



Overview & Outlook for the Global Commercial P/C Insurance Industry: *Trends, Challenges, Disruptors & Opportunities*

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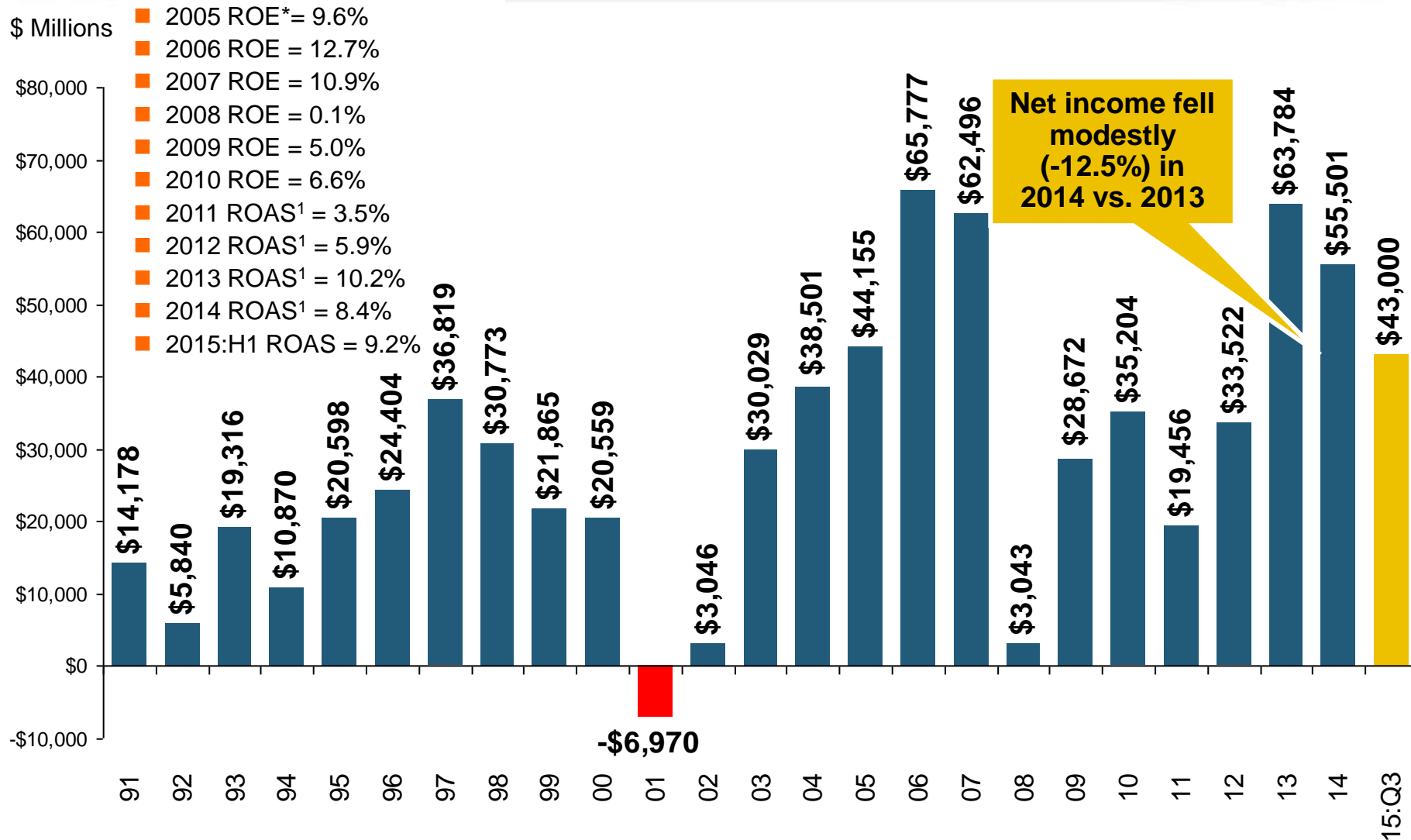
Insurance Industry: *Financial Update & Outlook*

***2015 Was a Reasonably Good Year
and Similar to 2014***

2016: Could Be Similar to 2015

- **Flat to modest deceleration in premium growth in 2016**
- **Rate environment suggests flat-to-slightly negative renewals in 2016**
- **Economic growth continues at a modest pace but unevenly across industries and regions; Nearly full employment and tighter labor market conditions are pluses and should drive new exposures**
- **Construction, Service sectors are positives but manufacturing, energy, commodities face headwinds**
- **Loss costs driven by modest frequency and severity trends, but helped by reserve releases, low cats, low infl.**
- **Property cat reinsurance costs continue to fall**
- **Investment income still under pressure from low yields**

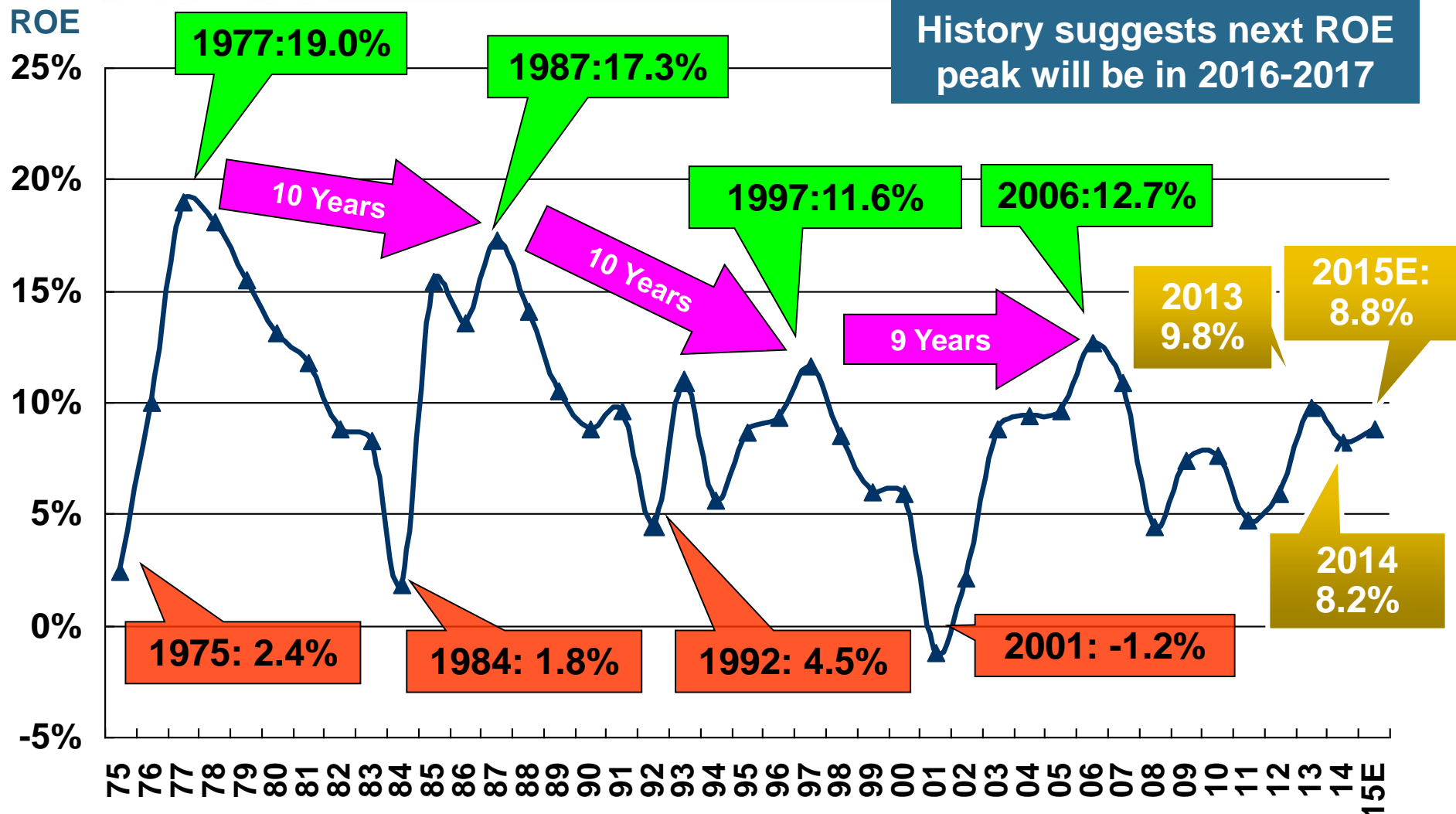
P/C Industry Net Income After Taxes 1991–2015:Q3 (Est.)



*ROE figures are GAAP; ¹Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 8.2% ROAS in 2014, 9.8% ROAS in 2013, 6.2% ROAS in 2012, 4.7% ROAS for 2011, 7.6% for 2010 and 7.4% for 2009.

Sources: A.M. Best, ISO; Insurance Information Institute

Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2015E

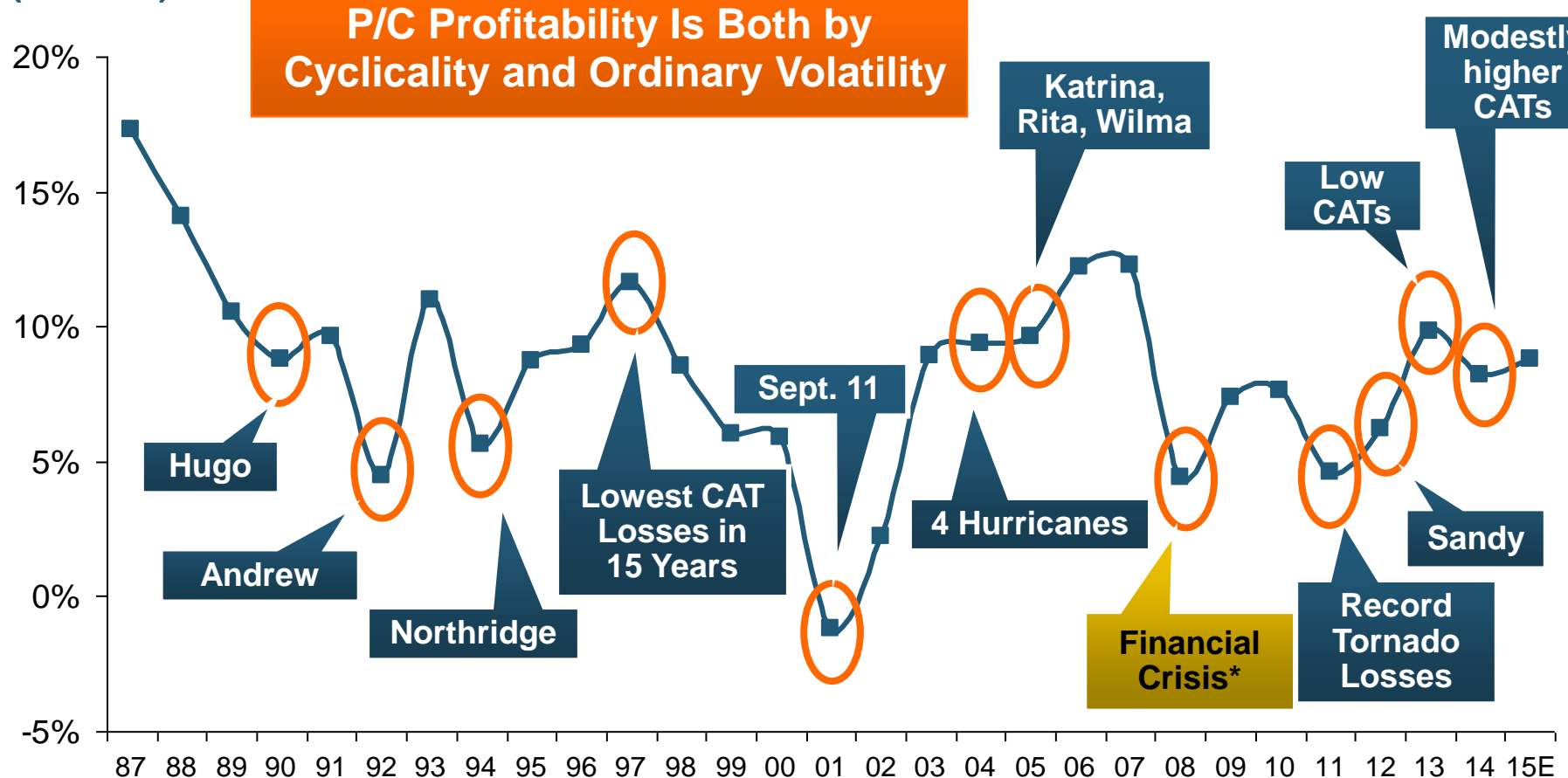


*Profitability = P/C insurer ROEs. 2011-14 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.

Source: Insurance Information Institute; NAIC, ISO, A.M. Best, Conning

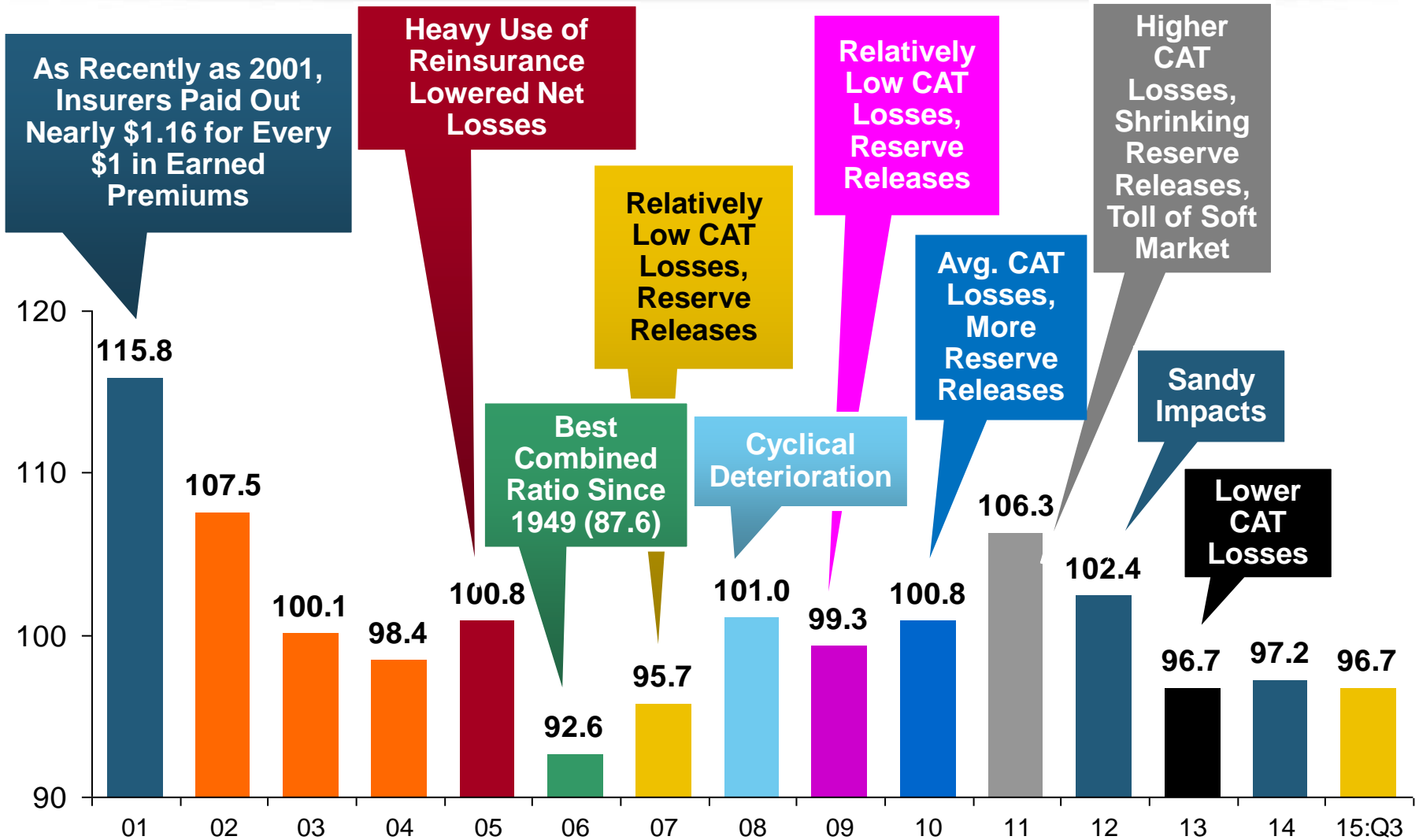
ROE: Property/Casualty Insurance by Major Event, 1987–2015E

(Percent)



* Excludes Mortgage & Financial Guarantee in 2008 – 2014.
Sources: ISO, *Fortune*; Insurance Information Institute.

P/C Insurance Industry Combined Ratio, 2001–2015:Q3 (Est.)*



* Excludes Mortgage & Financial Guaranty insurers 2008--2014. Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0.

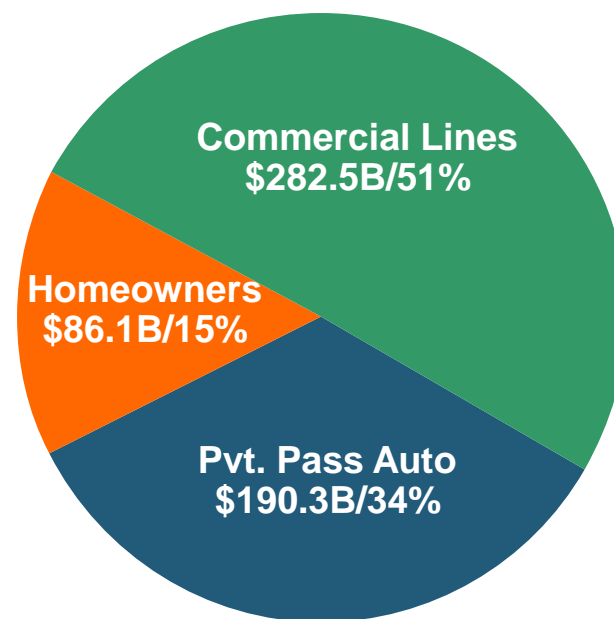
Sources: A.M. Best, ISO.

