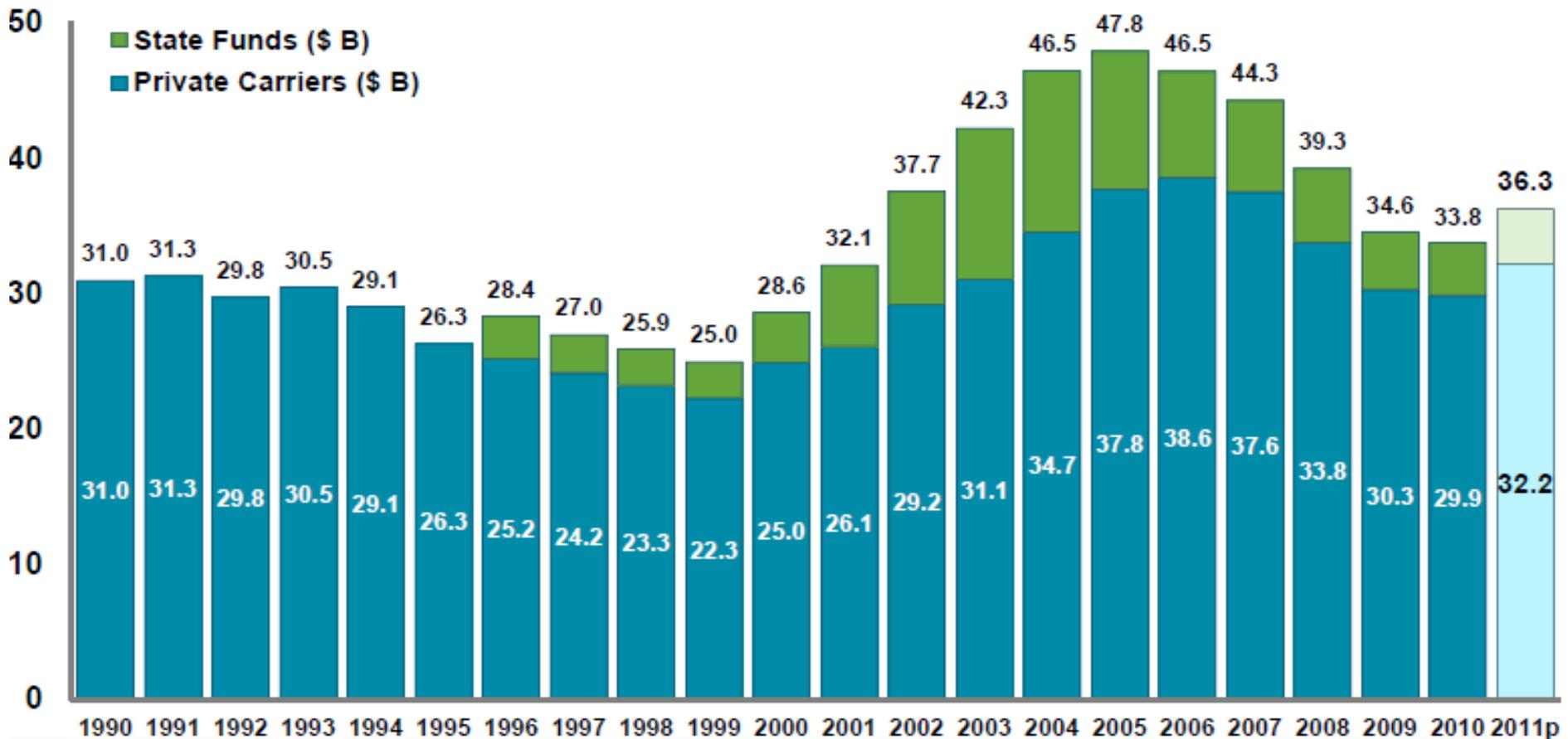
MARKET OVERVIEW



Workers Compensation Premium First Increase in Years

Net Written Premium

\$ Billions



p Preliminary

Calendar Year

Source: 1990–2010 Private Carriers, Annual Statement Data; 2011p, NCCI

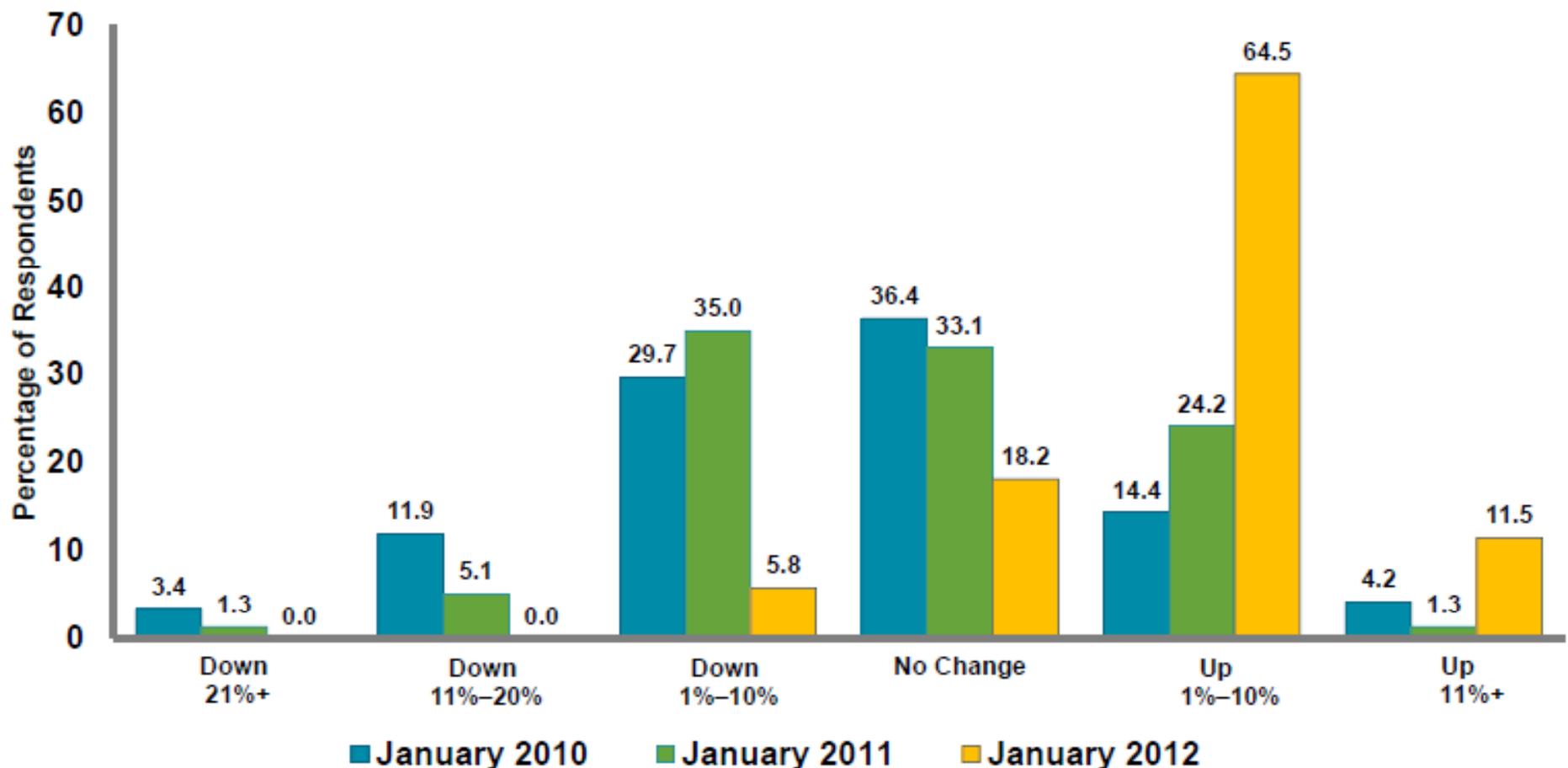
1996–2011p State Funds: AZ, CA, CO, HI, ID, KY, LA, MD, MO, MT, NM, OK, OR, RI, TX, UT Annual Statements

State Funds available for 1996 and subsequent

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According to Goldman Sachs, Prices Appear to Be Increasing