Distribution of Direct Premiums Written by Segment/Line, 2014

Distribution Facts

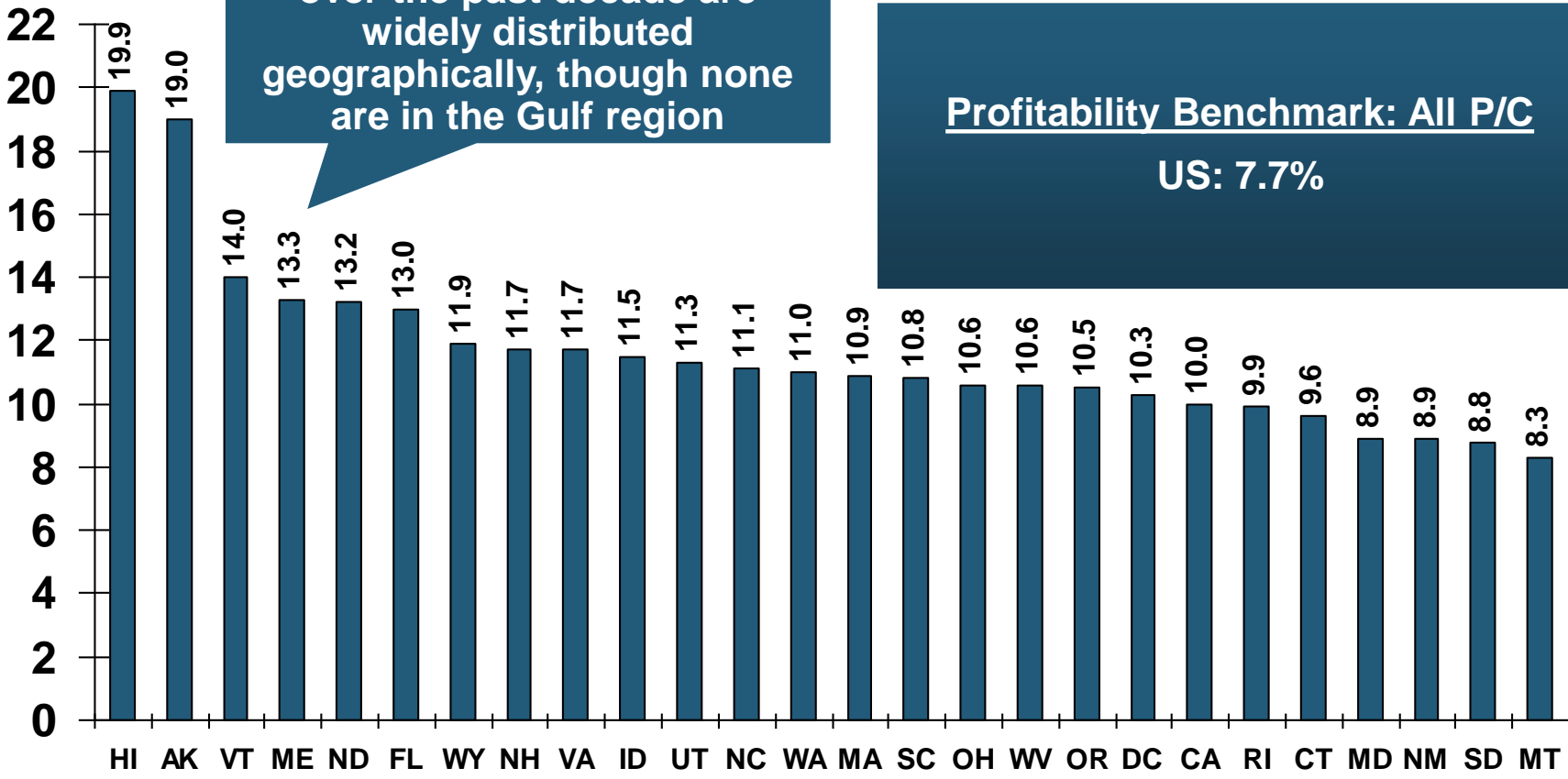
- Personal/Commercial lines split has been about 50/50 for many years
- Pvt. Passenger Auto is by far the largest line of insurance and is currently the most important source of industry profits
- Billions of additional dollars in homeowners insurance premiums are written by state-run residual market plans

2014



RNW All Lines, 2005-2014 Average: Highest 25 States

(Percent)



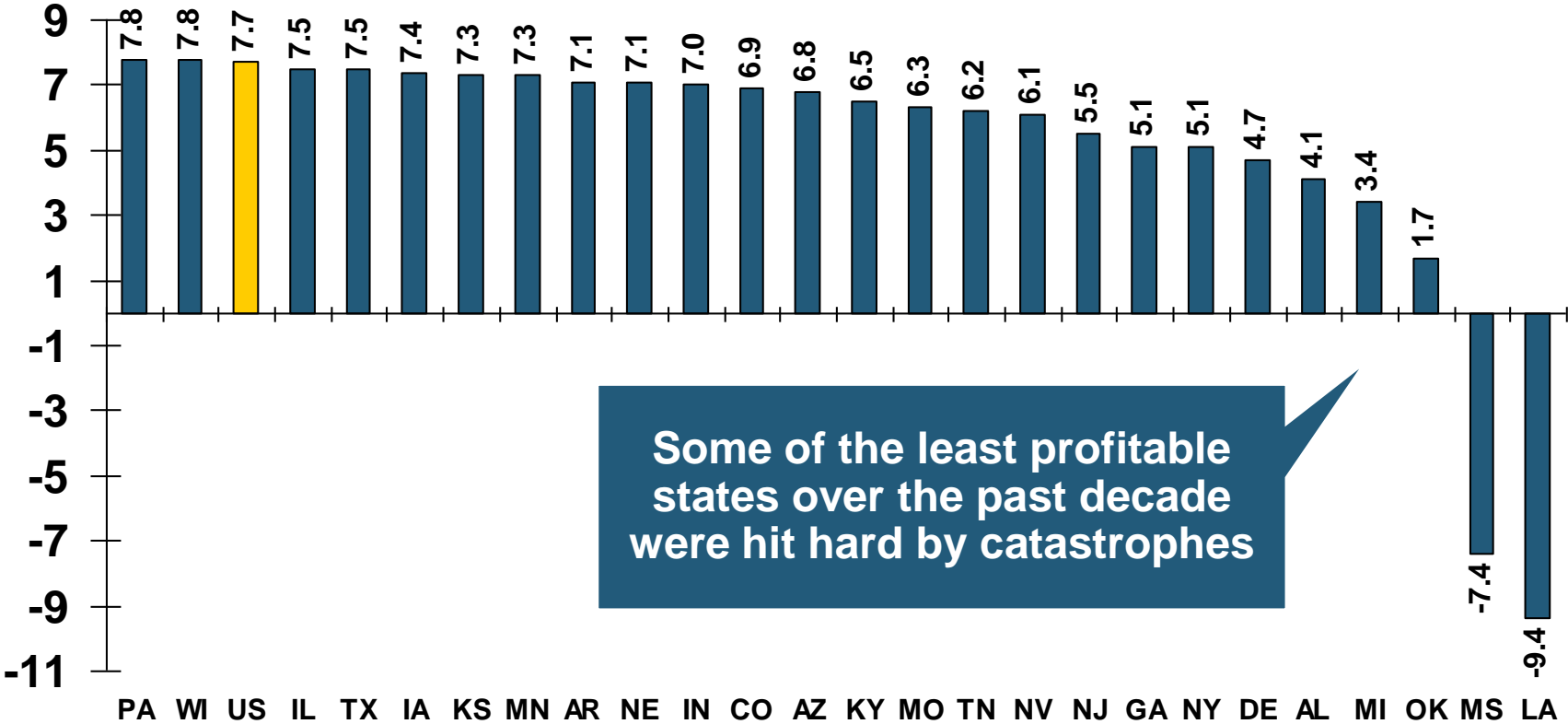
The most profitable states over the past decade are widely distributed geographically, though none are in the Gulf region

Profitability Benchmark: All P/C
US: 7.7%

Source: NAIC; Insurance Information Institute.

RNW All Lines, 2005-2014 Average: Lowest 25 States

(Percent)



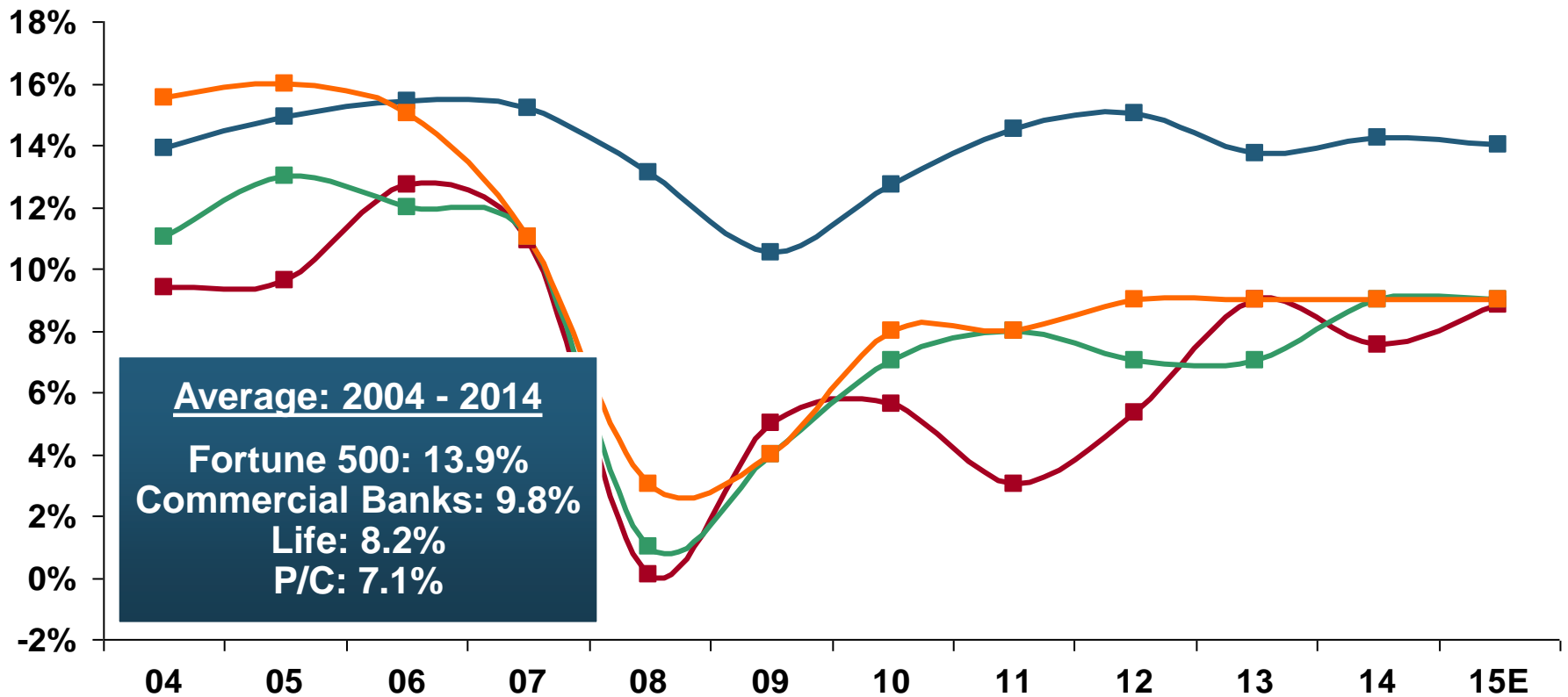
Some of the least profitable states over the past decade were hit hard by catastrophes

Source: NAIC; Insurance Information Institute.

Return on Equity by Financial Services Sector vs. Fortune 500, 2004-2015*

(Percent)

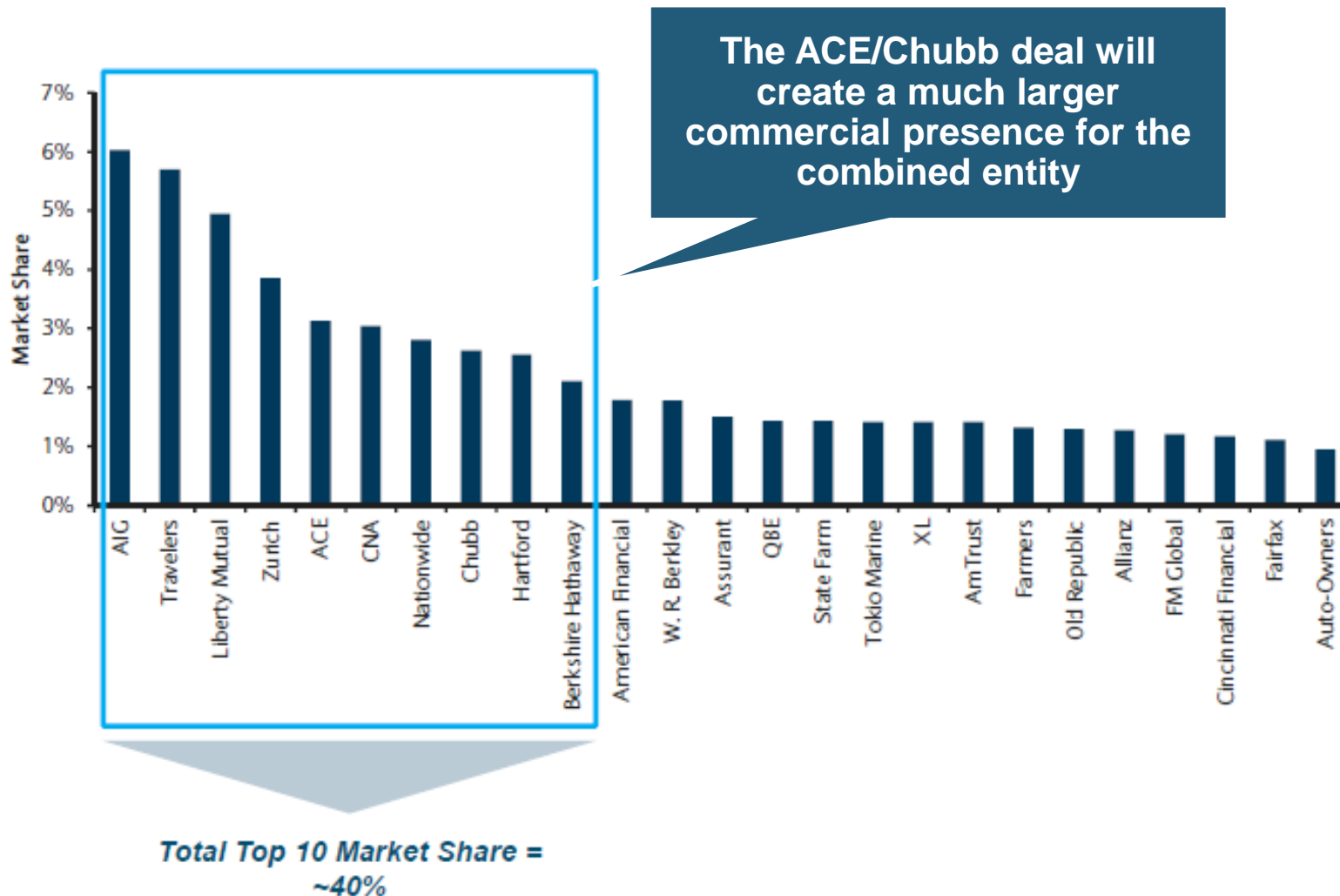
■ Fortune 500 ■ P/C Insurers ■ Life Insurers ■ Commercial Banks



Banks and Insurers Have Substantially Underperformed the Fortune 500 Since the Financial Crisis

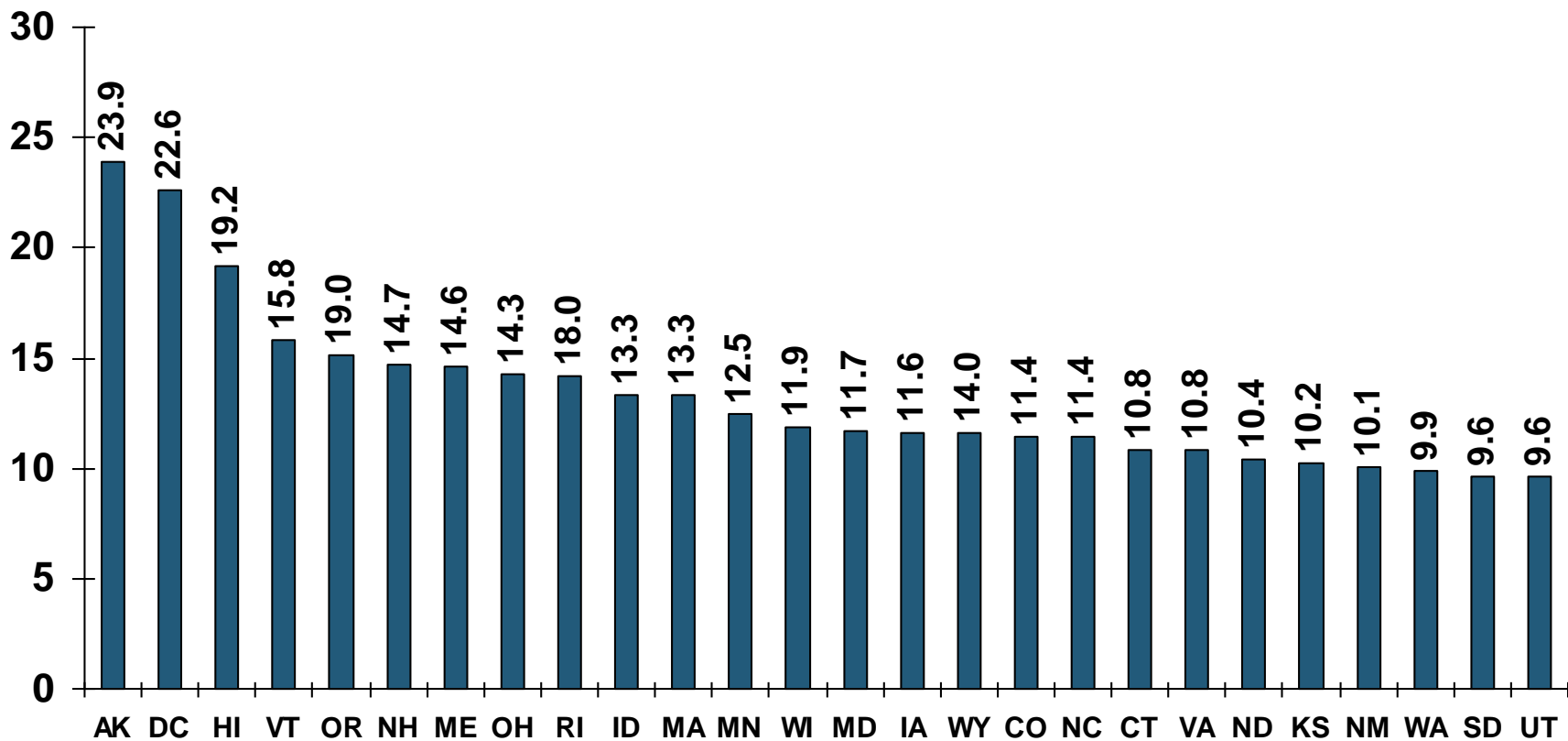
*GAAP basis.
Sources: ISO, Fortune; Insurance Information Institute.

Top 25 US P/C Insurers by Direct Premiums Written, 2014



RNW Commercial Auto, 2005-2014 Average: Highest 25 States

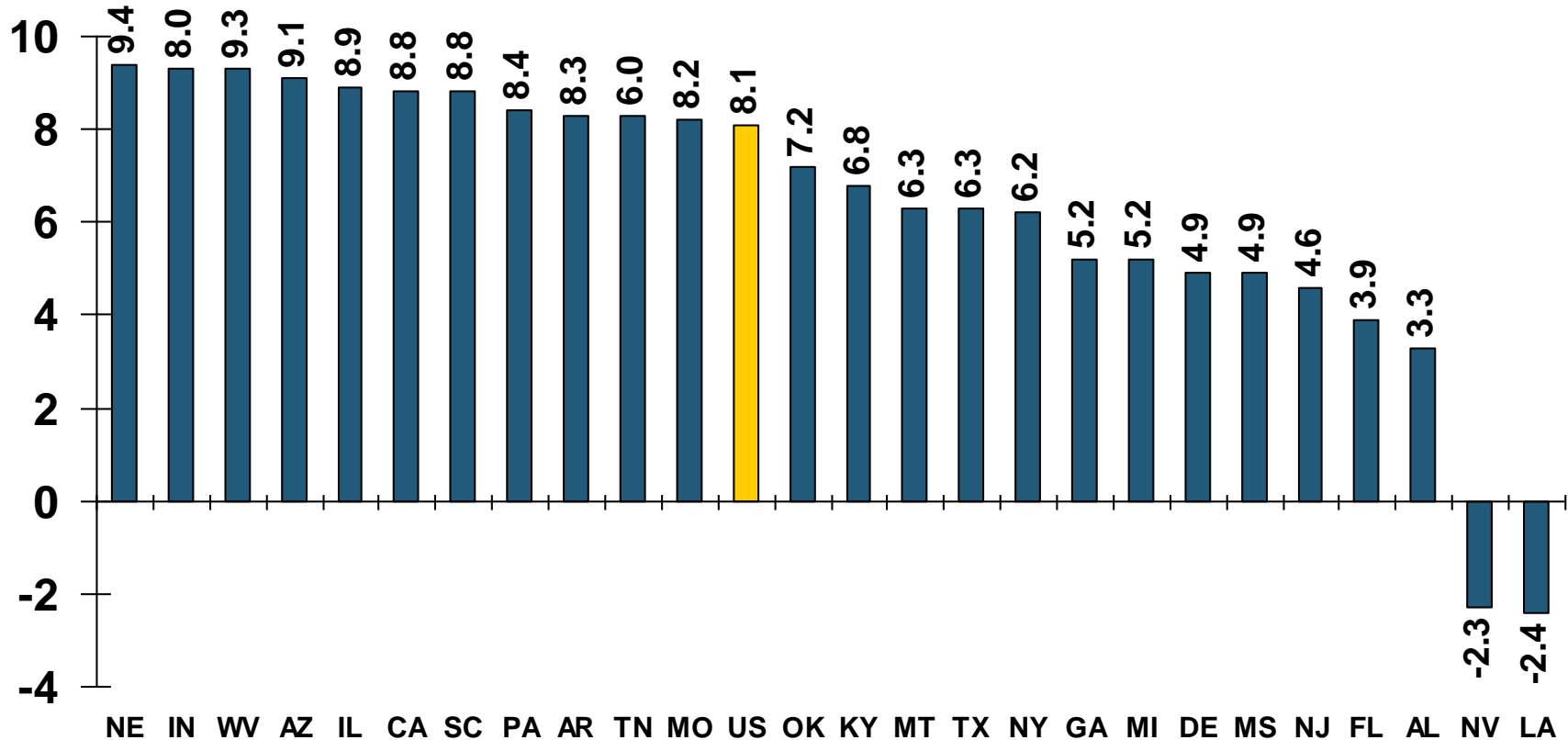
(Percent)



Sources: NAIC; Insurance Information Institute

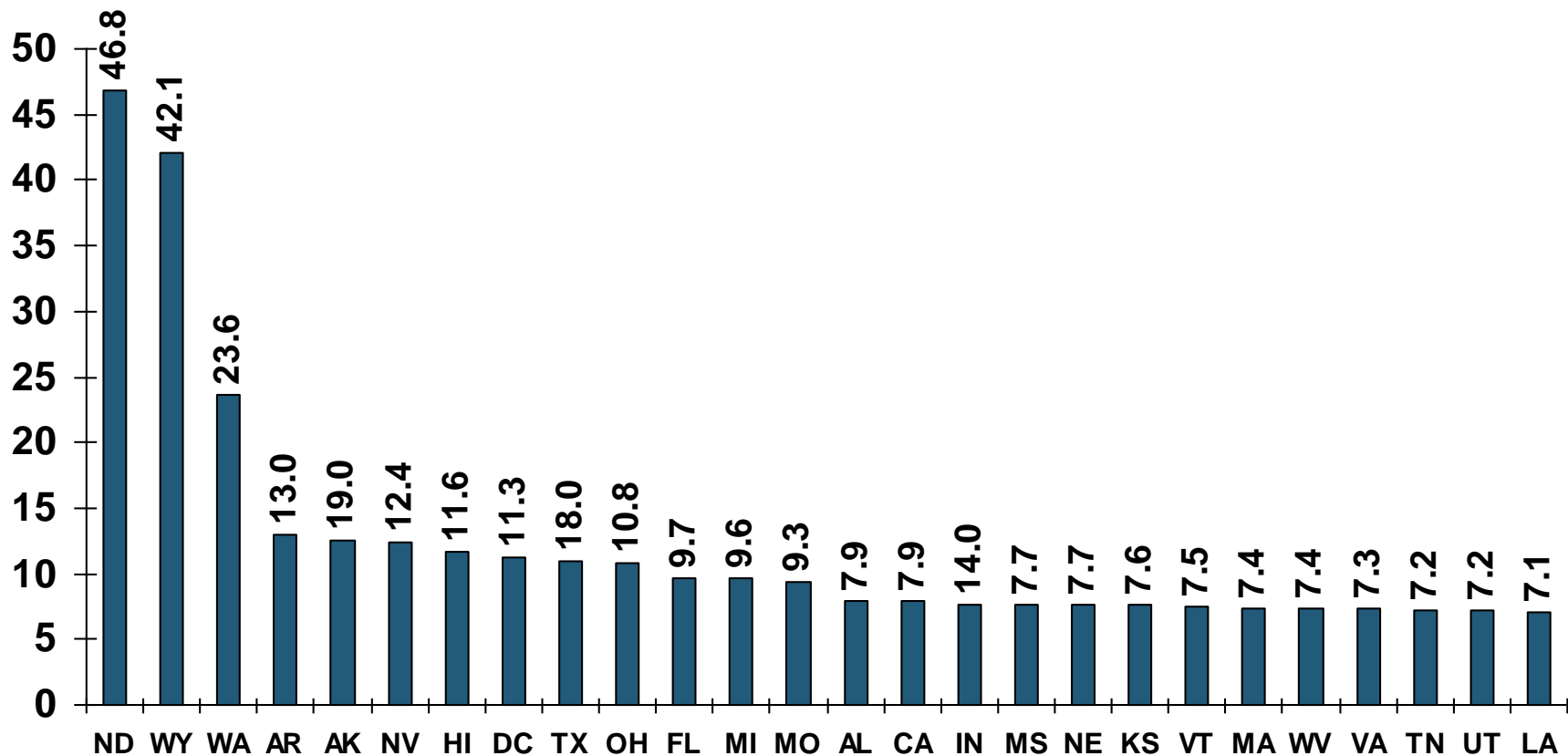
RNW Commercial Auto, 2005-2014 Average: Lowest 25 States

(Percent)



RNW Workers Compensation, 2005-2014 Average: Highest 25 States

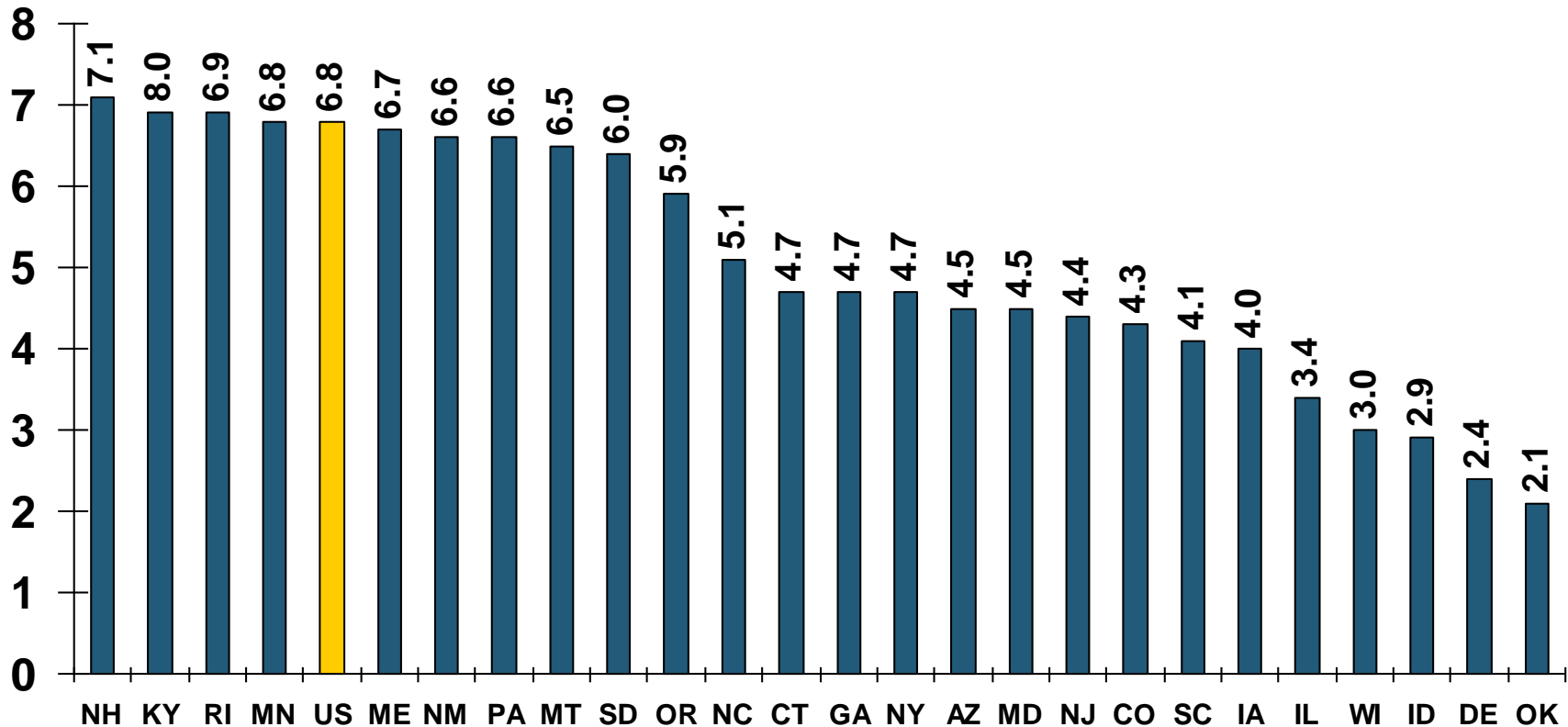
(Percent)



Sources: NAIC; Insurance Information Institute

RNW Workers Compensation, 2005-2014 Average: Lowest 25 States

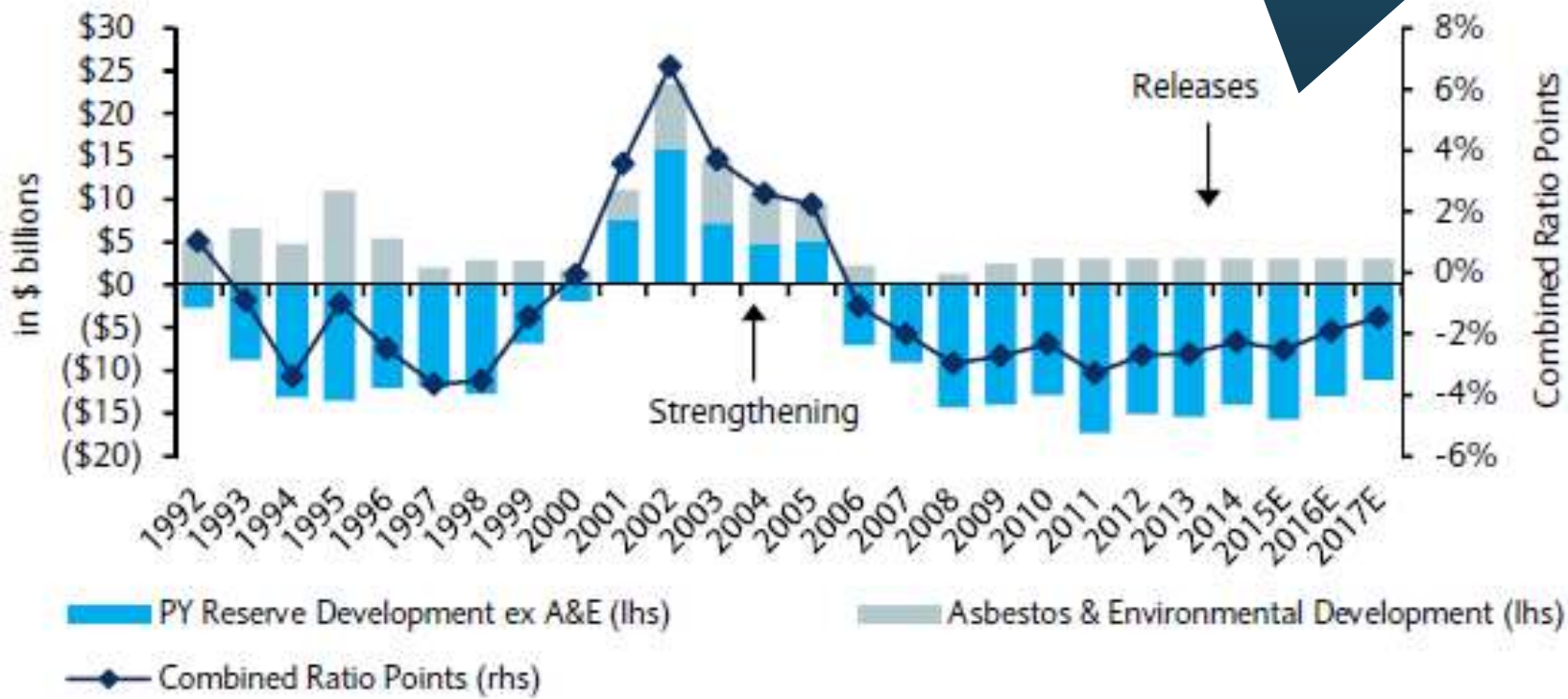
(Percent)



P/C Insurance Loss Reserve Development, 1992 – 2017E*

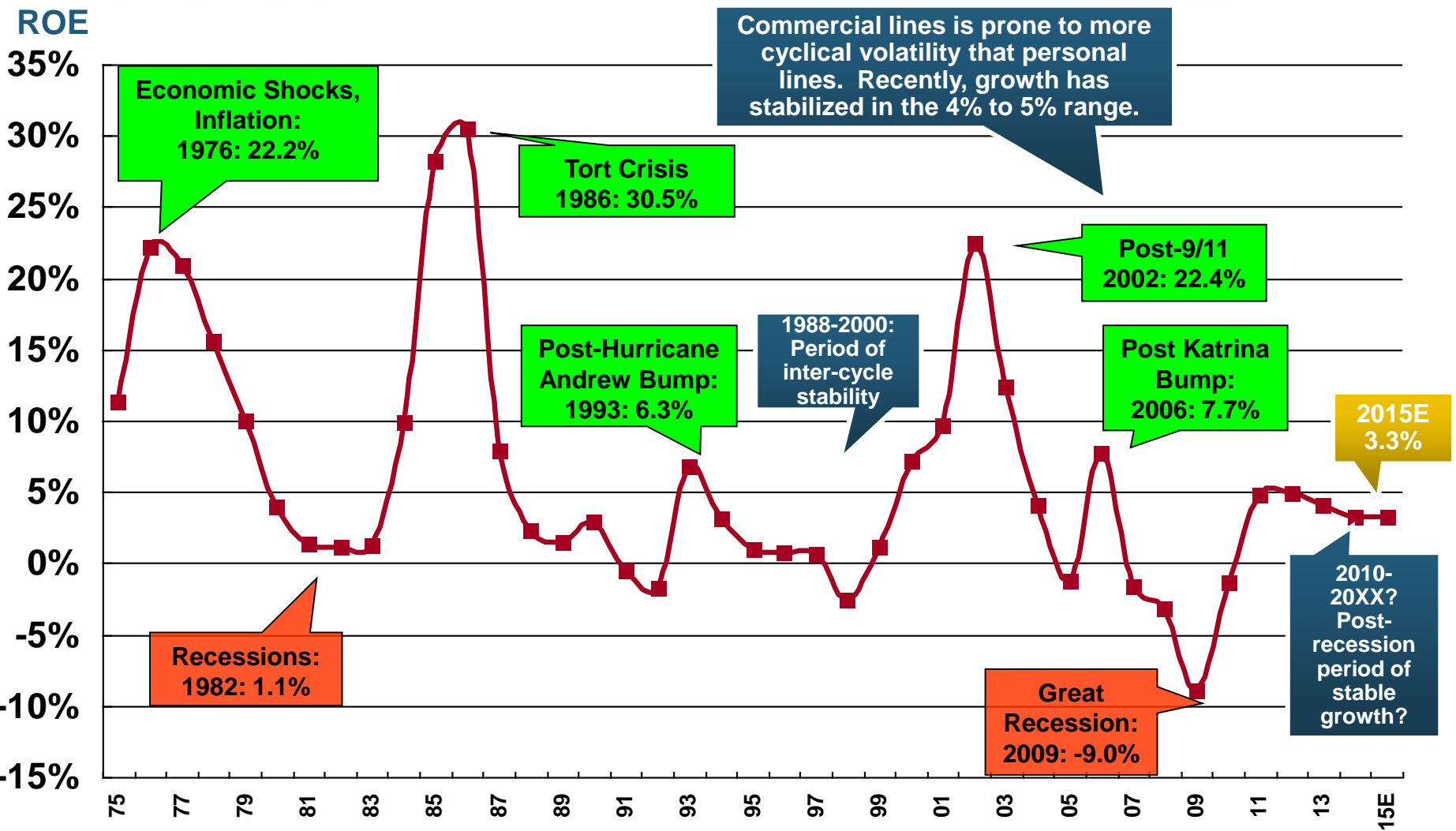
Reserve releases are expected to gradually taper off slowly, but will continue to benefit the bottom line and combined ratio through at least 2017

Reserve Change



Source: A.M. Best; Barclays research for estimates.

Commercial Lines NPW Premium Growth: 1975 – 2015E

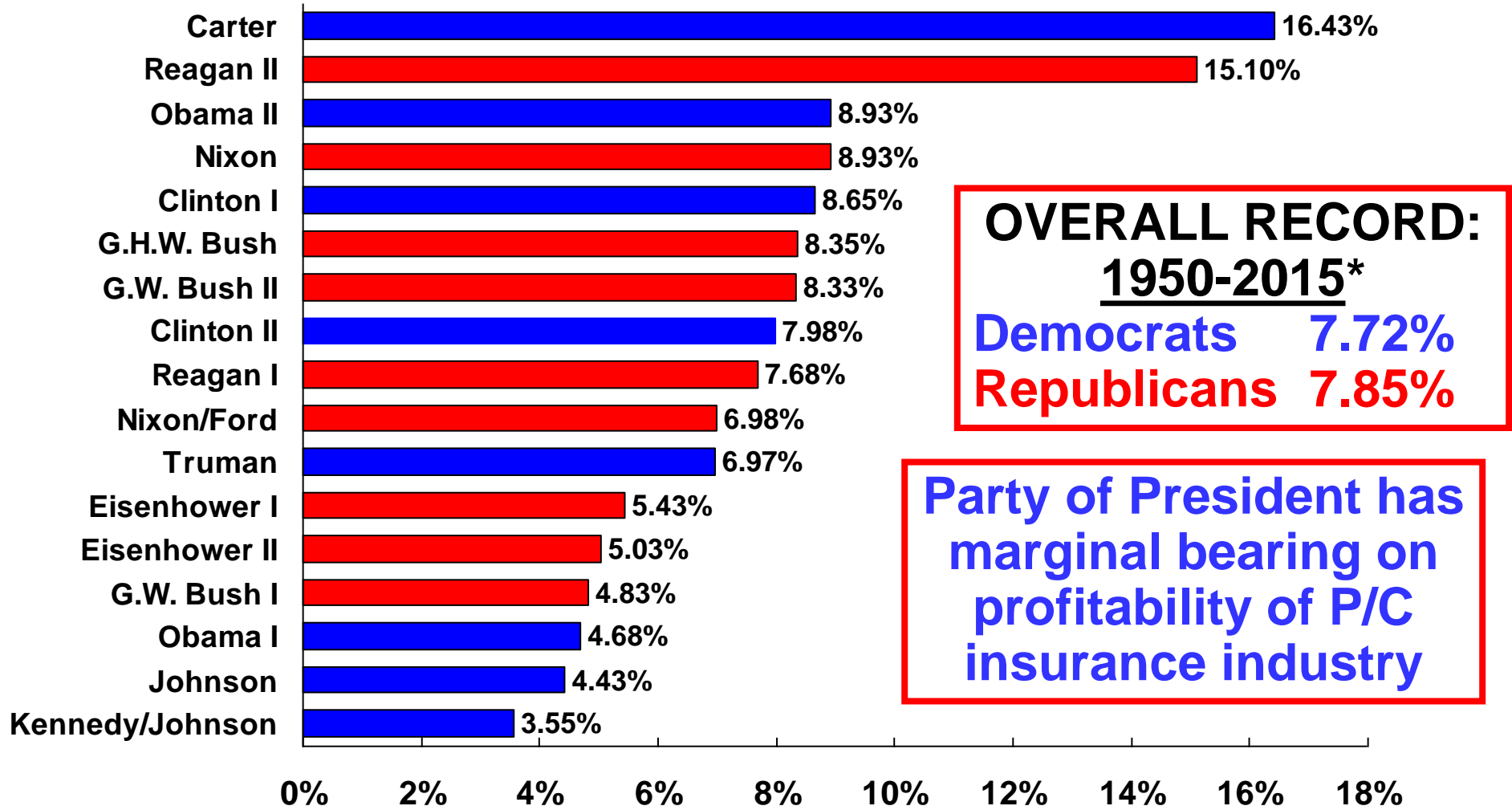


Note: Data include state funds beginning in 1998.
 Source: A.M. Best; Insurance Information Institute.