Agent Responses on Workers Compensation Rates on Renewals vs. 12 Months Prior



Calendar Year

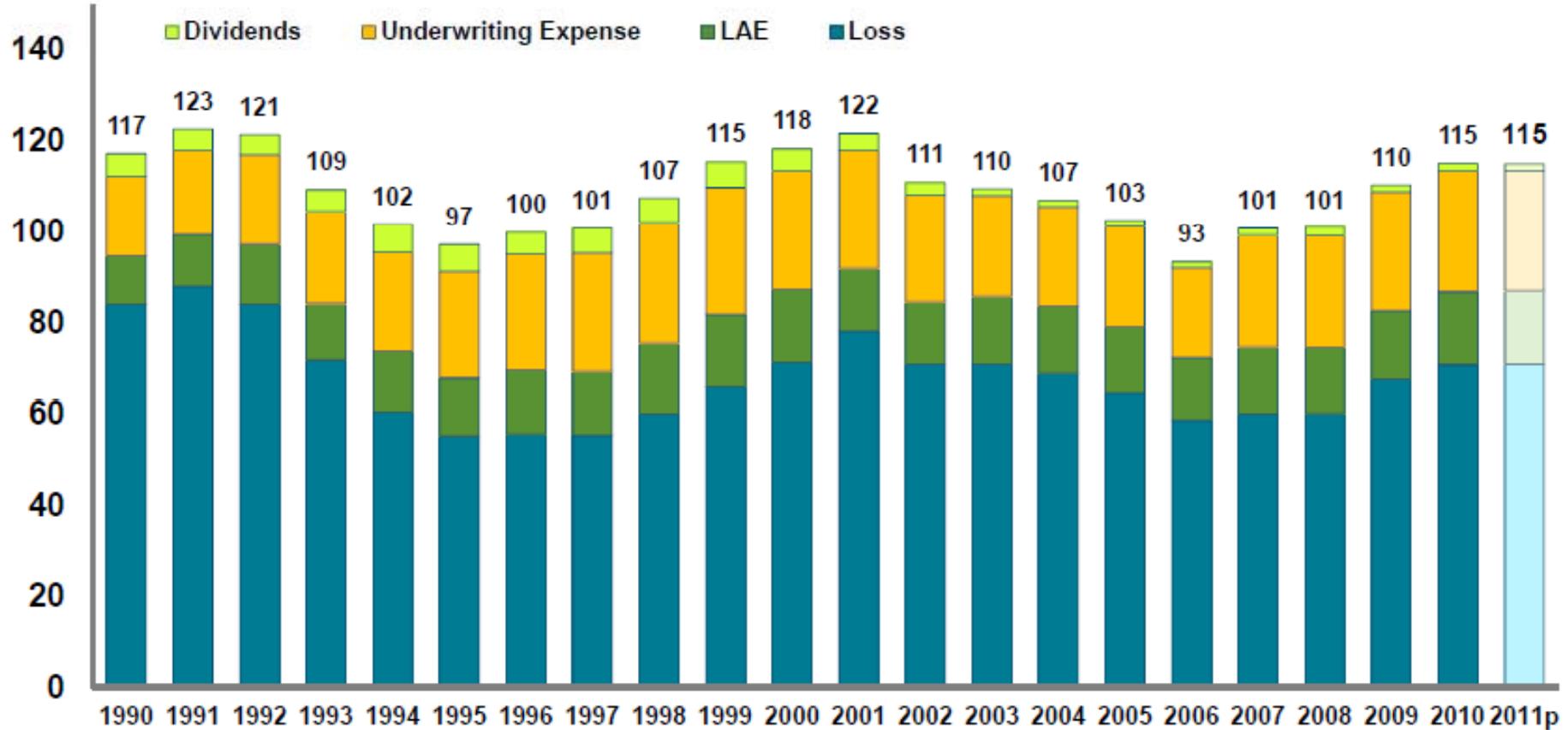
Source: Goldman Sachs Research, Proprietary Survey, "January 2012 Pricing Survey, Insurance: Property & Casualty" (Exhibit 4, Workers' Compensation, Percentage of Respondents)

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Workers Compensation Calendar Year Combined Ratio Remains High

Private Carriers

Percent



p Preliminary

Calendar Year

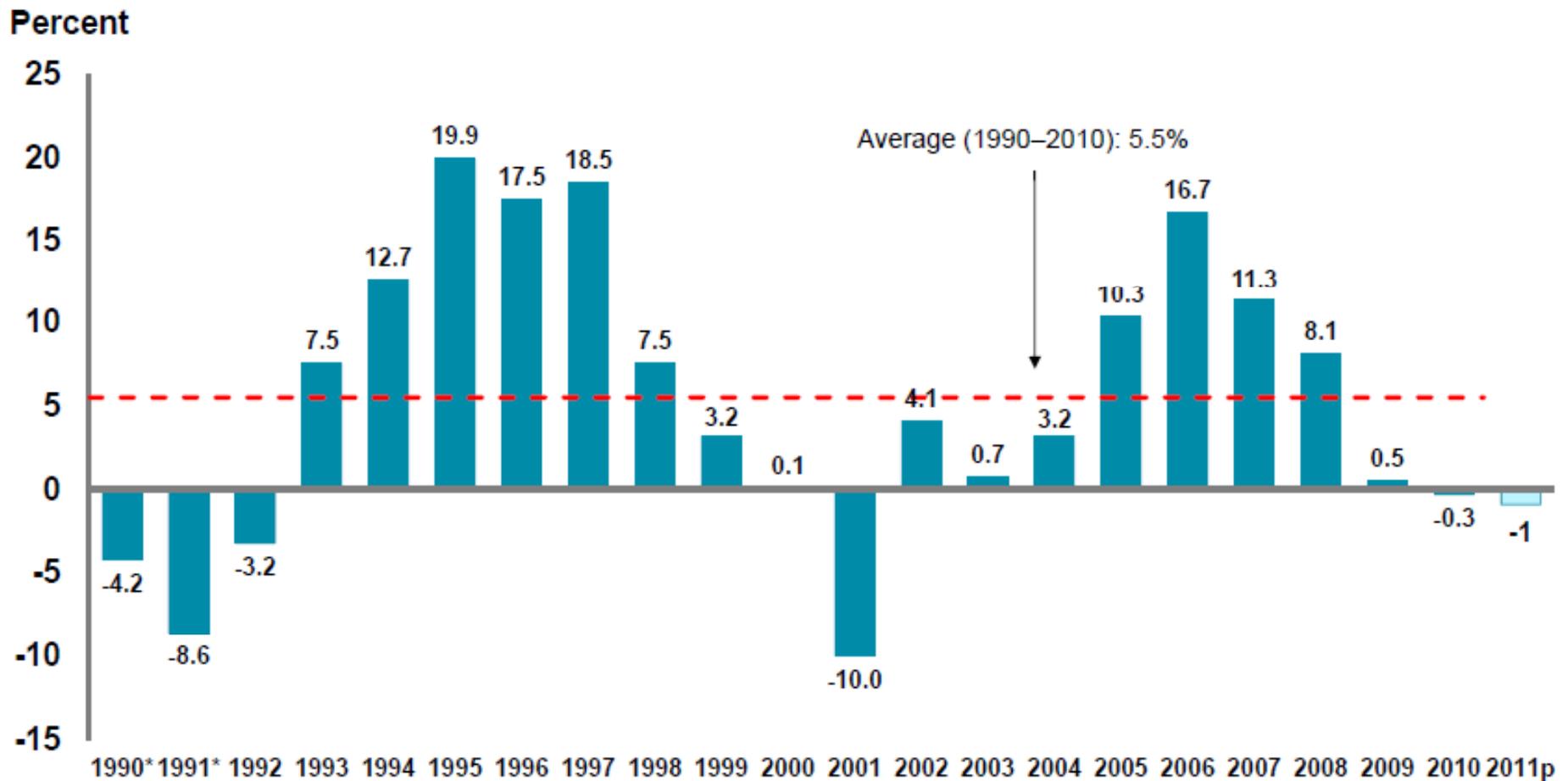
Source: 1990–2011p, Annual Statement Data

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Workers Compensation Results

Operating Loss Continues

Pre-Tax Operating Gain Ratio—Private Carriers



p Preliminary

Source: 1990–2010, Annual Statement Data; 2011p, NCCI

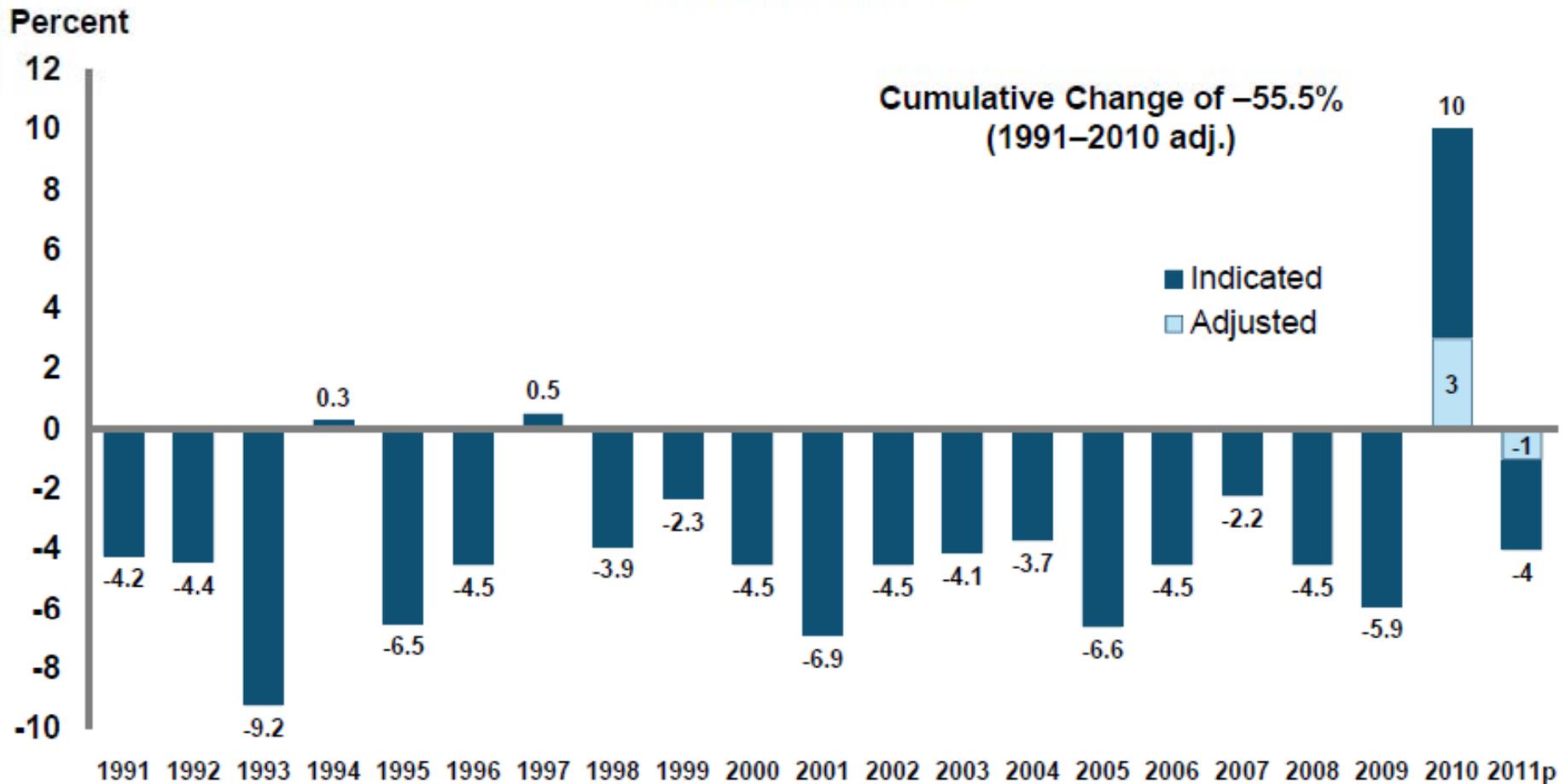
Operating Gain Equals 1.00 minus (Combined Ratio Less Investment Gain on Insurance Transactions and Other Income)

* Adjusted to include realized capital gains to be consistent with 1992 and after

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Workers Compensation Lost-Time Claim Frequency Declined in 2011

Lost-Time Claims



2011p: Preliminary based on data valued as of 12/31/2011

1991-2010: Based on data through 12/31/2010, developed to ultimate

Based on the states where NCCI provides ratemaking services, including state funds; excludes high deductible policies

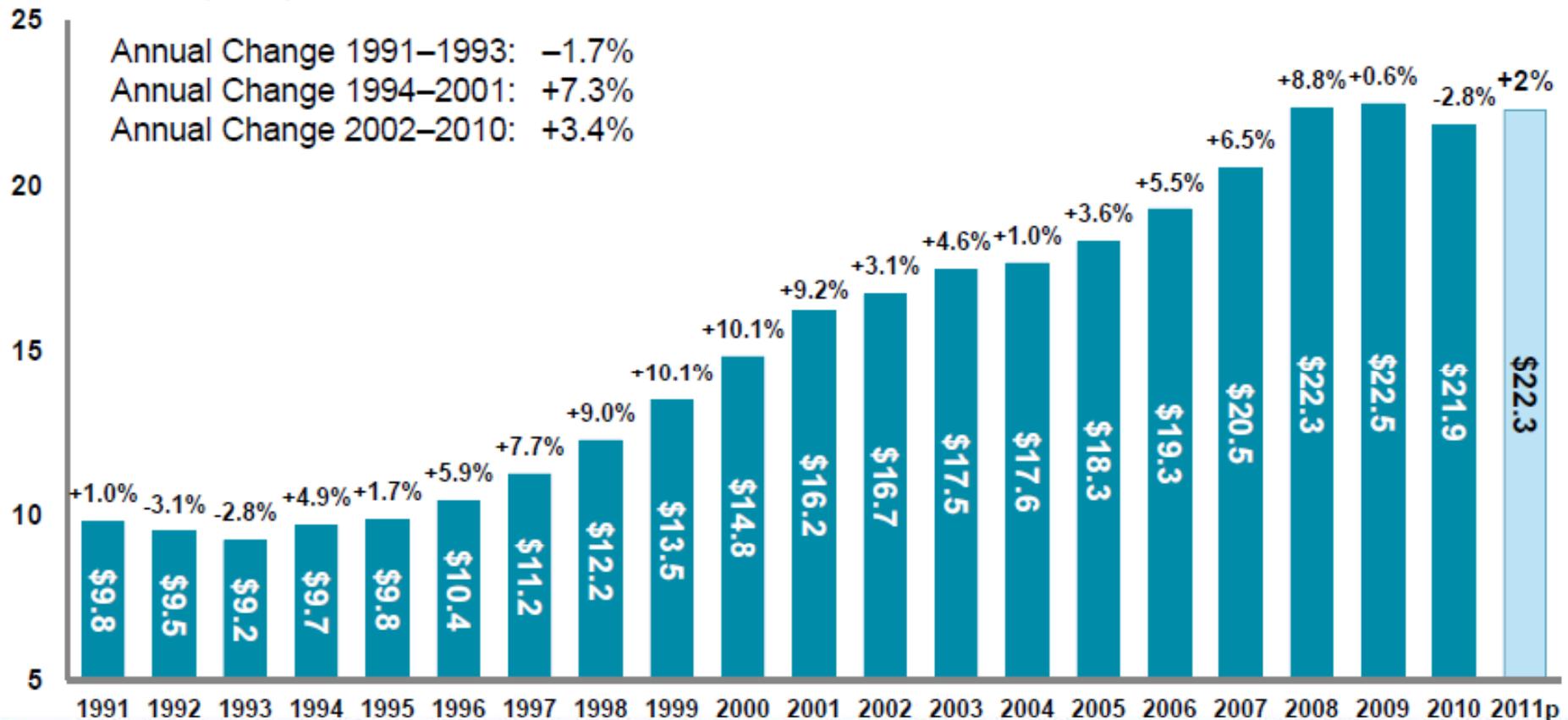
Frequency is the number of lost-time claims per \$1M pure premium at current wage and voluntary loss cost level

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Workers Compensation Indemnity Claim Costs—Modest Increase in 2011

Average Indemnity Cost per Lost-Time Claim

Indemnity Claim Cost (000s)



Accident Year

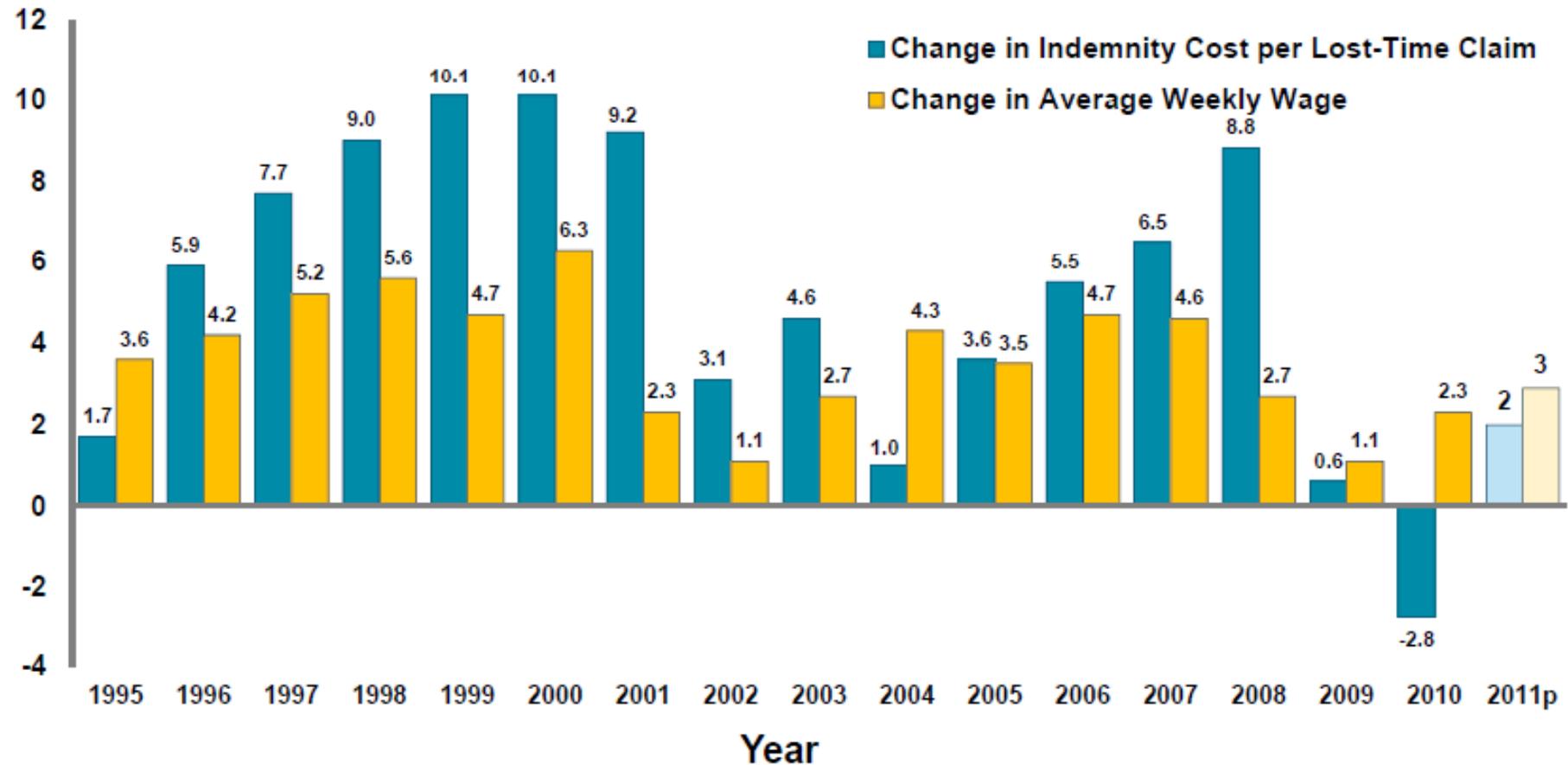
2011p: Preliminary based on data valued as of 12/31/2011
 1991–2010: Based on data through 12/31/2010, developed to ultimate
 Based on the states where NCCI provides ratemaking services, including state funds
 Excludes high deductible policies