Profitability & Politics

***How Is Profitability Affected by
the President's Political Party?***

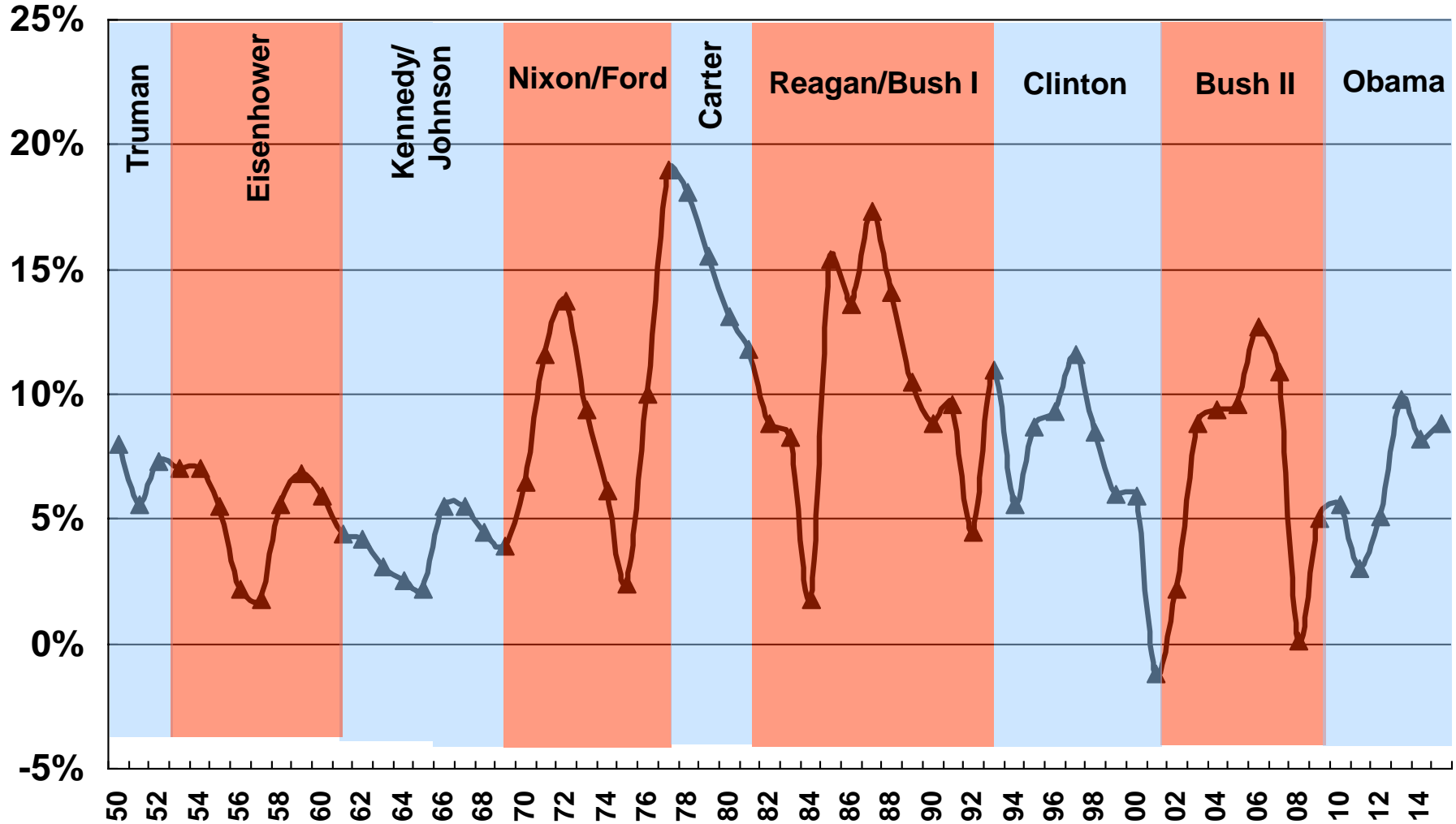
P/C Insurance Industry ROE by Presidential Administration, 1950-2015*



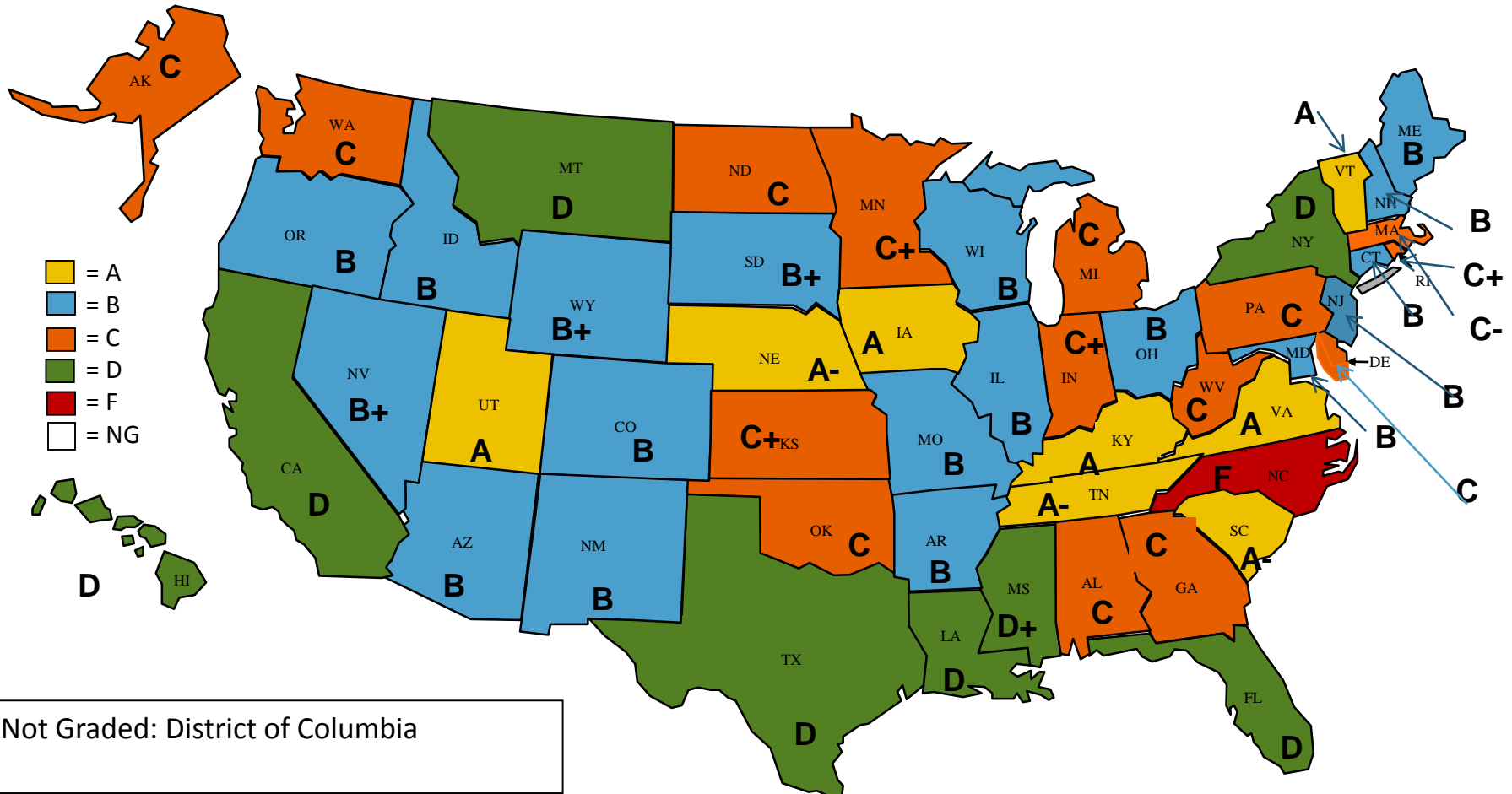
*Truman administration ROE of 6.97% based on 3 years only, 1950-52;. Source: Insurance Information Institute

P/C insurance Industry ROE by Presidential Party Affiliation, 1950- 2015

BLUE = Democratic President **RED** = Republican President



2015 Property and Casualty Insurance Regulatory Report Card

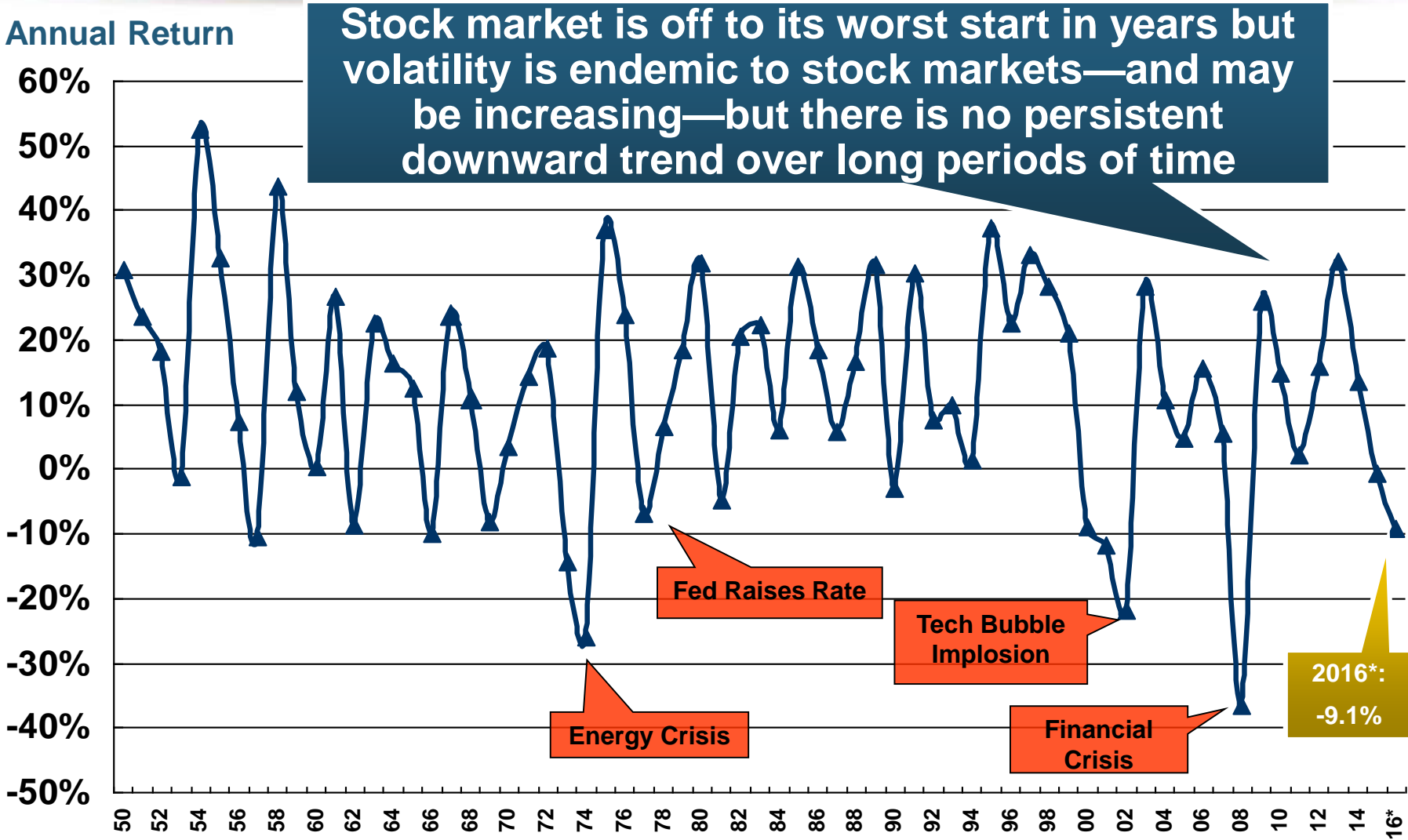


INVESTMENTS: THE NEW REALITY

**Investment Performance is a Key
Driver of Profitability**

***Depressed Yields Will Necessarily
Influence Underwriting & Pricing***

S&P 500 Index Returns, 1950 – 2016*

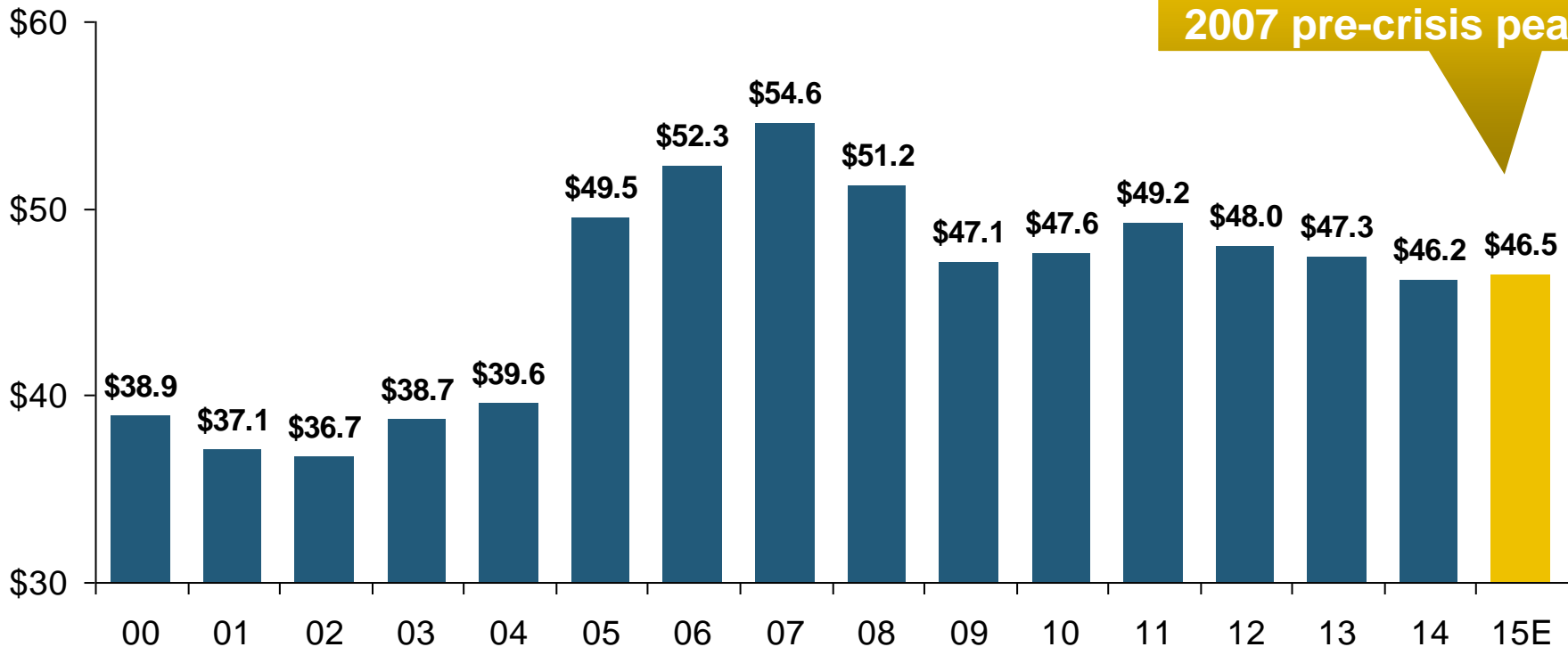


*Through Feb. 19, 2016.

Source: NYU Stern School of Business: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html Ins. Info. Inst.

Property/Casualty Insurance Industry Investment Income: 2000–2015E¹

(\$ Billions)



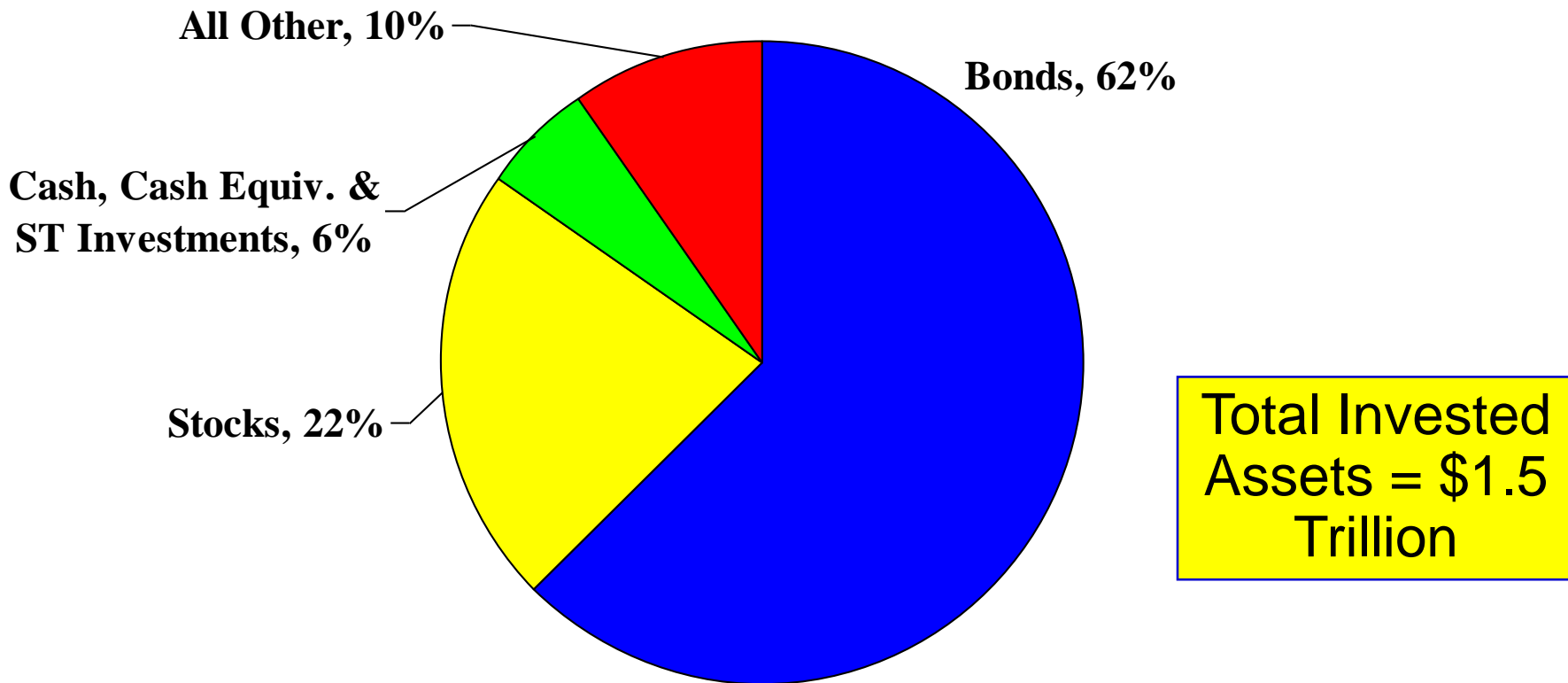
**Due to persistently low interest rates,
investment income fell in 2012, 2013 and 2014.**

¹ Investment gains consist primarily of interest and stock dividends.
Sources: ISO; Insurance Information Institute.

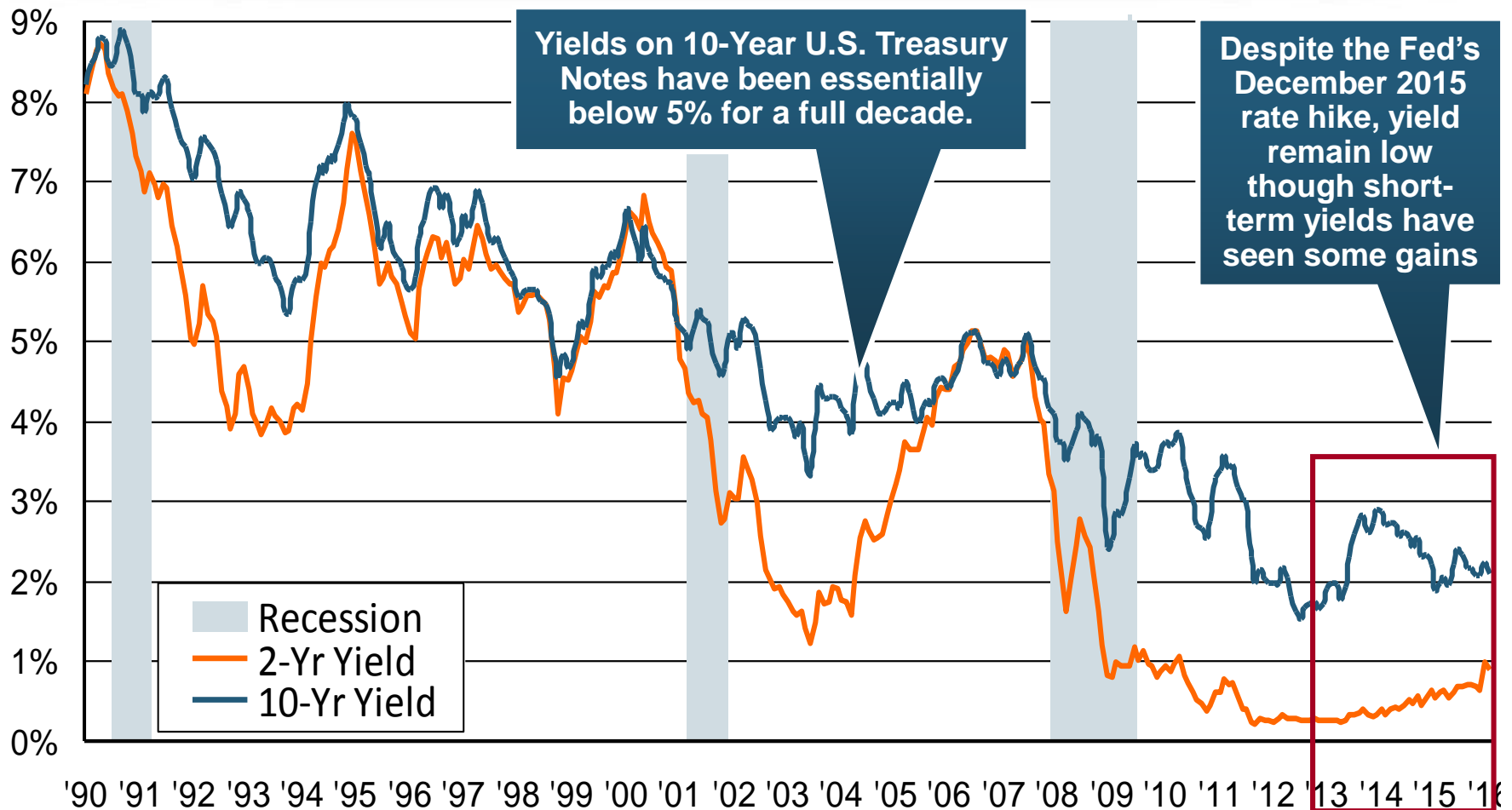
*2015 figure is estimated based on annualized data through Q3.