Workers Compensation Indemnity Severity—Modest Increase in 2011

Average Indemnity Cost per Lost-Time Claim

Percent Change



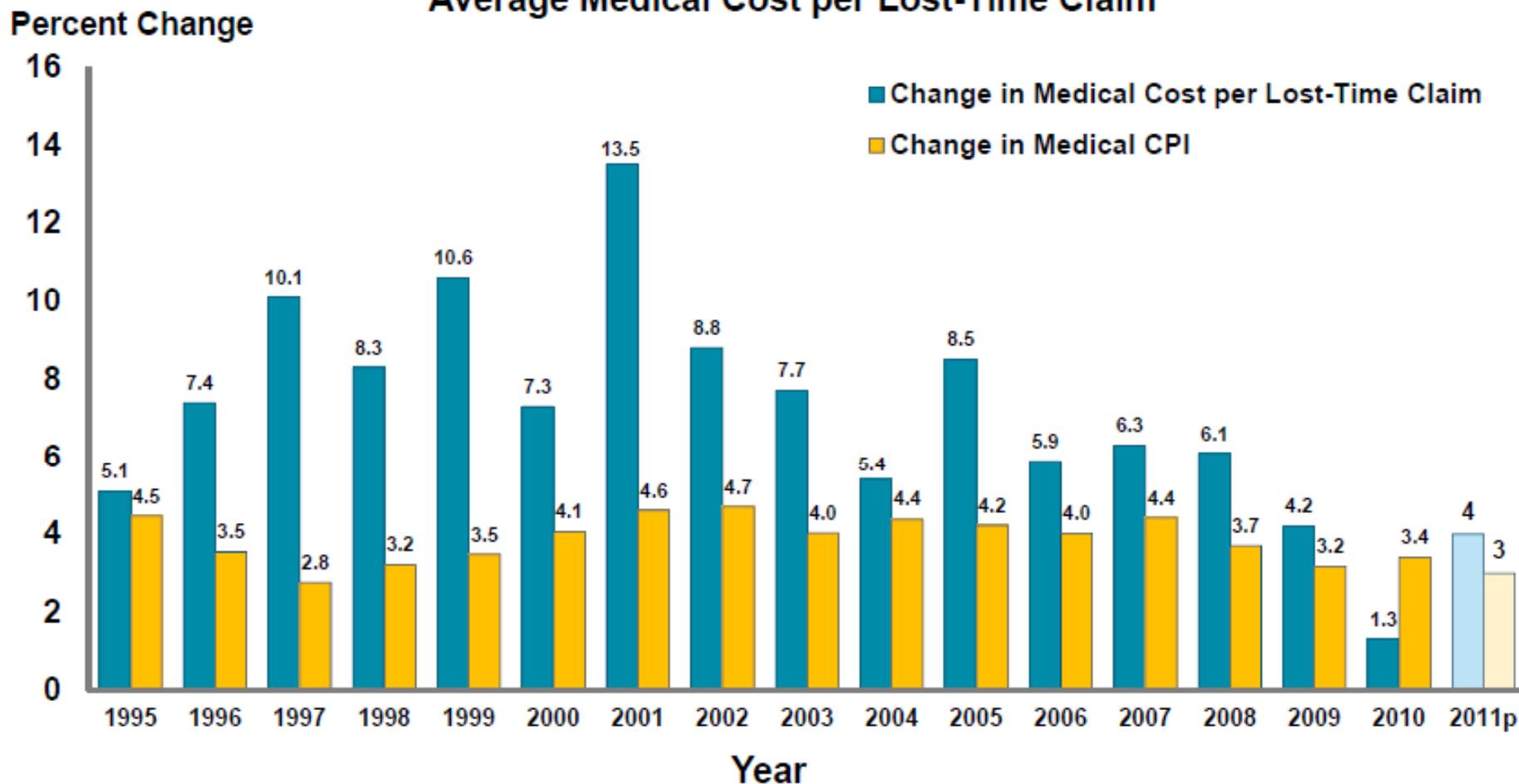
p Preliminary

Based on the states where NCCI provides ratemaking services, including state funds; excludes high deductible policies

Source: Average Weekly Wage 1995–2008: Quarterly Census of Employment and Wages, Economy.com; 2009–2011p, NCCI
Accident year indemnity severity—NCCI states, NCCI

Workers Compensation Medical Severity Moderate Increase in 2011

Average Medical Cost per Lost-Time Claim



p Preliminary

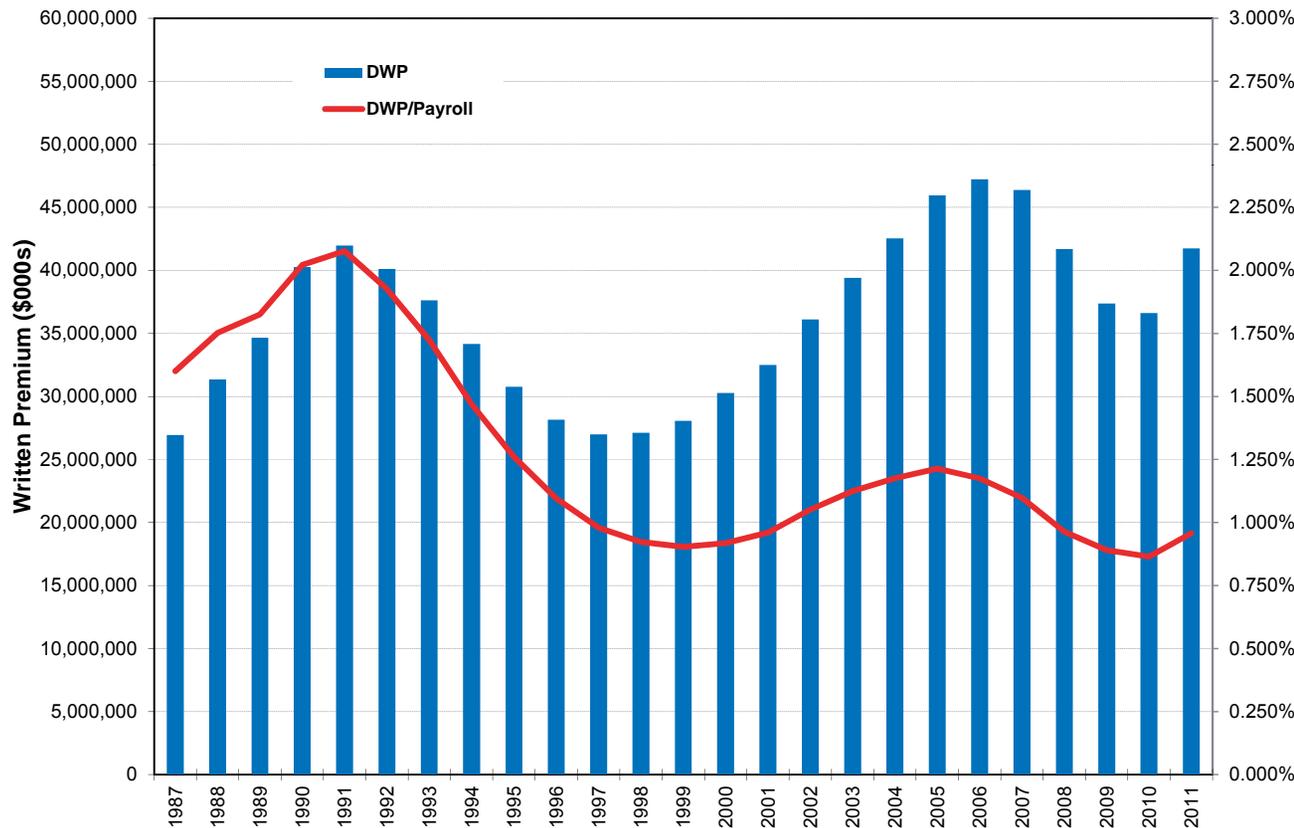
Based on the states where NCCI provides ratemaking services, including state funds; excludes high deductible policies

Source: Medical CPI—All states, Economy.com; Accident year medical severity—NCCI states, NCCI