Distribution of Invested Assets: P/C Insurance Industry, 2013

\$ Billions



U.S. Treasury Security Yields: A Long Downward Trend, 1990–2016*

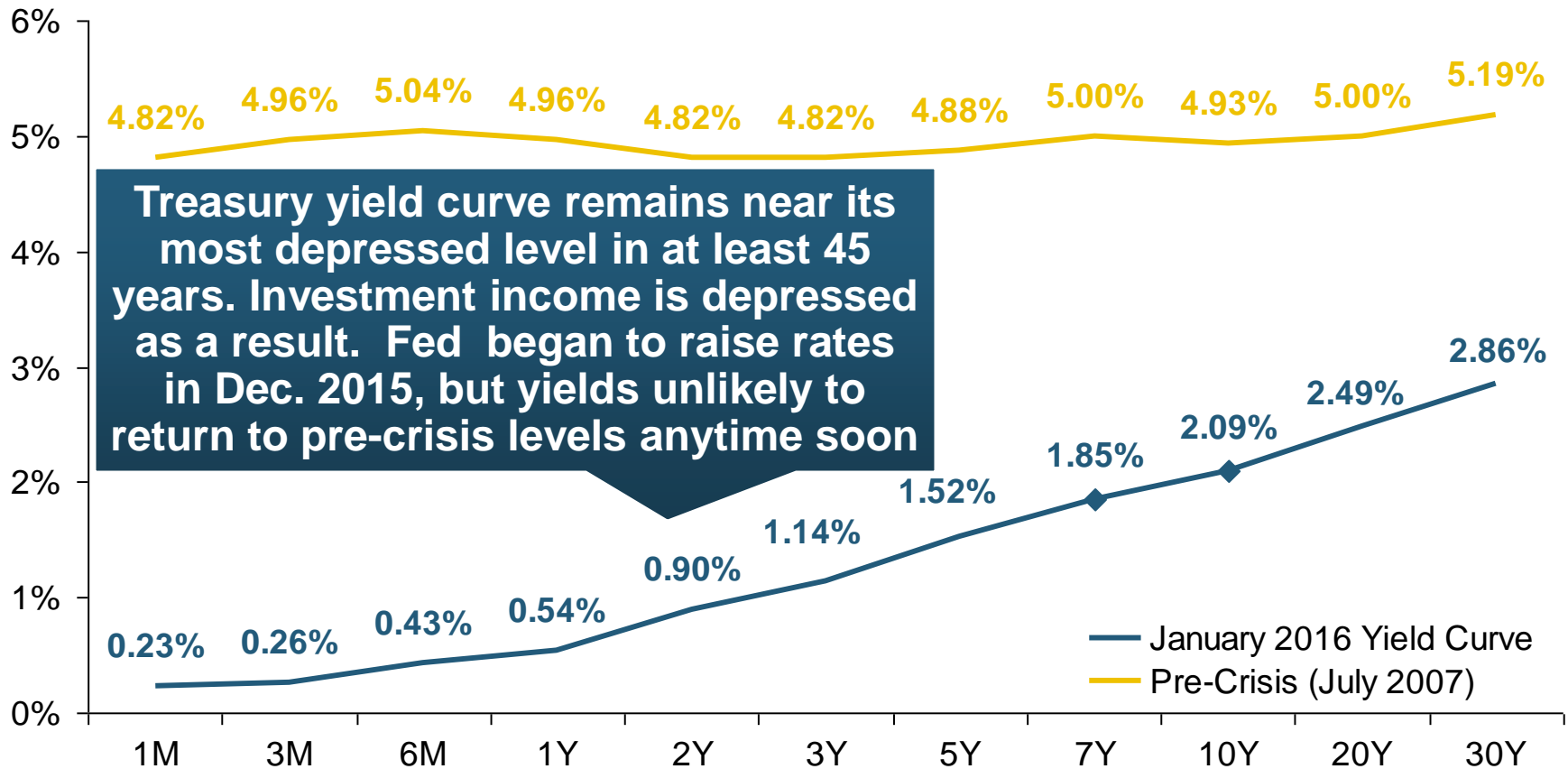


Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for years to come.

*Monthly, constant maturity, nominal rates, through January 2016.

Sources: Federal Reserve Bank at <http://www.federalreserve.gov/releases/h15/data.htm>. National Bureau of Economic Research (recession dates); Insurance Information Institute.

Treasury Yield Curves: Pre-Crisis (July 2007) vs. January 2016

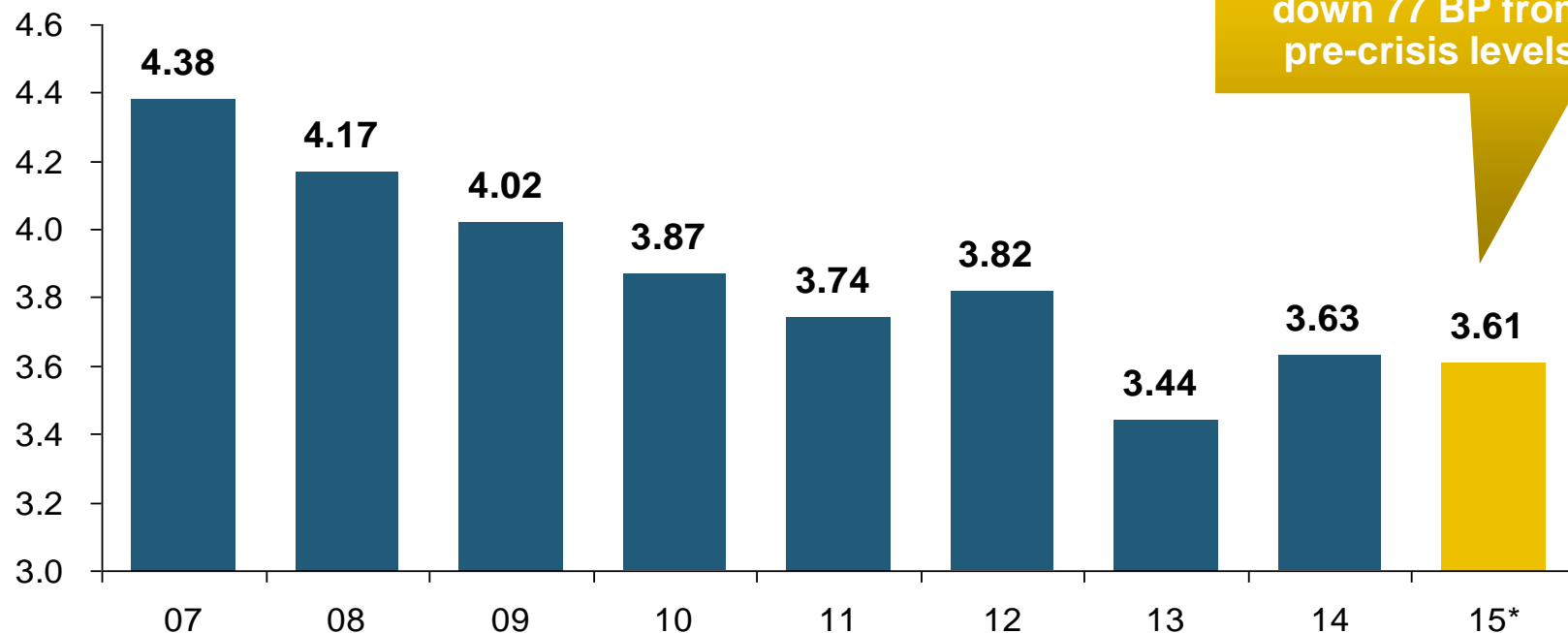


Treasury yield curve remains near its most depressed level in at least 45 years. Investment income is depressed as a result. Fed began to raise rates in Dec. 2015, but yields unlikely to return to pre-crisis levels anytime soon

The Fed Began to Raise Rates in Dec. 2015 but Market Volatility and Weakness Abroad Will Make It Difficult for the Fed to Raise Rates in Early 2016

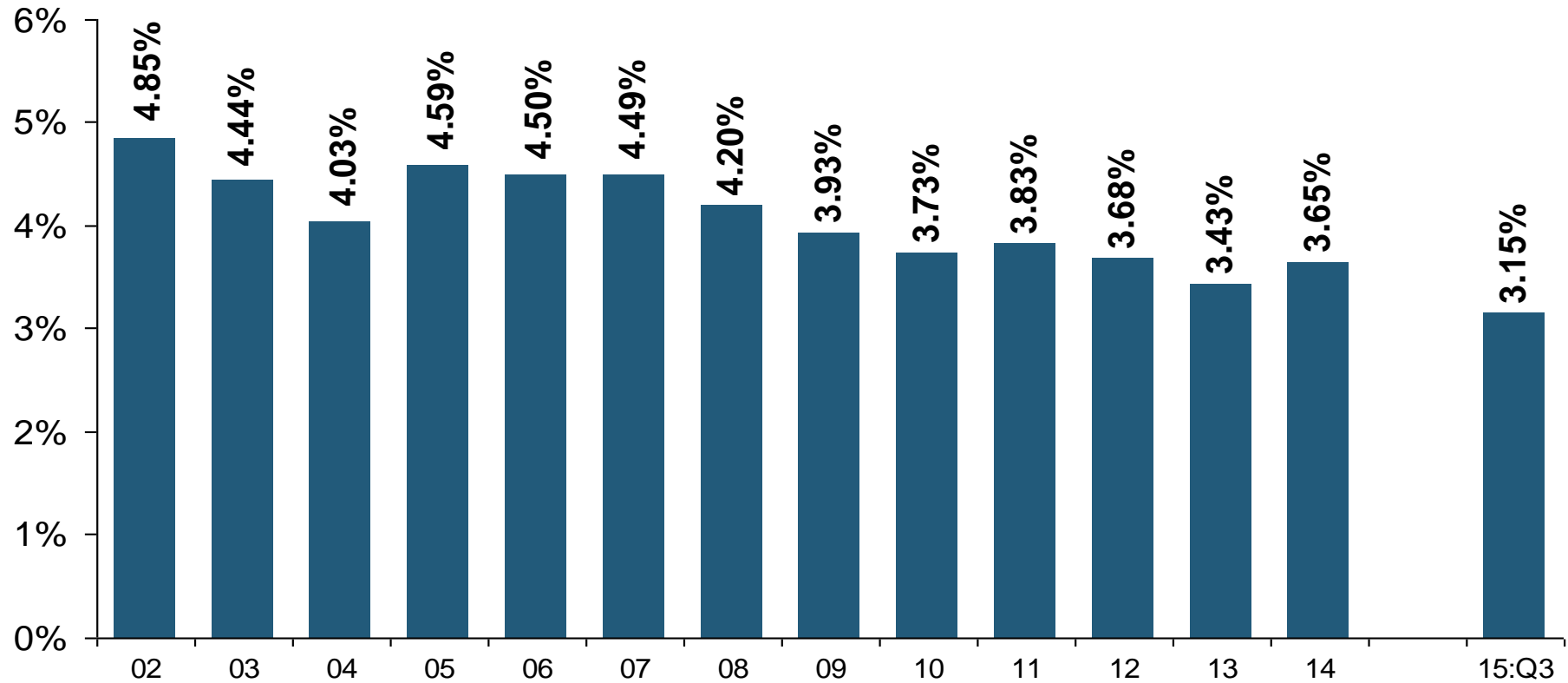
Net Yield on Property/Casualty Insurance Invested Assets, 2007–2015*

(Percent)



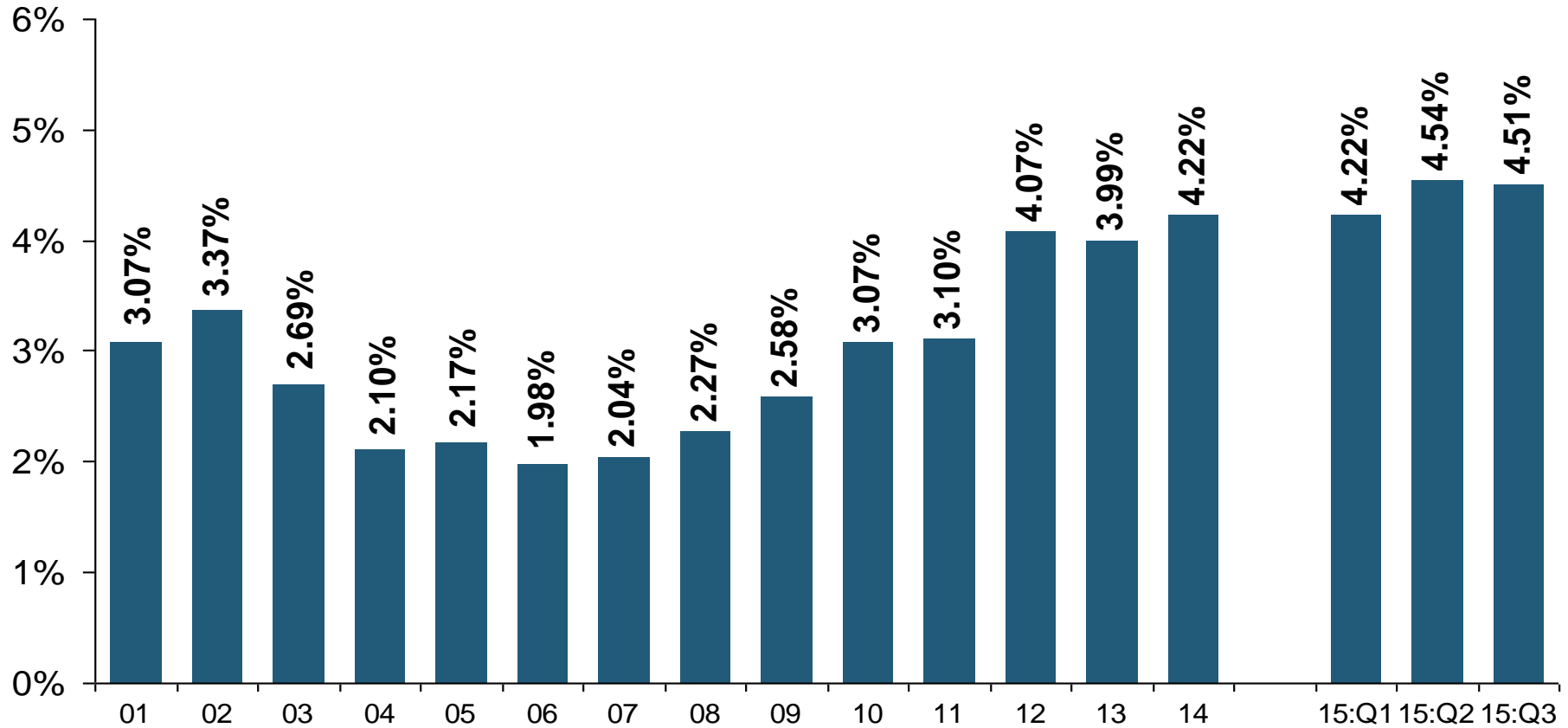
The yield on invested assets remains low relative to pre-crisis yields. The Fed's plan to raise interest rates in late 2015 has already pushed up some yields, albeit quite modestly.

P/C Insurer Portfolio Yields, 2002-2015:Q3



P/C carrier yields have been falling for over a decade, reflecting the long downtrend in prevailing interest rates. Even as prevailing rates rise in the next few years, portfolio yields are unlikely to rise quickly, since low yields of recent years are “baked in” to future returns.

P/C Insurers Below-Investment-Grade (BIG) Bonds as a Percent of Total Bonds, 2001-2015:Q3

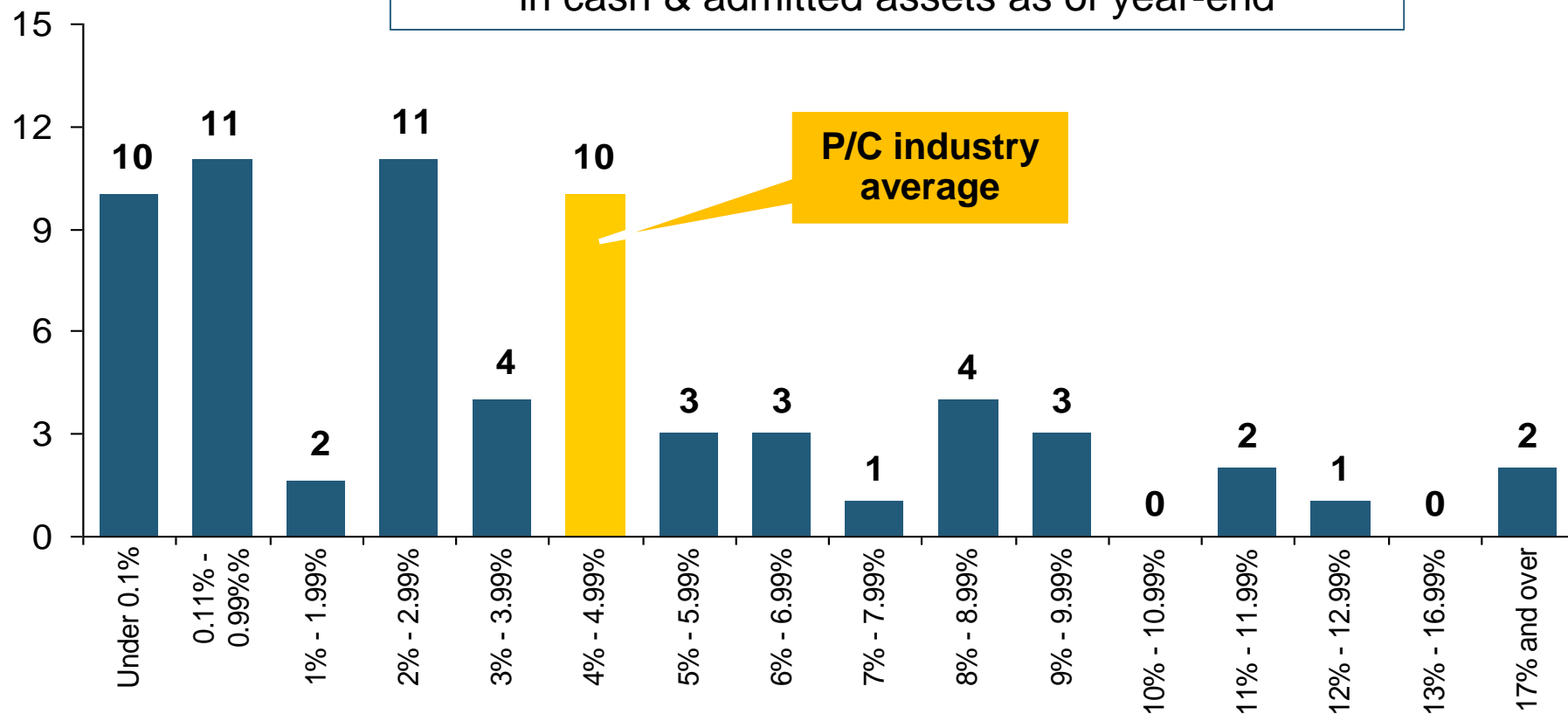


As a group, P/C carriers have increased the percentage of bond investments in riskier instruments. Since 2006-07, that percentage has risen over 200 basis points (double what it was). As interest rates rise, will this percentage return to pre-recession levels?

P/C Insurer Groups Holdings of BIG** Bonds as a Percent of Total Bonds, 2014

Number of Groups

The 67 groups graphed are those with over \$3 billion in cash & admitted assets as of year-end



There is a wide disparity among insurance groups regarding holdings of below-investment-grade bonds. Some hold none (or almost none); a few have over 10% of their bond portfolio in BIGs.

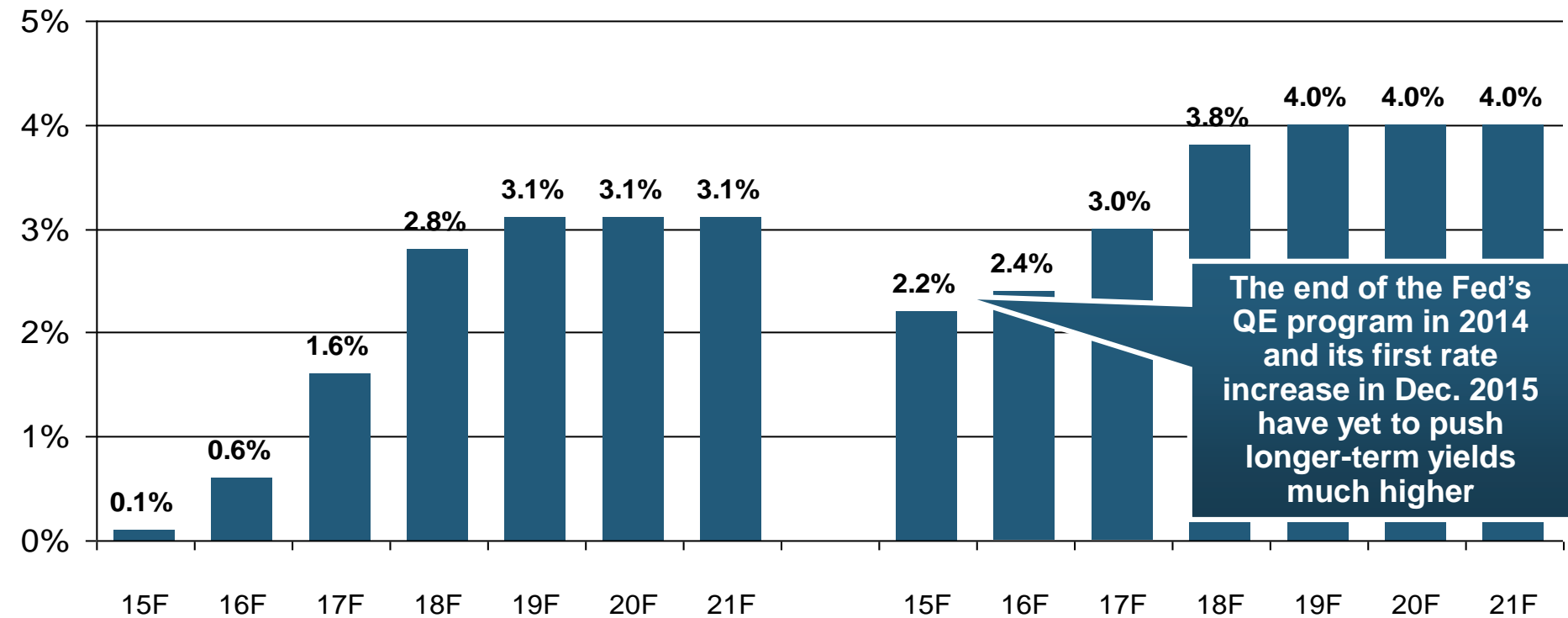
*Below Investment Grade
Sources: NAIC, via SNL Financial; Insurance Information Institute.