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WP and Price

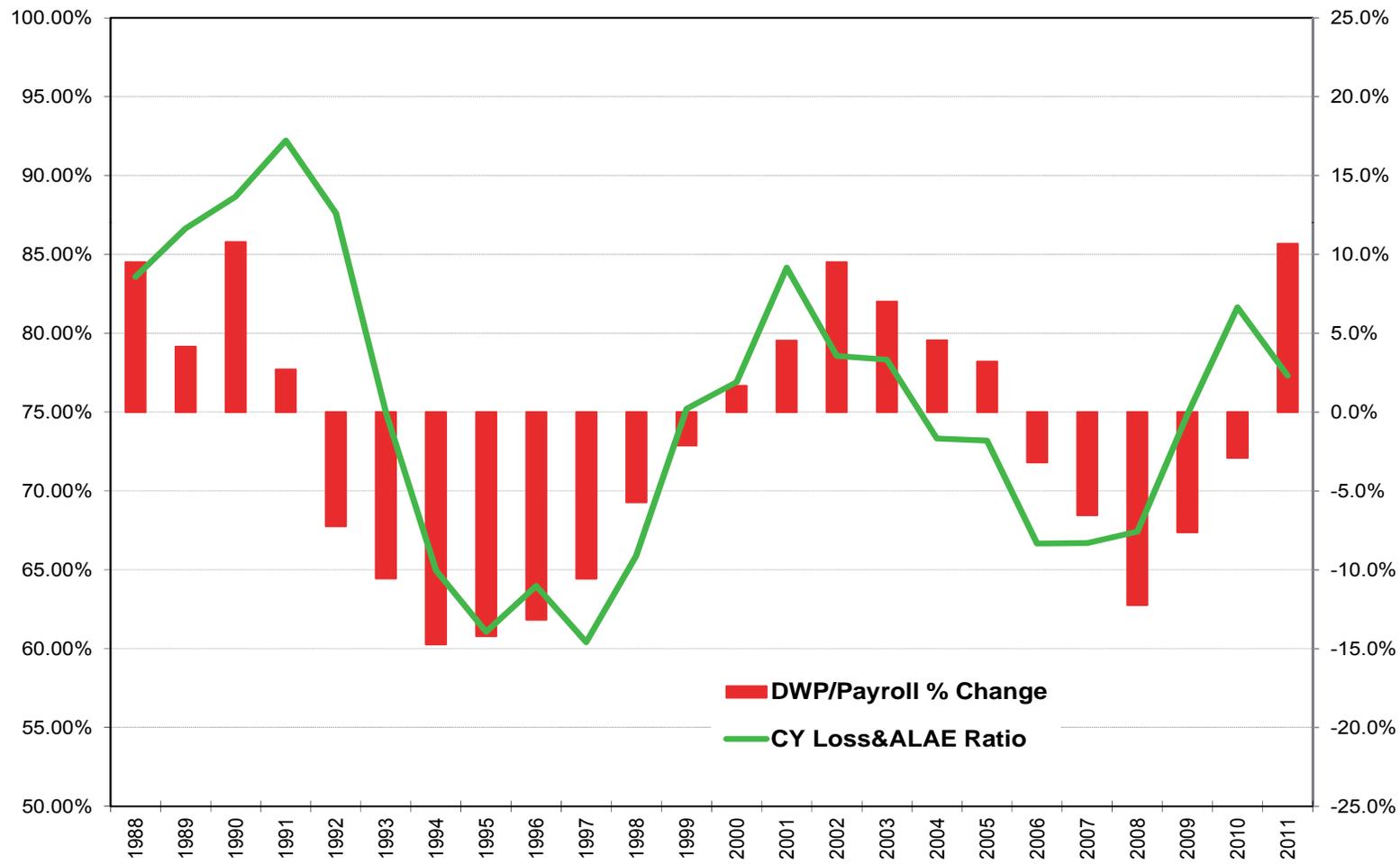
Workers Compensation WP and Price



Historical cycles:

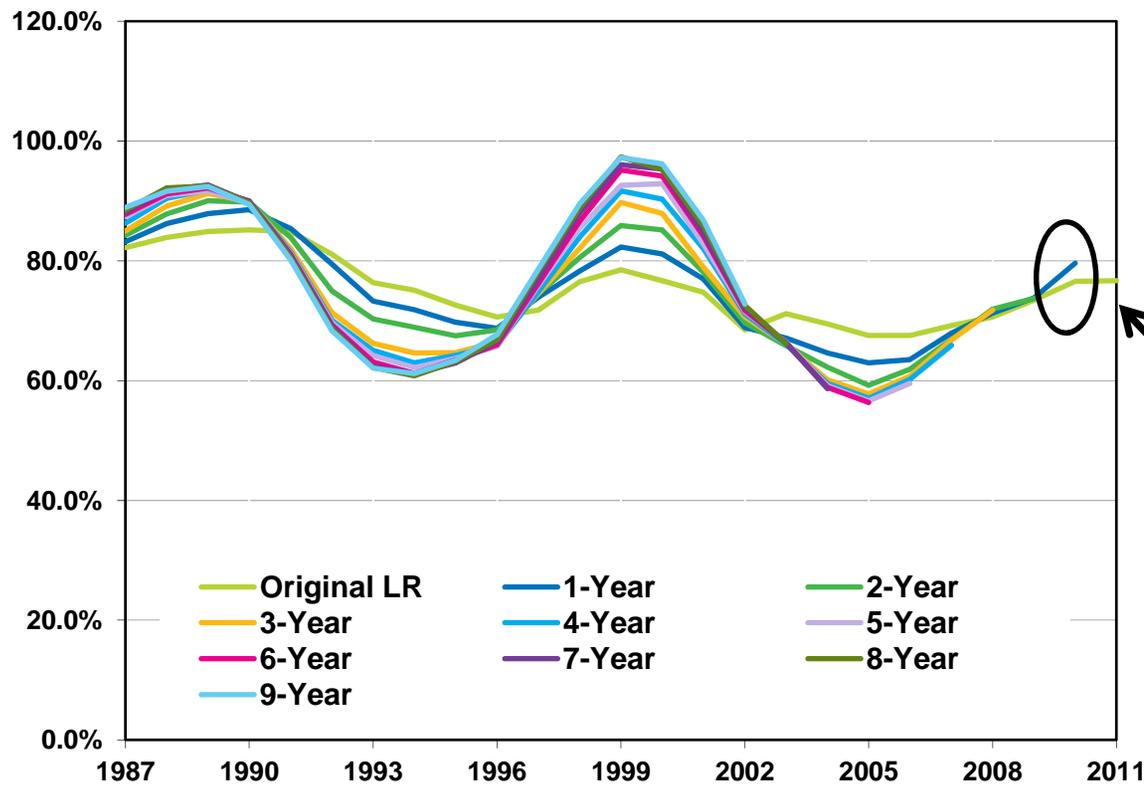
- 1991: Hard Market peak
- Soft cycle to 1999
- 2005:
 - Comparatively small peak
 - But highest premium level
- Soft cycle to 2010?
- 2011 appears to be turning, is it for real?

CY results vs Pricing



Attack of the killer LR drift

Workers Compensation Booked LR

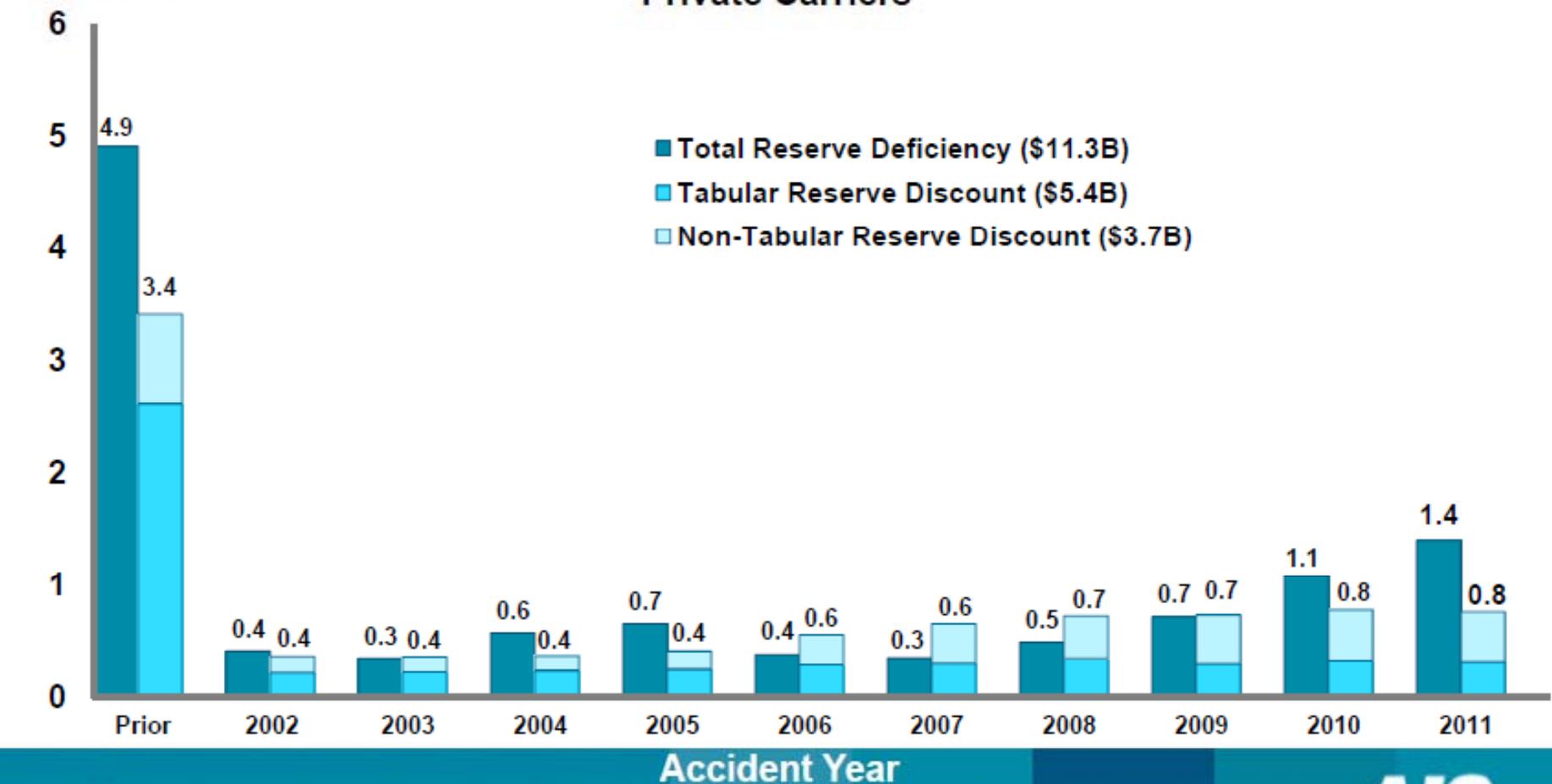


- Booked LR for single AY
 - Move slowly over time
 - Monotonic changes
- AY 2010 LR uptick after 1 year implies much additional deterioration coming

Reserve Deficiency and Reserve Discounts by Accident Year

Workers Compensation Loss and LAE Reserves as of 12/31/2011
Private Carriers

\$ Billions



Reserve deficiency considers all reserve discounts as deficiencies

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Market overview

- Appear to have hit inflection point
 - Operating ratios negative
 - Interest rates at all time lows
 - 2012 rates up
 - Recognition of 2010 inadequacy
- Tempered by reserve inadequacy low relative to last turn
 - 10% of carried now, vs 33% in 2001

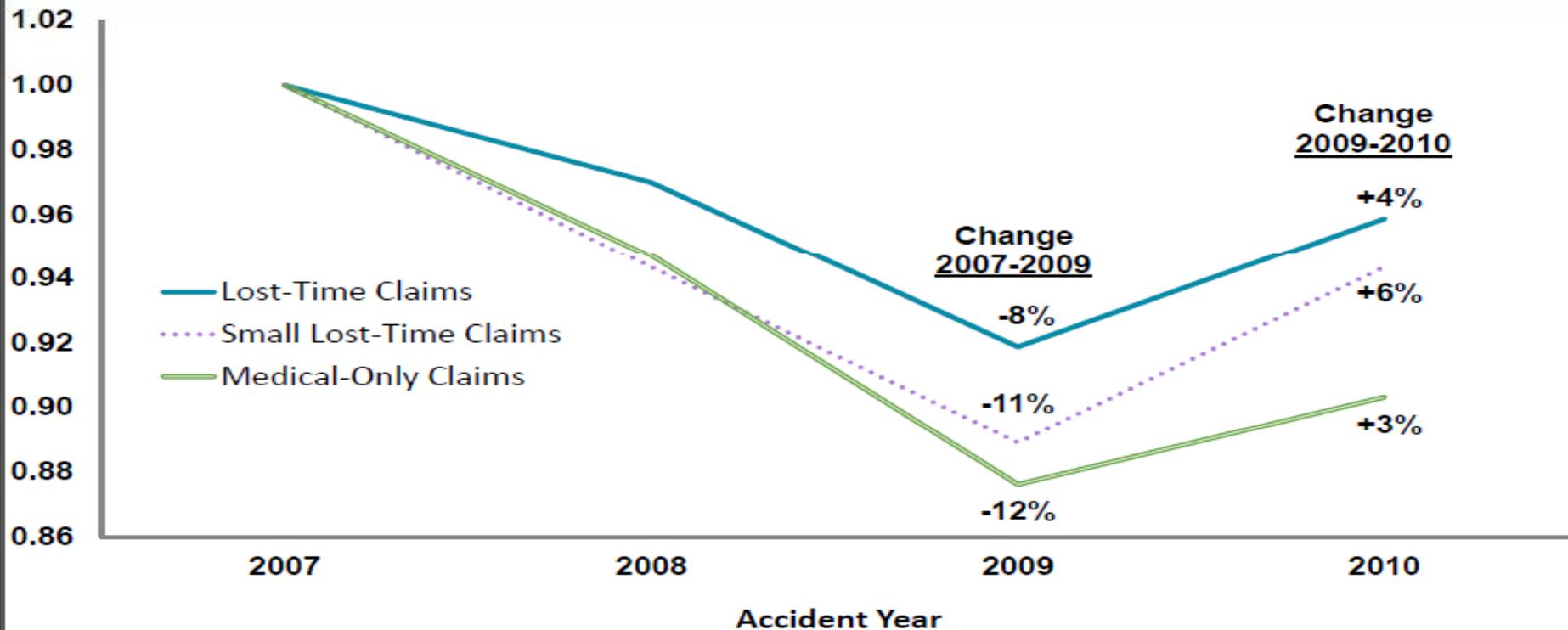
ITEMS OF INTEREST



Playing hurt

Claim Frequency by Type of Claim

Index: Accident Year 2007 = 1.00



NCCI's *Statistical Plan* data, policies effective January 2006 through July 2010, organized by accident/exposure year, at 1st report
 Based on states where NCCI provides ratemaking services, including state fund data, excluding high deductible policies
 Frequency is the number of claims per \$1M wage-adjusted on-level premium
 Small lost-time claims are those with incurred indemnity losses <= \$2,000 at 1st report in 2010 dollars
 Threshold de-trended for prior years at the rate of 3%



State fee schedule impact

- Schmid study
- Fee schedule increase impact on severity
 - Plus 80% of fee increase
 - Affected by price departure in state and fee schedule relative to neighboring states
- Fee schedule decrease impact on severity
 - Negative 50% of fee decrease

Workplace homicides and assaults

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- Homicides
 - 11% of workplace fatalities
 - Highest rates for service stations, barbershops and taxi drivers
- Assaults
 - 2% of workplace injuries, but increasing
 - Health services account for 75%
 - Half in nursing homes/residential care
 - 60% of these by patient

HOW MIGHT WORKERS' COMPENSATION SYSTEMS BE AFFECTED BY HEALTH CARE REFORM?



Executive Summary

- Massachusetts healthcare reform
 - Decreased uninsured population 40-50%, primarily via Medicaid expansion
 - Lowered hospital WC claim frequency by 5-10%
 - No discernible impact on hospital WC claim severity or duration of treatment
 - Impact in Massachusetts may be function of low WC reimbursement rates

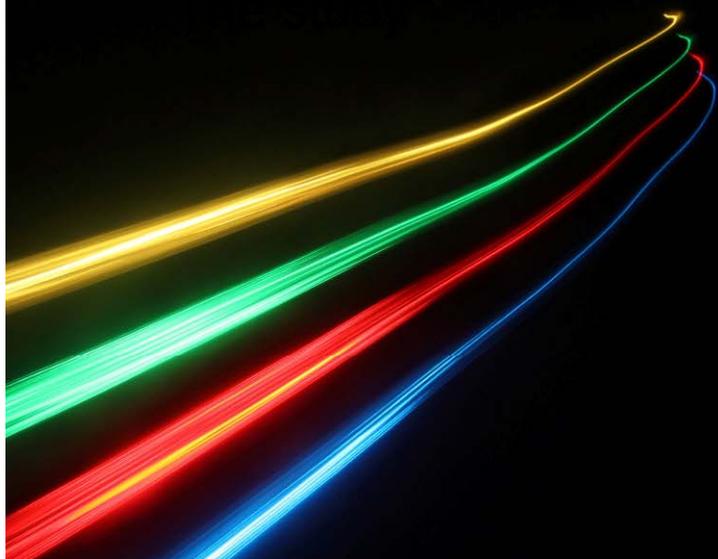
Today's Agenda

- Why Massachusetts?
- The RAND study
 - Data
 - Results
 - Limitations
- Pending Supreme Court decision
- Conclusions

Why Massachusetts?

- Massachusetts 2006 health reform
 - Individual mandate
 - Employer mandate
 - Health insurance exchange
 - State subsidized low cost plan
 - Expanded Medicaid eligibility
- All five features are pillars of federal healthcare reform

THE RAND STUDY



Data

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- MA Agency for Healthcare Research and Quality data from 2005 to 2008
 - Covers pre and post reform period
 - Represents 99% of MA hospital visits
 - 9.5 M ER visits, 340K WC
 - 3.4 M inpatient hospital visits, 14K WC
- Key assumption: Impact on hospital WC costs proxy for impact on total WC medical
 - ER classification endures