Interest Rate Forecasts: 2015 – 2021

Yield (%)

3-Month Treasury

10-Year Treasury



A full normalization of interest rates is unlikely until 2019, more than a decade after the onset of the financial crisis.

Annual Inflation Rates, (CPI-U, %), 1990–2016F

Annual Inflation Rates (%)



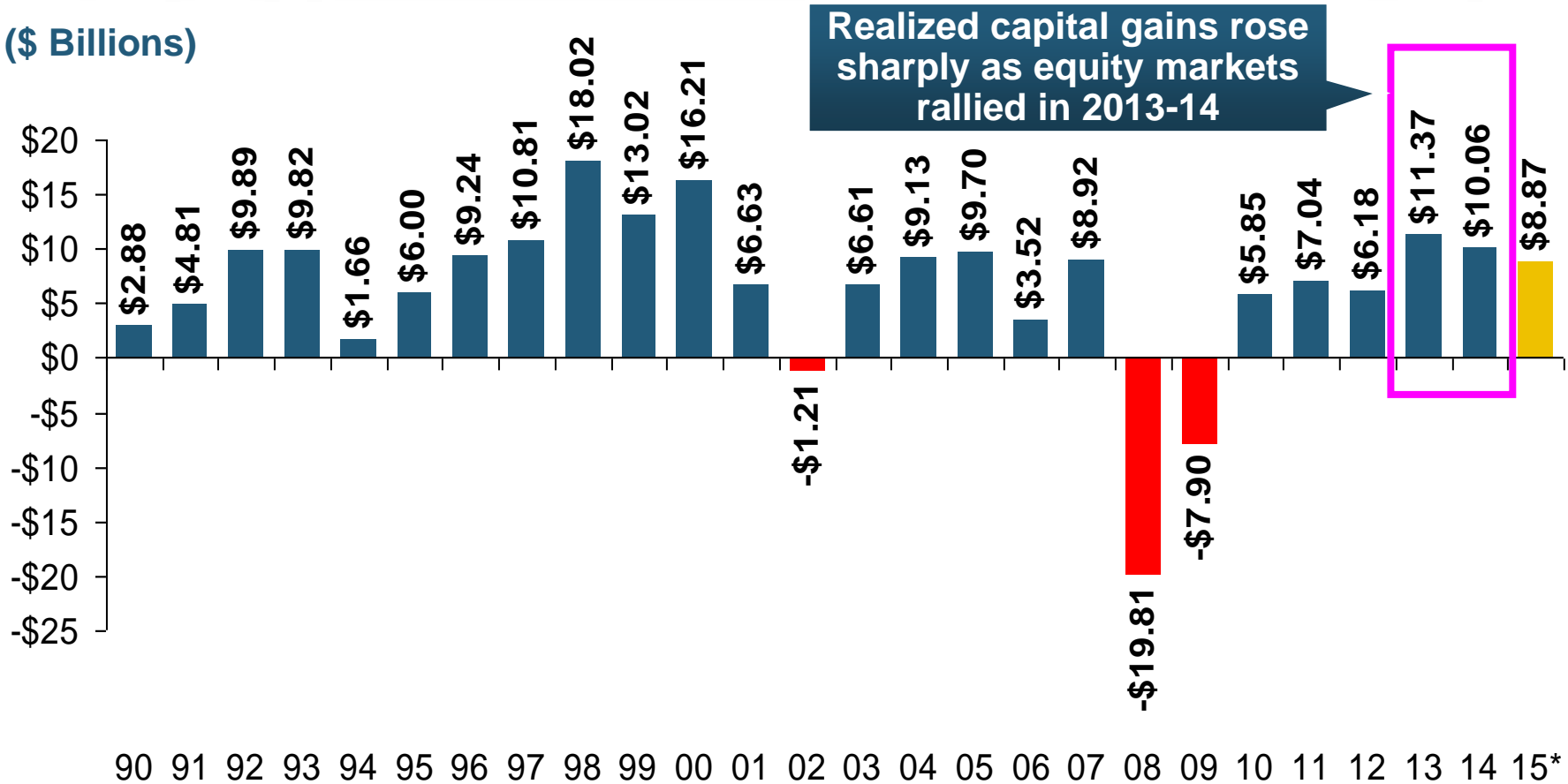
Inflation peaked at 5.6% in August 2008 on high energy and commodity crisis. The recession and the collapse of the commodity bubble reduced inflationary pressures in 2009/10

Inflationary expectations have slipped (due in part to falling energy costs) allowing the Fed to maintain low interest rates

Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

P/C Insurer Net Realized Capital Gains/Losses, 1990-2015:Q3*

(\$ Billions)



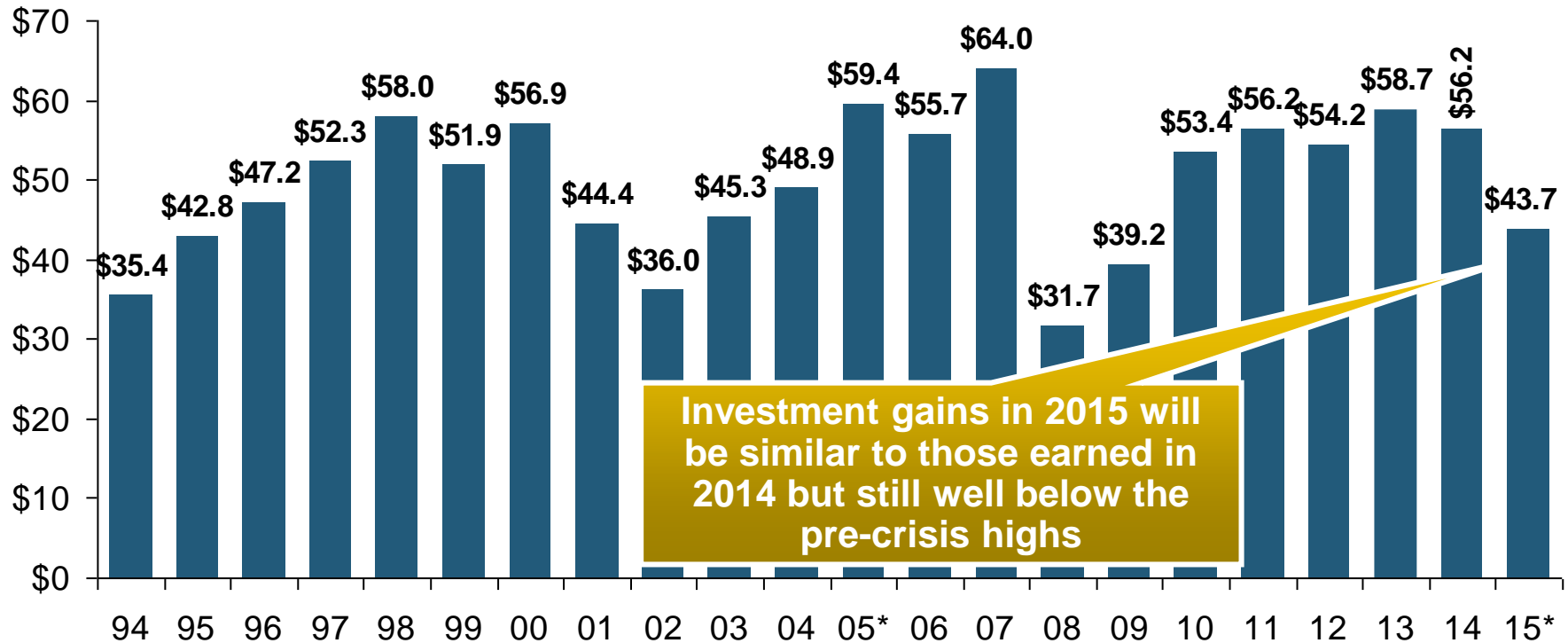
Insurers Posted Net Realized Capital Gains in 2010 - 2014 Following Two Years of Realized Losses During the Financial Crisis. Realized Capital Losses Were a Primary Cause of 2008/2009's Large Drop in Profits and ROE.

*Through Q3 2015.

Sources: A.M. Best, ISO, SNL, Insurance Information Institute.

Property/Casualty Insurance Industry Investment Gain: 1994–2015:Q3¹

(\$ Billions)



Investment gains in 2015 will be similar to those earned in 2014 but still well below the pre-crisis highs

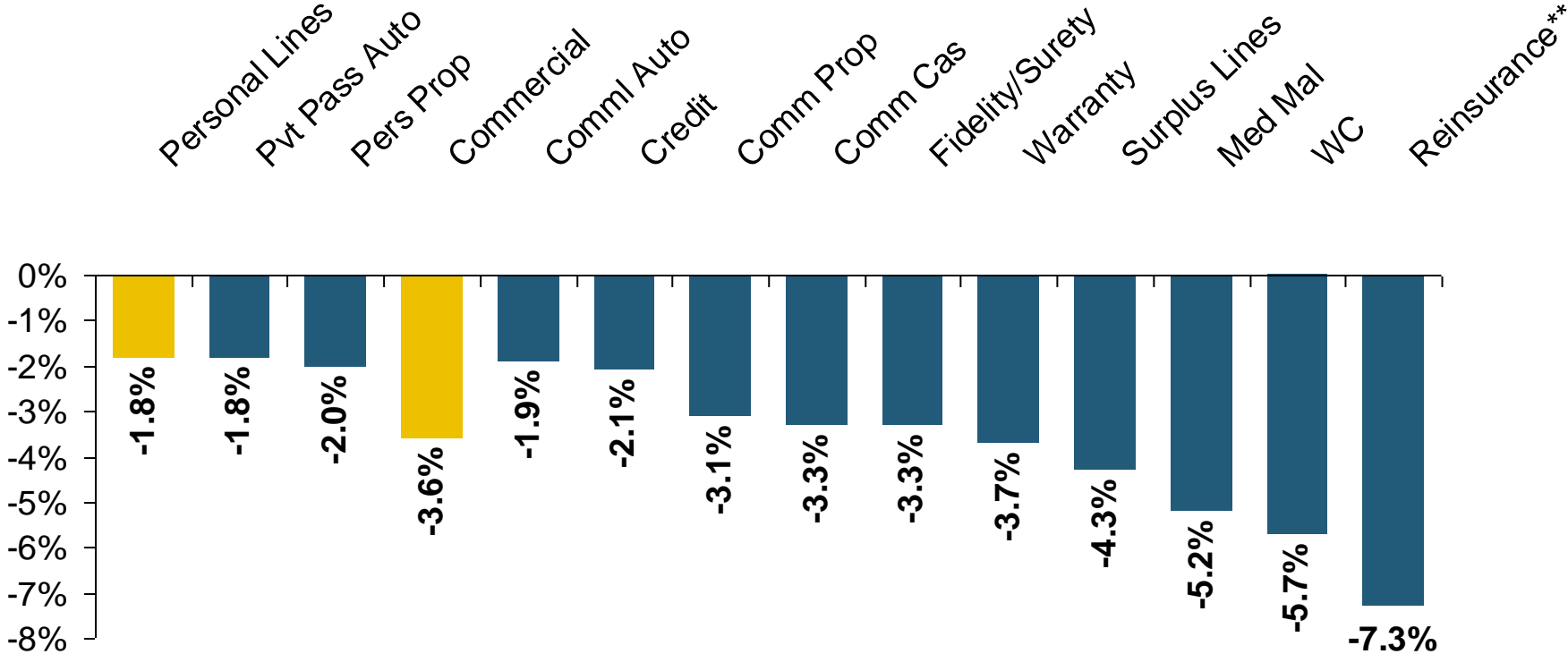
Total Investment Gains Were Down Slightly in 2014 as Low Interest Rates Pressured Investment Income but Realized Capital Gains Remained Robust

¹ Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.

* 2005 figure includes special one-time dividend of \$3.2B; 2015 figure is through Q3 2015.

Sources: ISO, SNL; Insurance Information Institute.

Reduction in Combined Ratio Necessary to Offset 1% Decline in Investment Yield to Maintain Constant ROE, by Line*



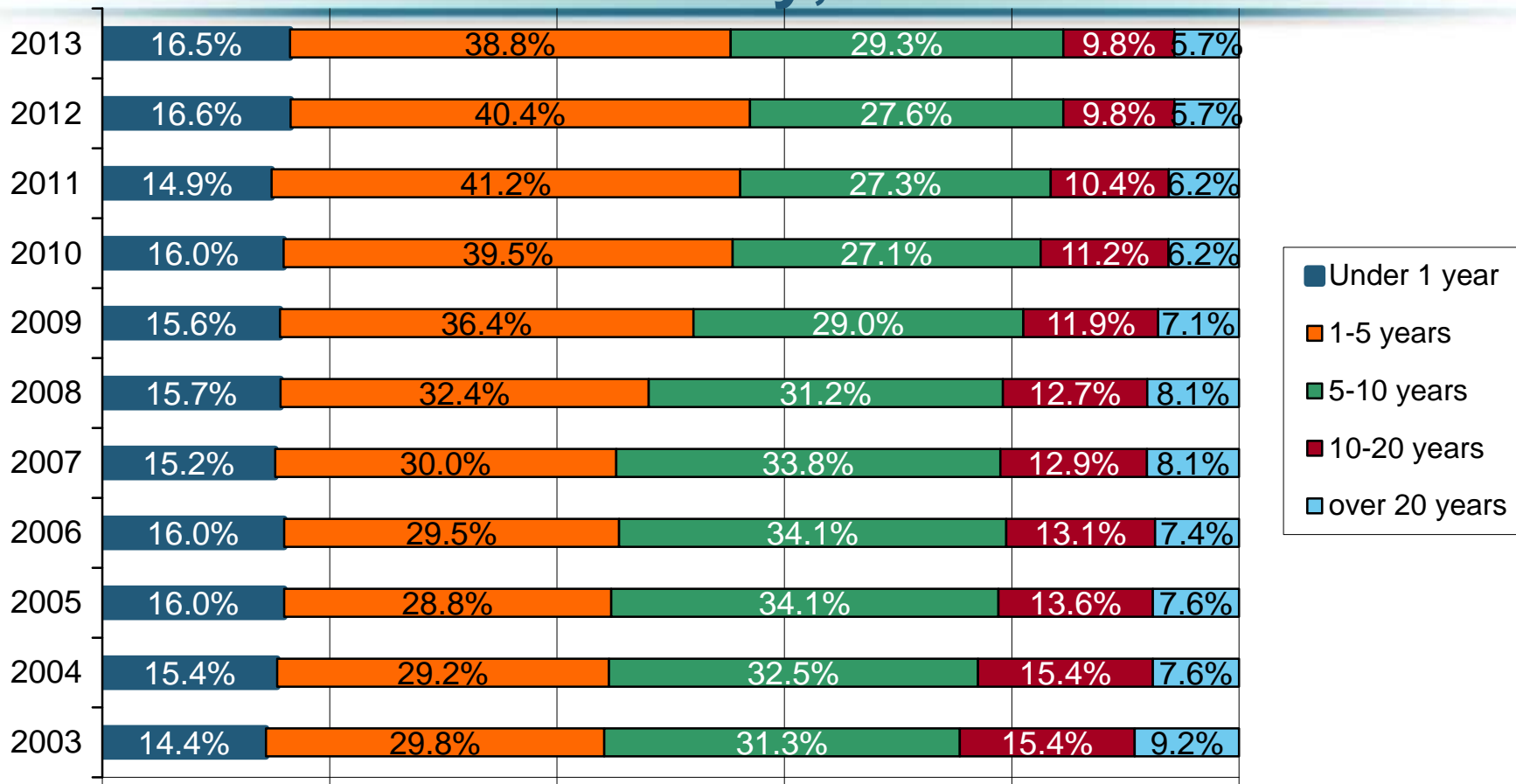
Lower Investment Earnings Place a Greater Burden on Underwriting and Pricing Discipline

*Based on 2008 Invested Assets and Earned Premiums

**US domestic reinsurance only

Source: A.M. Best; Insurance Information Institute.

Distribution of Bond Maturities, P/C Insurance Industry, 2003-2013



The main shift over these years has been from bonds with longer maturities to bonds with shorter maturities. The industry first trimmed its holdings of over-10-year bonds (from 24.6% in 2003 to 15.5% in 2012) and then trimmed bonds in the 5-10-year category (from 31.3% in 2003 to 27.6% in 2012). Falling average maturity of the P/C industry's bond portfolio is contributing to a drop in investment income along with lower yields.

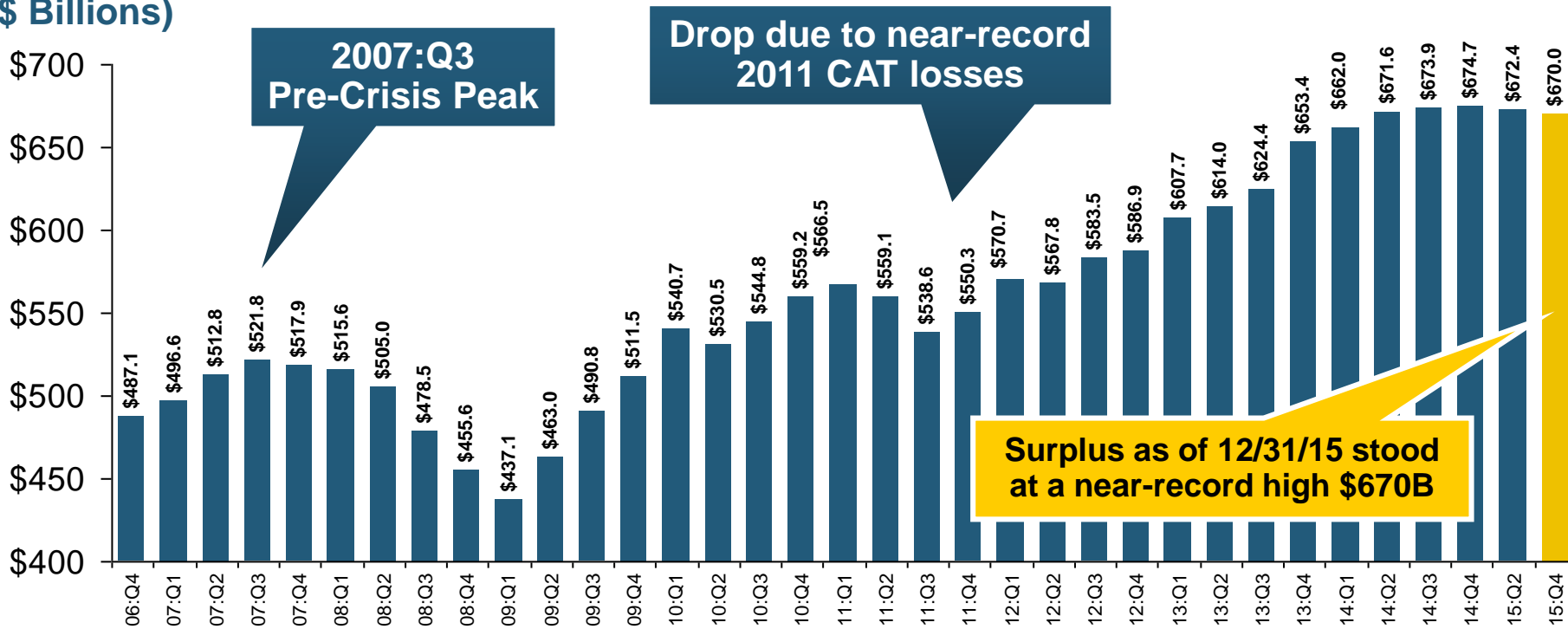
CAPITAL/CAPACITY

**Capital Accumulation Has
Multiple Impacts**

Alternative Capital Impacts?

Policyholder Surplus, 2006:Q4–2015:Q4E

(\$ Billions)



The industry now has \$1 of surplus for every \$0.73 of NPW, close to the strongest claims-paying status in its history.

2010:Q1 data includes \$22.5B of paid-in capital from a holding company parent for one insurer’s investment in a non-insurance business .

The P/C insurance industry entered 2016 in very strong financial condition.

Sources: ISO, A.M .Best.