Research questions

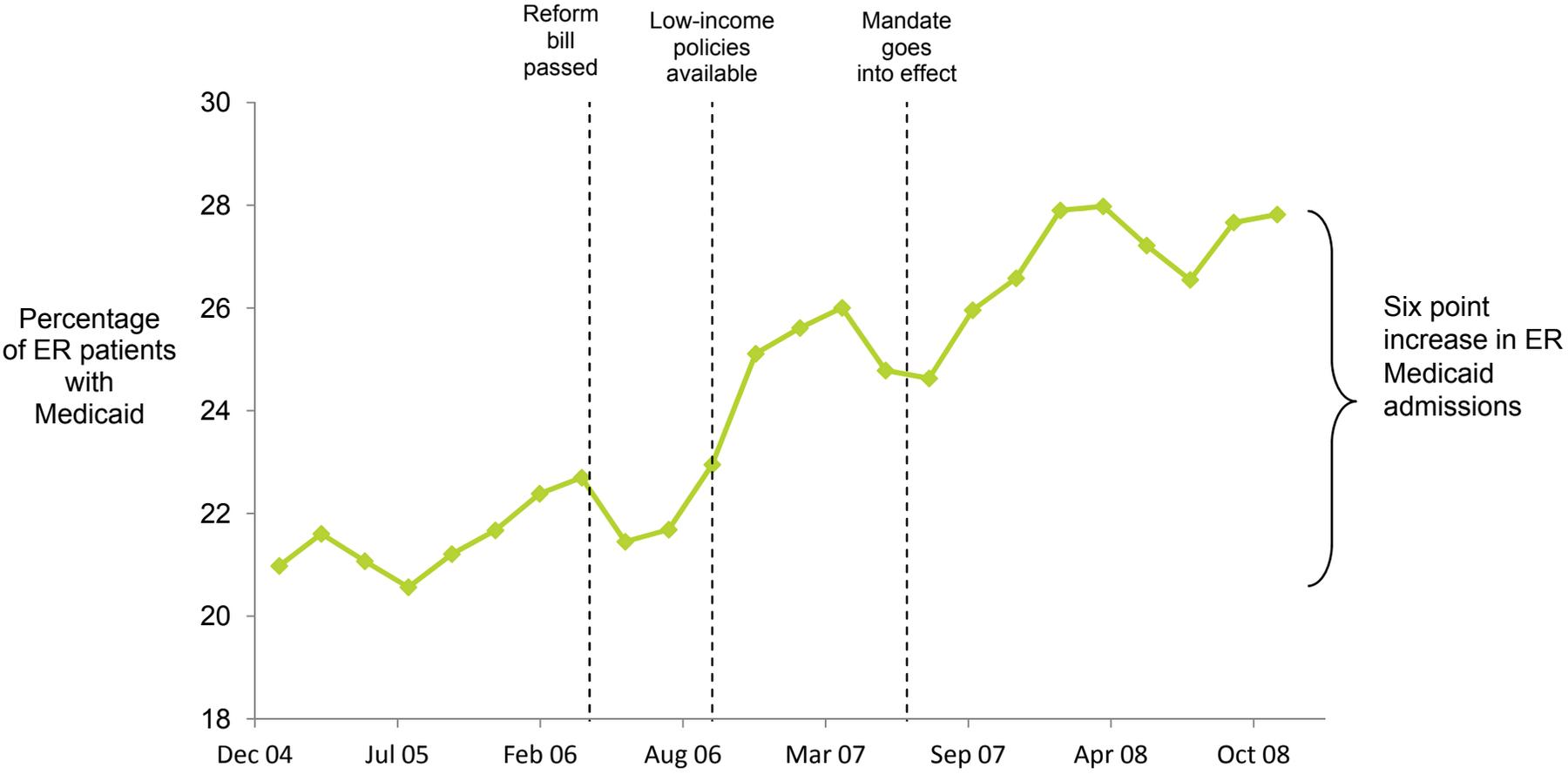
- Using the Massachusetts hospital data, we examined whether health reform:
 - Impacted insurance coverage, and how
 - Changed the number of hospital bills received by WC insurers (claim frequency)
 - Changed WC patients' billed charges (claim severity)

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Increase in coverage driven by Medicaid expansion



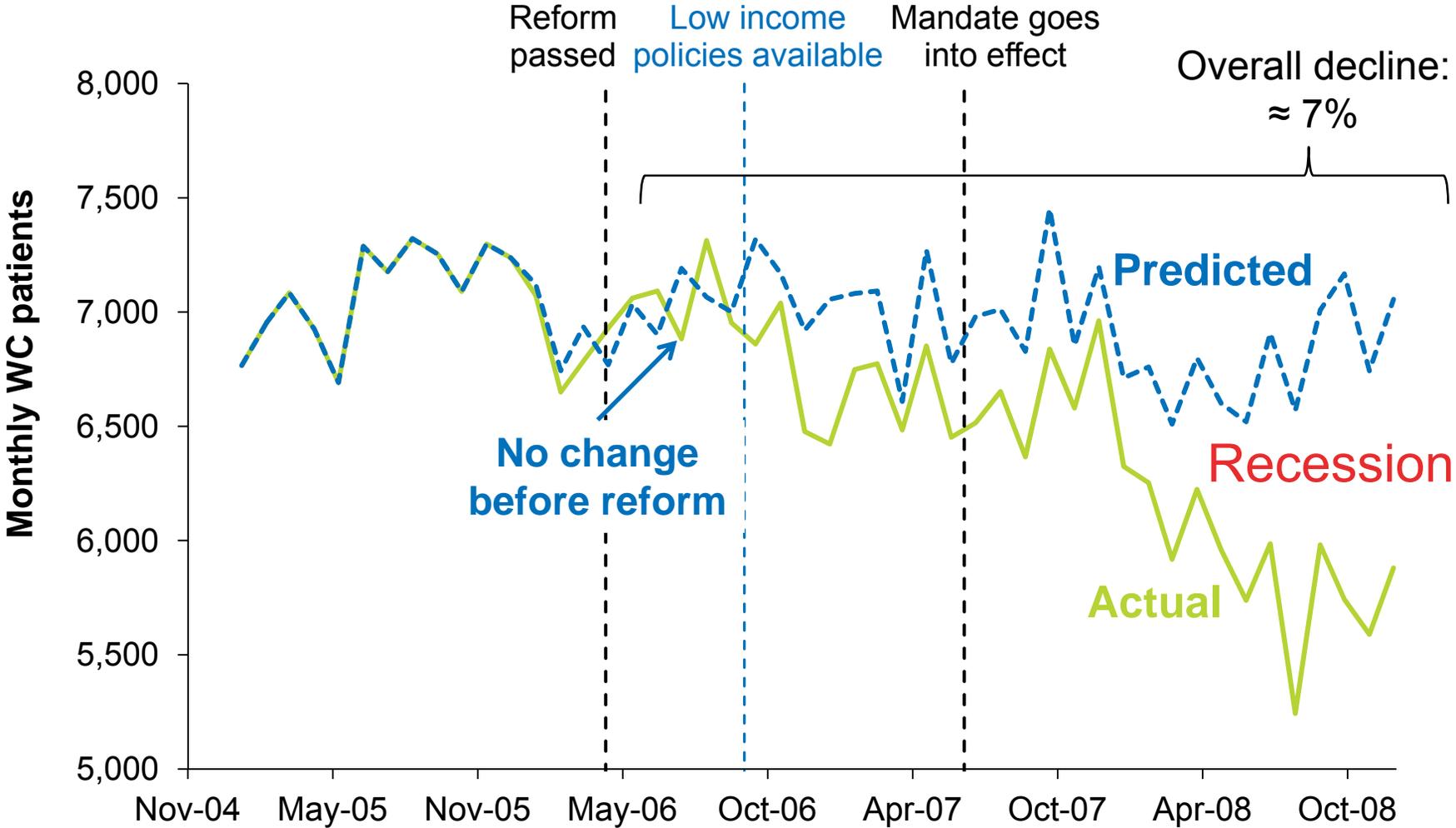
WC billing: projected vs actual

- RAND model predicts number of bills in 2006-2008 based upon 2005 pre-reform data
- Accounts for patient demographics, type of injury, time and day of week, and other factors
- Differences between realized bills and predicted bills may indicate impacts of reform
- Data from early 2006, before reform in effect, serves as “reality check” for model

Fewer admissions billed as WC as health reform implemented

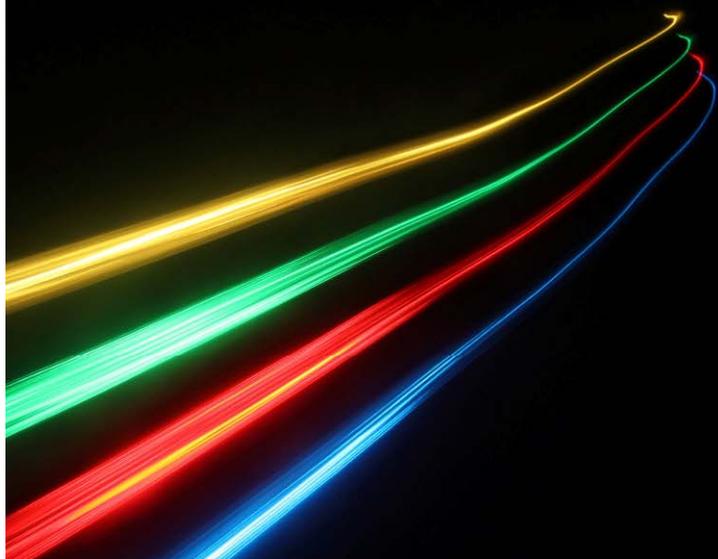
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Impact of recession?

Changes over Time in the Likelihood That an Industrial Injury Is Billed to WC

| Time Period | Difference in Billing Probability Relative to 1st Half of 2005 |
|-------------------|--|
| 2nd half 2005 | -.011 |
| | -0.008 |
| 1st half 2006 | -.005 |
| | -0.005 |
| 2nd half 2006 | 0.003 |
| | -0.009 |
| 1st half 2007 | 0.004 |
| | -0.013 |
| 2nd half 2007 | 0.002 |
| | -0.017 |
| 1st half 2008 | -.021 ** |
| | -0.006 |
| 2nd half 2008 | -.028 ** |
| | -0.009 |
| Overall 2006–2008 | -.011 * |
| | -0.004 |

- Historically 74% of these events billed to WC
- Drop in 2008 translates to 4% drop in WC claim frequency in 2008
- Possibly exacerbated by low Mass WC fee schedule?

Testing for a dose-response relationship

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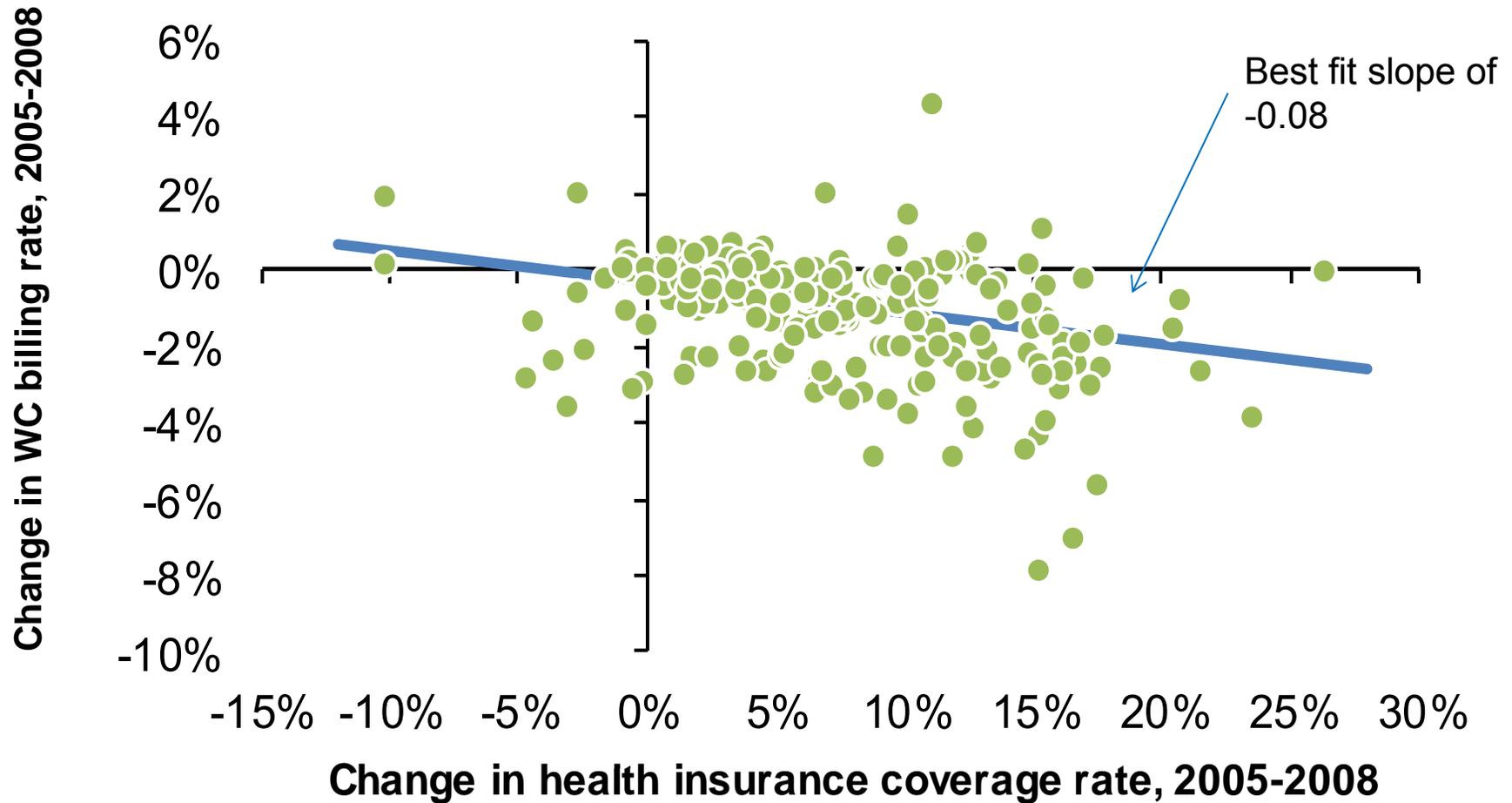
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- If coverage expansion is the driver, WC bills should decline most among populations with largest increases in coverage.
- Approach:
 - Divide people into cells by age / race / ZIP.
 - Control for change in county-level change in unemployment
 - Compute 2005 to 2008 coverage change in each cell
 - See if groups affected most by reform had largest WC shifts

The larger the gains in coverage, the greater the WC billing decline

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Dose-response outcome

- WC Billing change due to increased coverage
 - = (Change in Coverage x Best Fit Slope) / (Pre-reform WC Billing Rate)
 - = $(6 \times -0.08) / 4.2 = \underline{-11.4\%}$
- Indicated decrease in WC billing in line with predicted vs actuals
 - More granular
 - Controls for unemployment

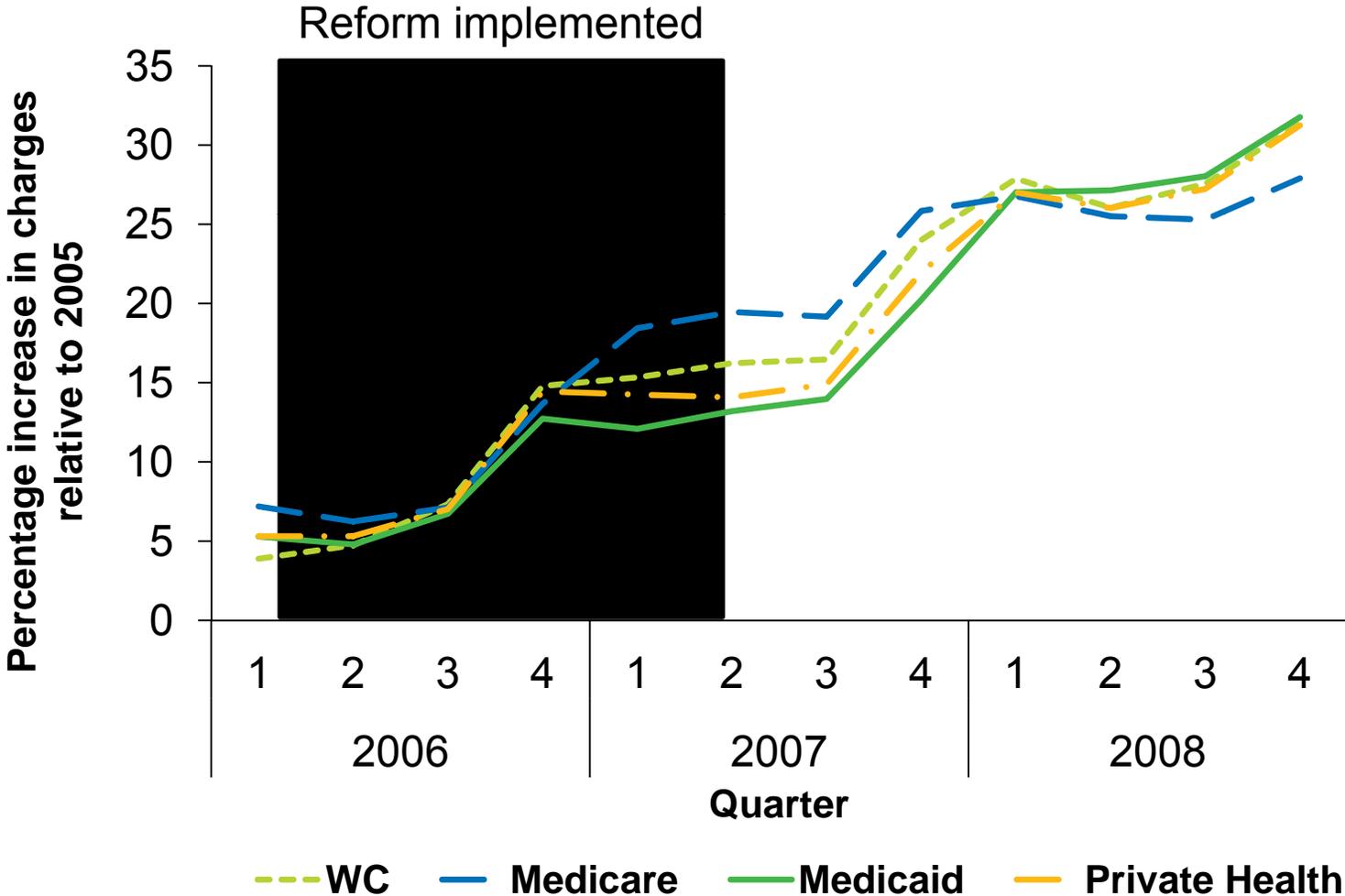
Does claiming decline differ by claim type?

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- RAND looked at this in two ways:
 - Top 20% ER vs all ER bills
 - Inpatient vs ER
- In both cases the observed WC billing declines were similar regardless of claim size
- WC claim mix not affected by Mass reform

Severity - Reform did not affect medical inflation



Severity – Reform did not affect utilization

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- No change in number of procedures or length of hospital stay
- Similar patterns for hospital inpatients

Limitations of study

- Massachusetts nuances
 - Very low WC reimbursement rate
 - Medicaid expansion differs by state
- Impact of recession
 - RAND considering update to reflect data through 2012
- Hospital data only

What about the Supreme Court's pending decision?

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- Status quo
 - Currently 56M on Medicaid
 - Starting in 2014 expanded eligibility causes rolls to grow by 16-24M
 - Impact not uniform by state
- Individual mandate unconstitutional, but severable
 - As above
- Mandate unconstitutional and not severable
 - State by state reform effects

Massachusetts reform conclusions

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- Decreased uninsured population 40-50%, primarily via Medicaid expansion
- Coverage expansions resulting from reform reduced WC hospital bill frequency by 5-10%
 - Shifted billing to other insurers
- No discernible impact on claim severity
- Insured population with greatest increase in coverage likely to have greatest decrease in WC billing
- WC reimbursement levels relative to other coverage may impact billing decline

Links to papers

- Impact of Health Care Reform on WC Medical Care
 - http://www.rand.org/pubs/technical_reports/TR1216.html
- How will Health Care Reform Affect Costs and Coverages
 - http://www.rand.org/pubs/research_briefs/RB9589.html

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