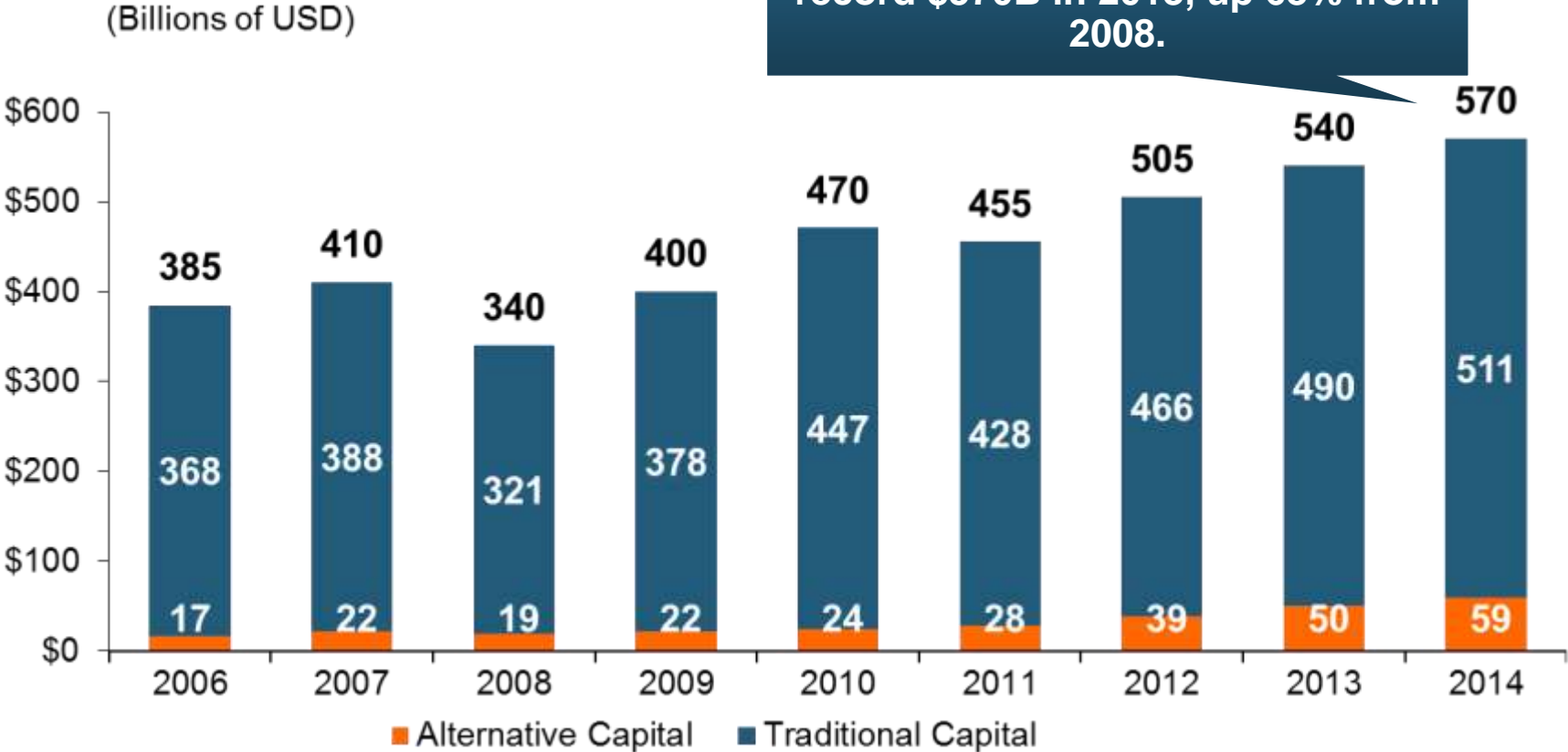
Alternative Capital

**New Investors Continue to Change
the Reinsurance Landscape**

***First I.I.I. White Paper on Issue Was
Released in March 2015***

Global Reinsurance Capital (Traditional and Alternative), 2006 - 2014

Total reinsurance capital reached a record \$570B in 2013, up 68% from 2008.

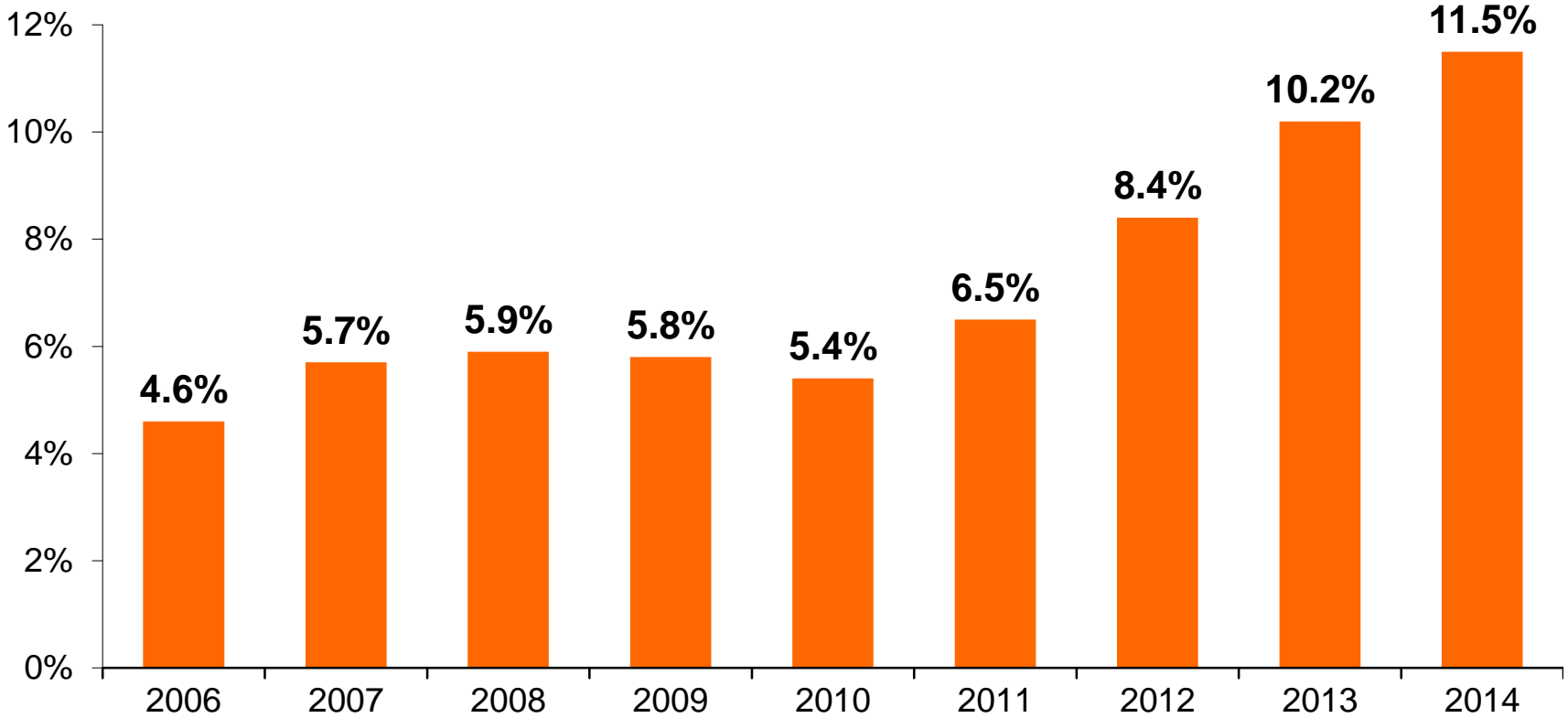


But alternative capacity has grown 210% since 2008, to \$50B. It has more than doubled in the past three years.

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.

Alternative Capital as a Percentage of Traditional Global Reinsurance Capital



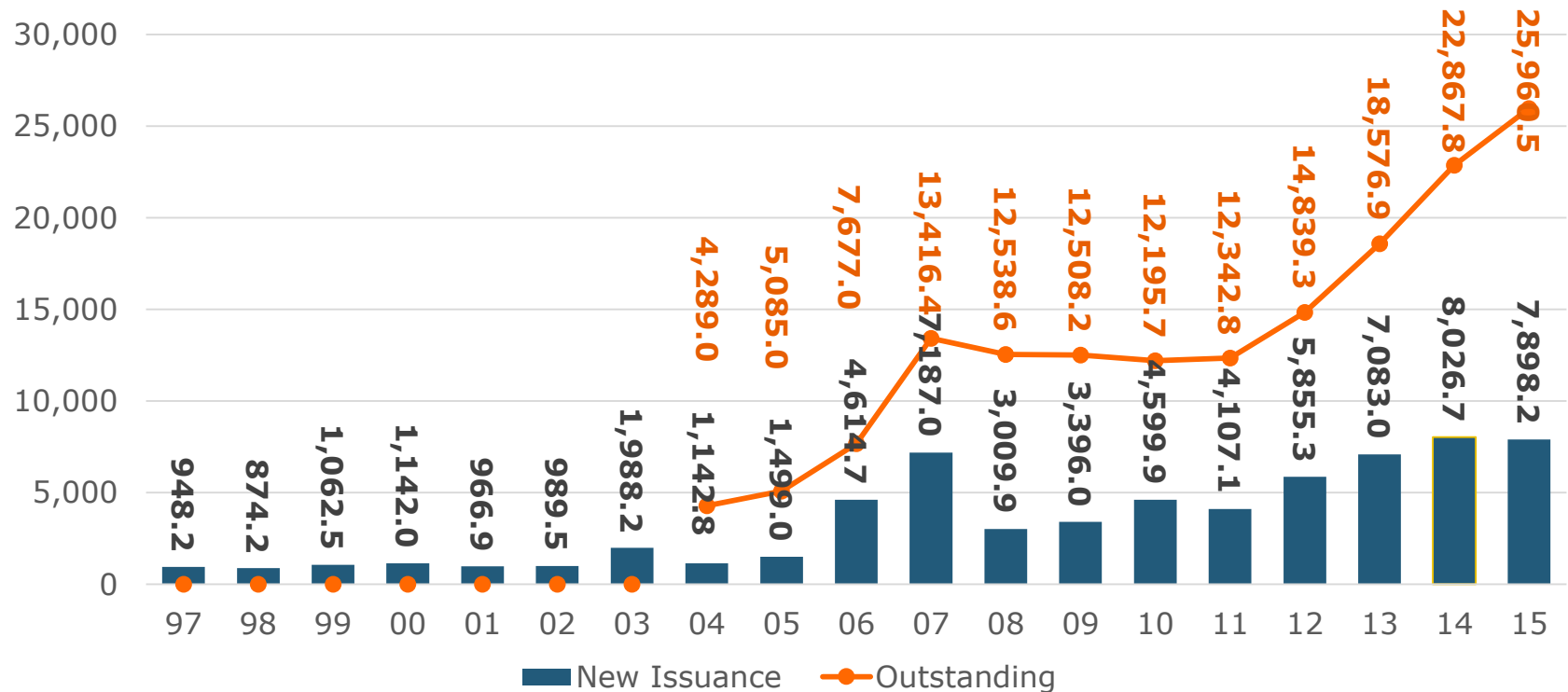
Alternative Capital's Share of Global Reinsurance Capital Has More Than Doubled Since 2010.

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.

Catastrophe Bond Issuance and Outstanding: 1997-2015

Risk Capital Amount (\$ Millions)

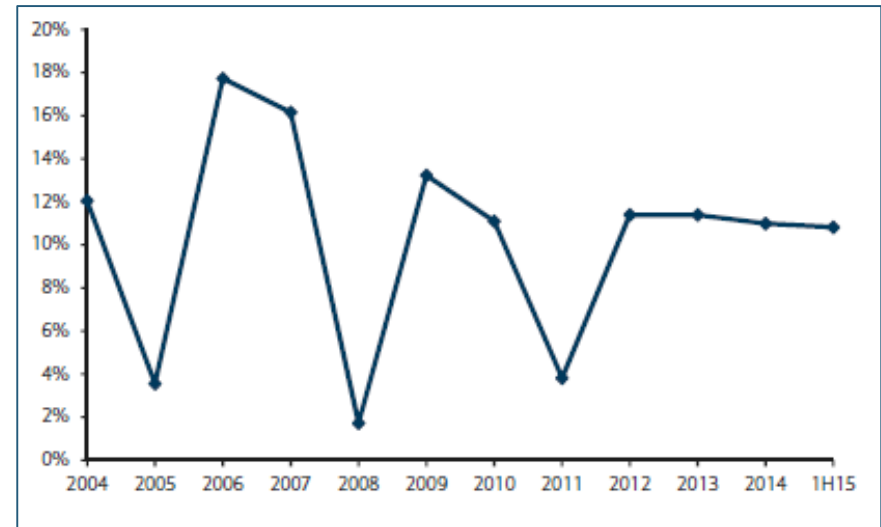
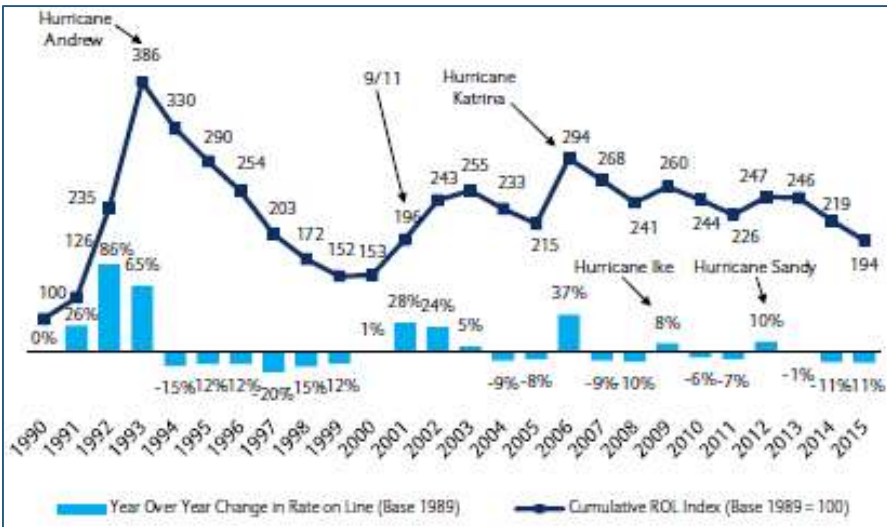


Cat Bond Issuance Declined Slightly in 2015 from 2014's Record Pace. Lower Yields on Bonds Explain Some of the Contraction.

US Property CAT Rate on Line Index & Global Reinsurance ROE

US Property CAT ROL

Global Reinsurance ROE



Record traditional capacity, alternative capital and low CAT activity have pressured reinsurance prices; ROEs are now only very modestly

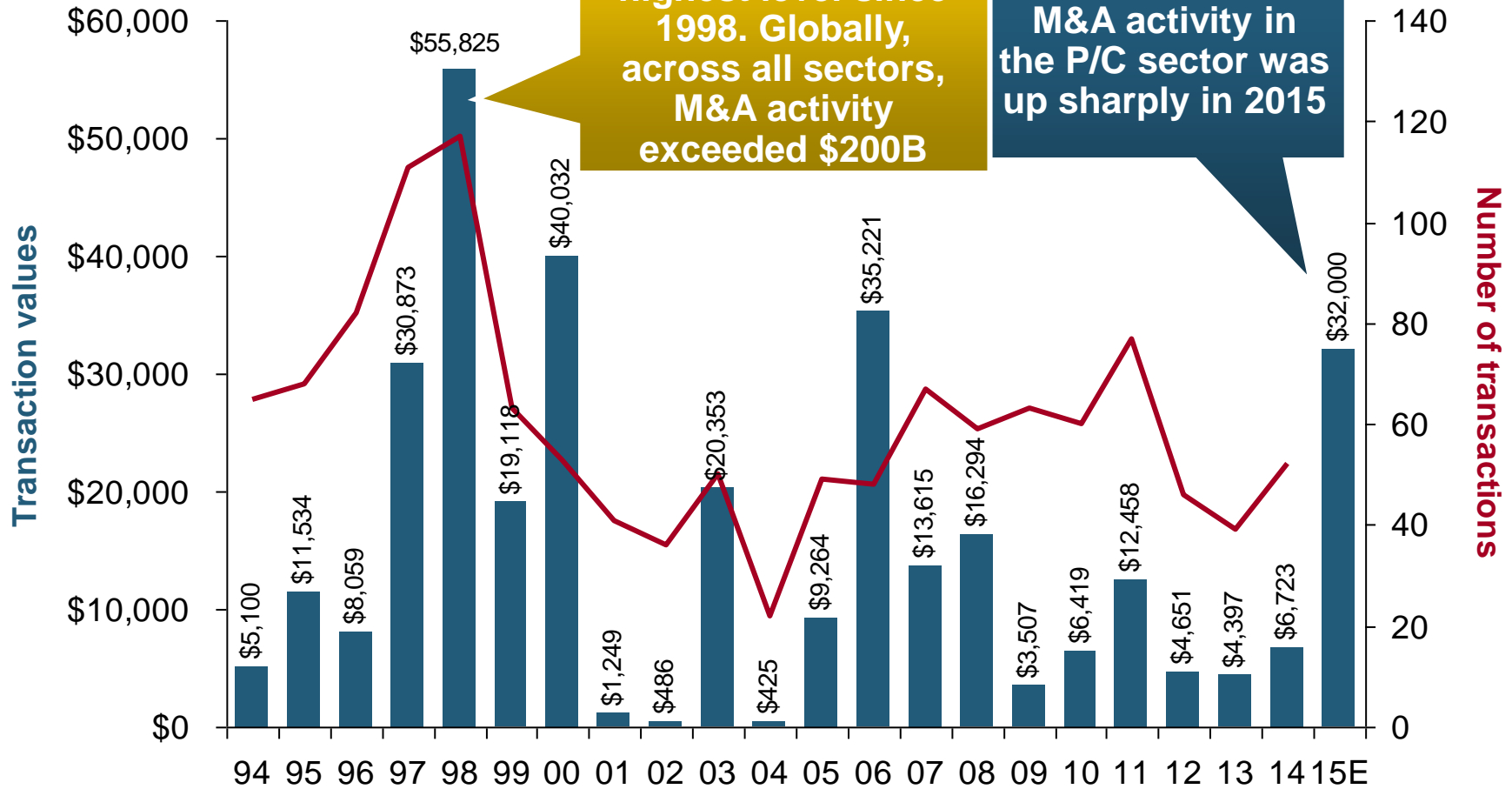
Source: Barclays PLC from Guy Carpenter; Insurance Information Institute.

GLOBAL M&A UPDATE: *A PATH TO GROWTH?*

**Are Capital Accumulation, Drive
for Growth and Scale Stimulating
M&A Activity?**

U.S. INSURANCE MERGERS AND ACQUISITIONS, P/C SECTOR, 1994-2015E (1)

(\$ Millions)



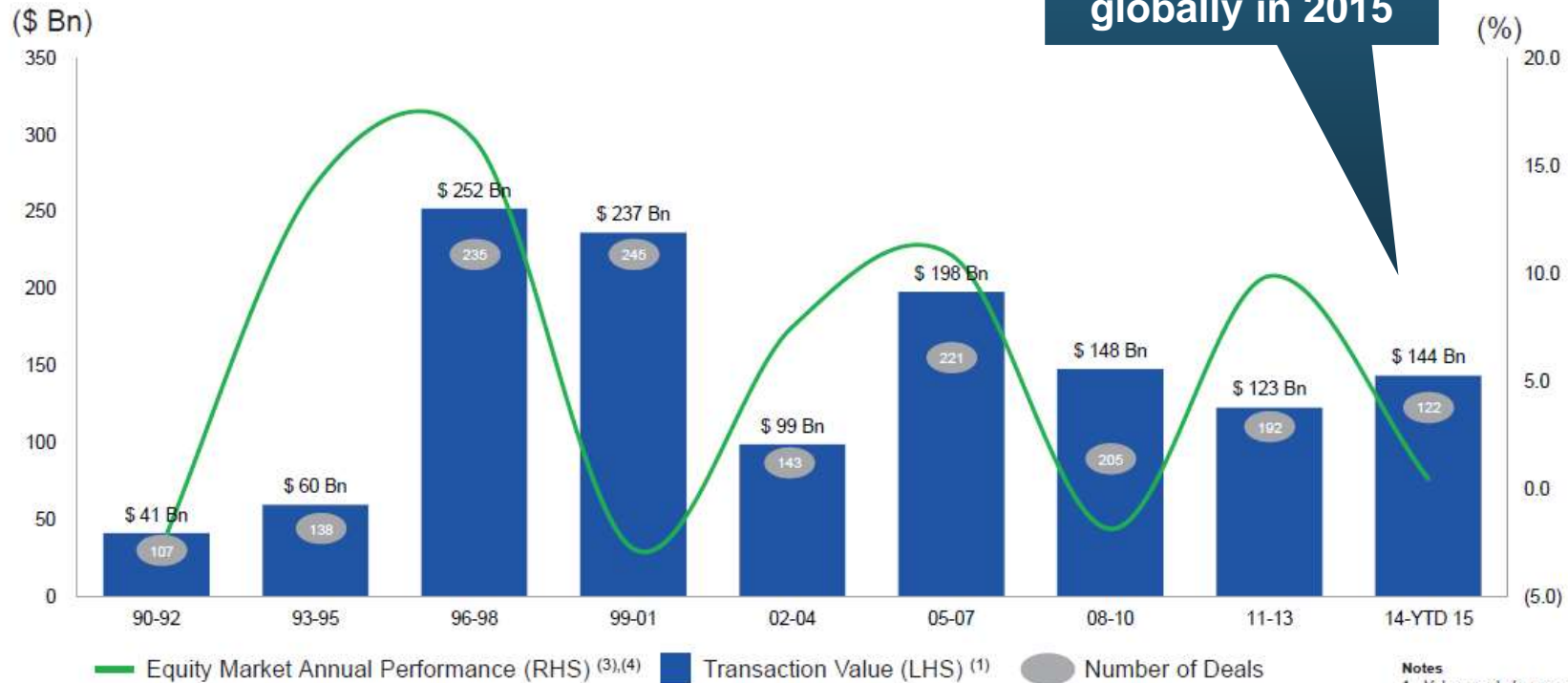
(1) Includes transactions where a U.S. company was the acquirer and/or the target.

Source: Conning proprietary database; 2015 I.I.I. estimate.

Global M&A Activity Tends to Follow Equity Market Performance

The number and volume of insurance M&A deals was up globally in 2015

Total Insurance M&A Volumes
Deals of value > \$100M - Since 1990



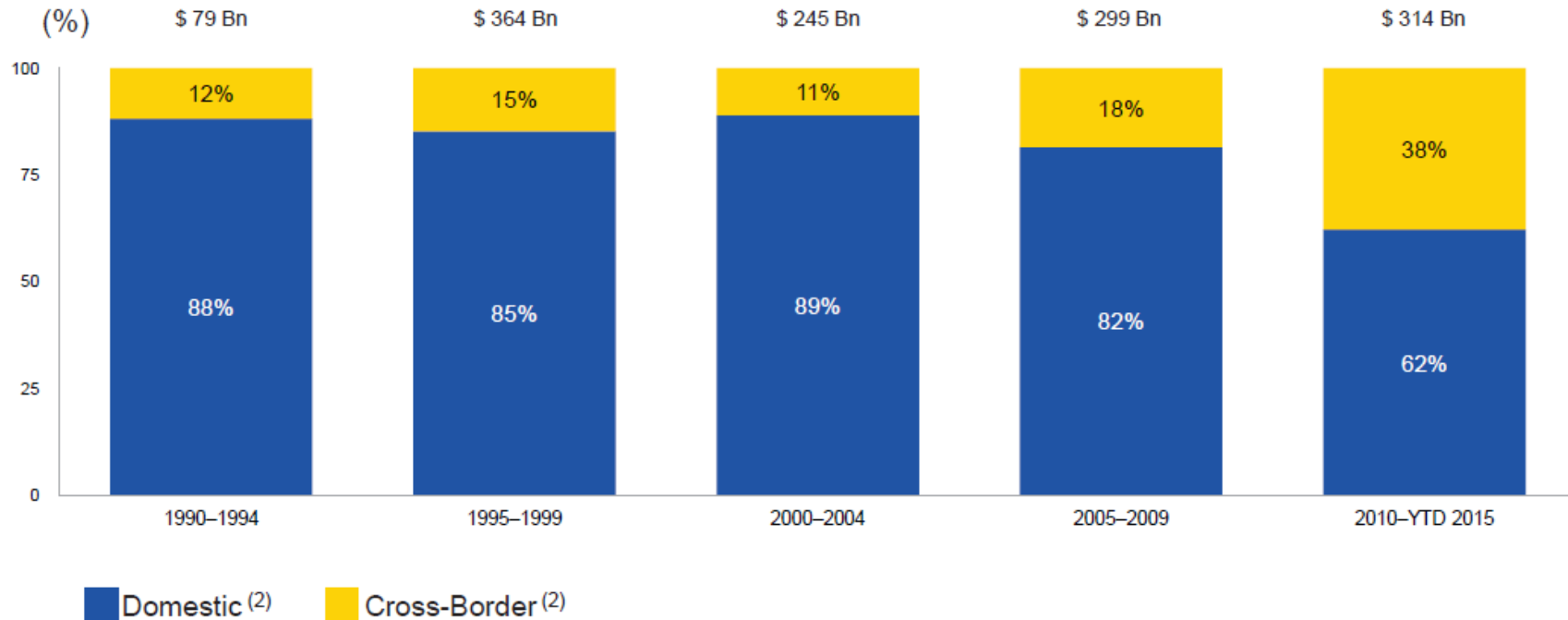
- Notes
1. Values exclude assumed liabilities
 2. IMF Aggregate for World
 3. MSCI World Index
 4. Period average figures

Source: Thomson Reuters, Capital IQ as of Oct. 2015 and IMF from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "Facts vs. Sentiment: Deals in the Insurance Sector," by Aviva CEO Mark Wilson.

Huge Shift from Domestic M&A Activity to Cross-Border

The share of M&A deal volume that was cross-border more than doubled in 2015

Insurance M&A Volumes
Deals of value > \$100M (Since 1990)

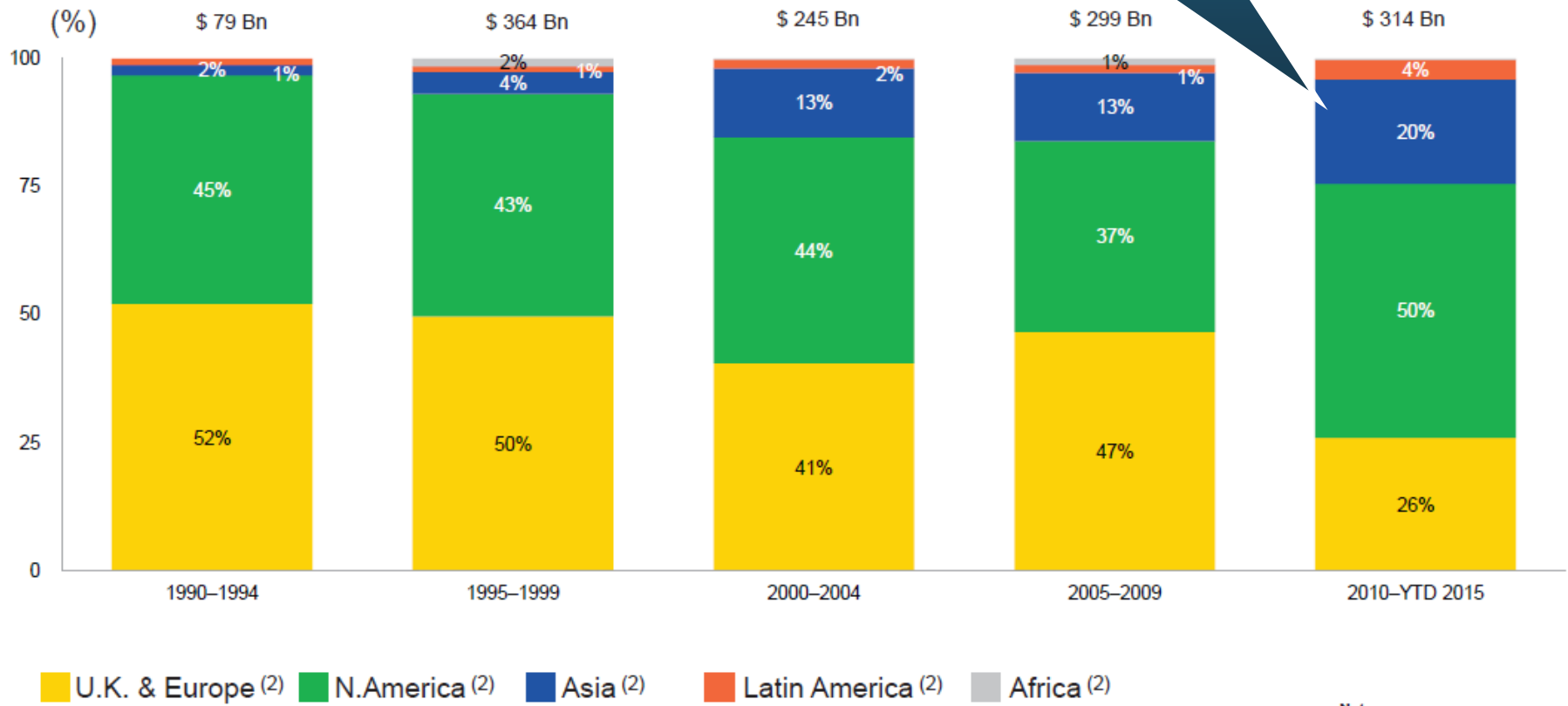


Notes
1. Split based on target's region
2. Values exclude assumed liabilities

Source: Thomson Reuters as of Oct. 2015 from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "Facts vs. Sentiment: Deals in the Insurance Sector," by Aviva CEO Mark Wilson.

M&A Activity Has Shifted Away from Europe and Towards Asia and N. America

Asian, N. American deal volumes were up sharply in 2015

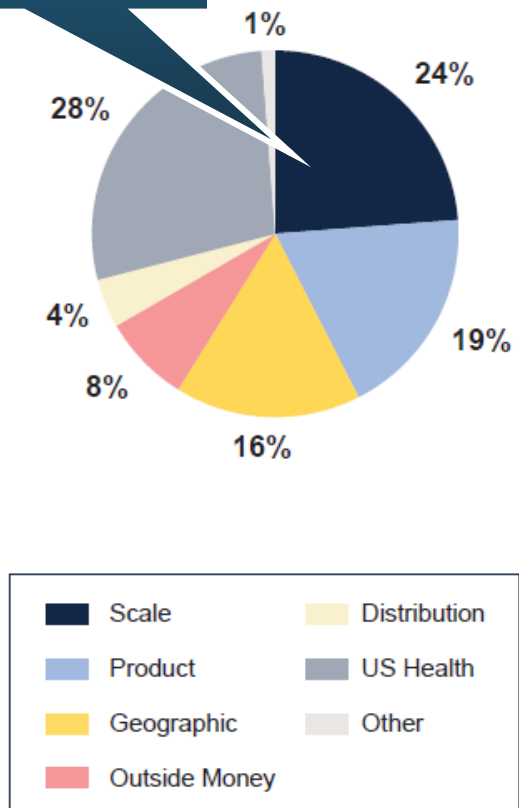
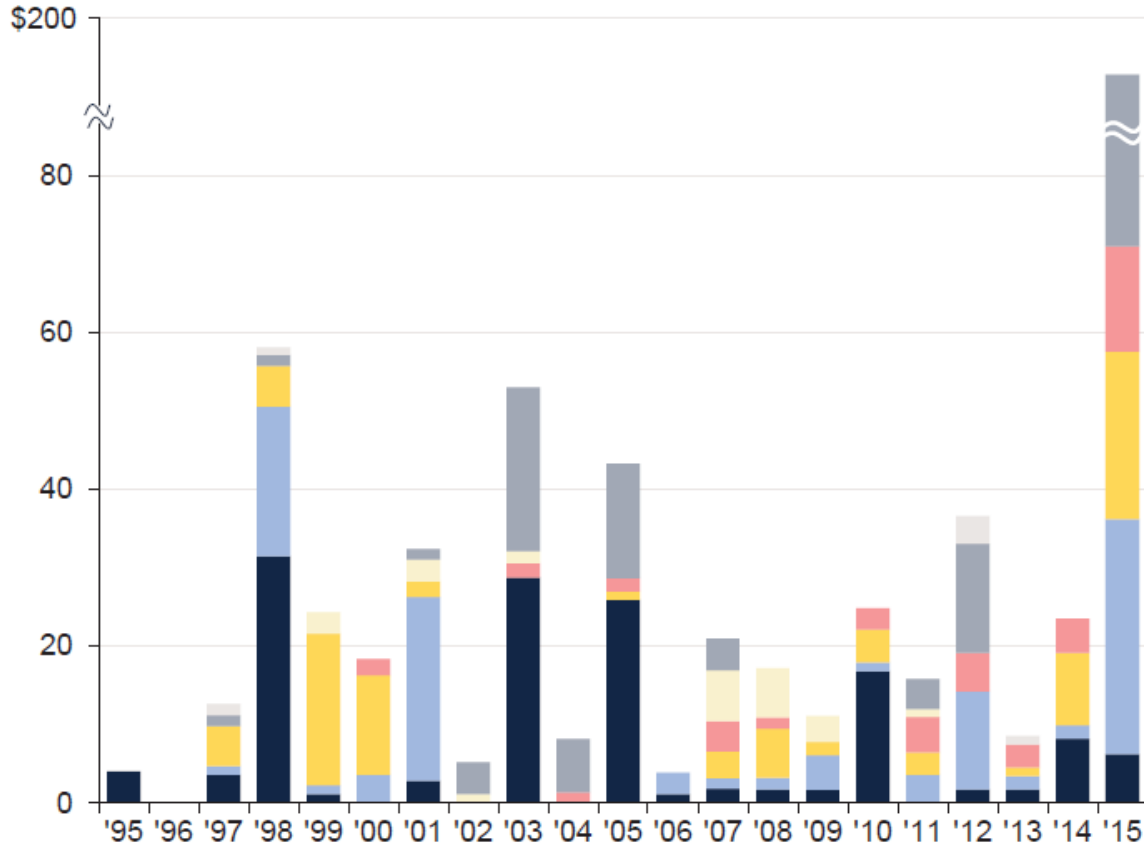


Notes
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 2. Values exclude assumed liabilities

Source: Thomson Reuters as of Oct. 2015 from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "Facts vs. Sentiment: Deals in the Insurance Sector," by Aviva CEO Mark Wilson.

M&A: Deal Rationale by Dollar Amount

Scale drives most deals (excluding health sector)



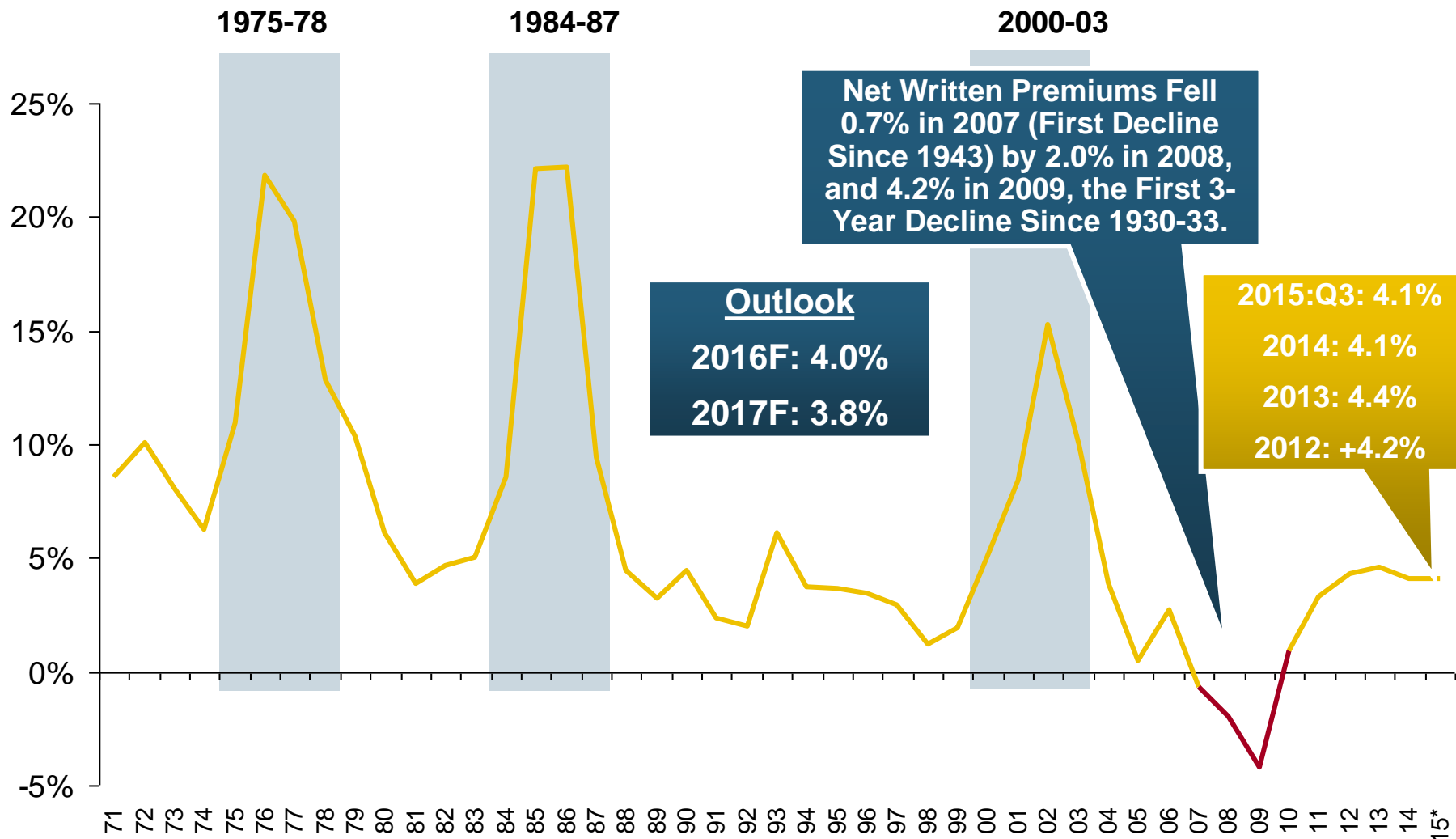
Source: SNL Financial and WCMA estimates from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "What is the Logic Behind Consolidation? And Does It Create Value? A View from Outside," by Brian Shea, Head of Willis Capital Markets & Advisory Europe (WCMA).

Growth

**Premium Growth Rates Vary
Tremendously by State and
Over Time, But...**

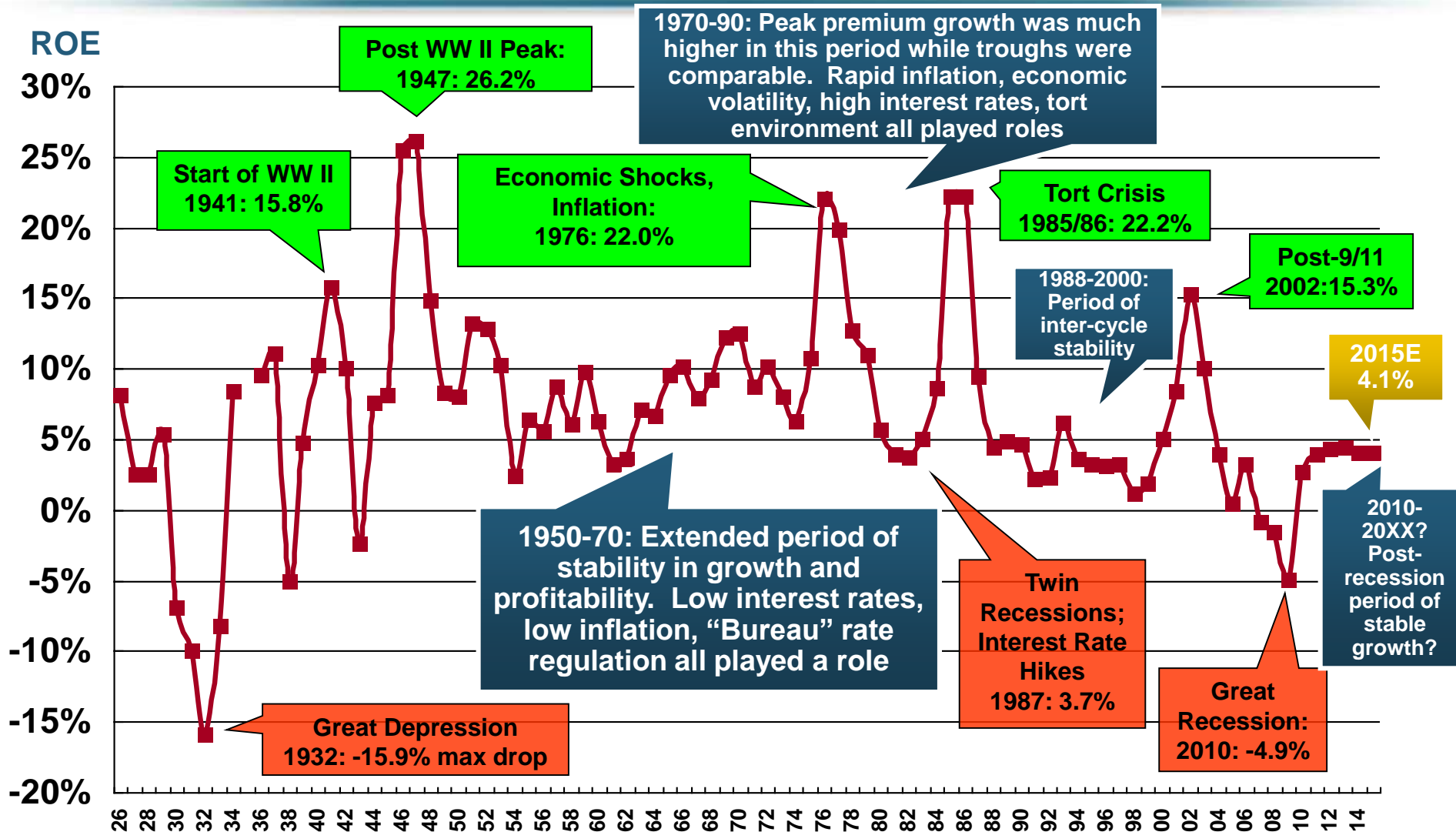
Net Premium Growth (All P/C Lines): Annual Change, 1971—2015:Q3P

(Percent)



Shaded areas denote "hard market" periods
Sources: A.M. Best (1971-2013), ISO (2014-15).

NPW Premium Growth: Peaks & Troughs in the P/C Insurance Industry, 1926 – 2015E

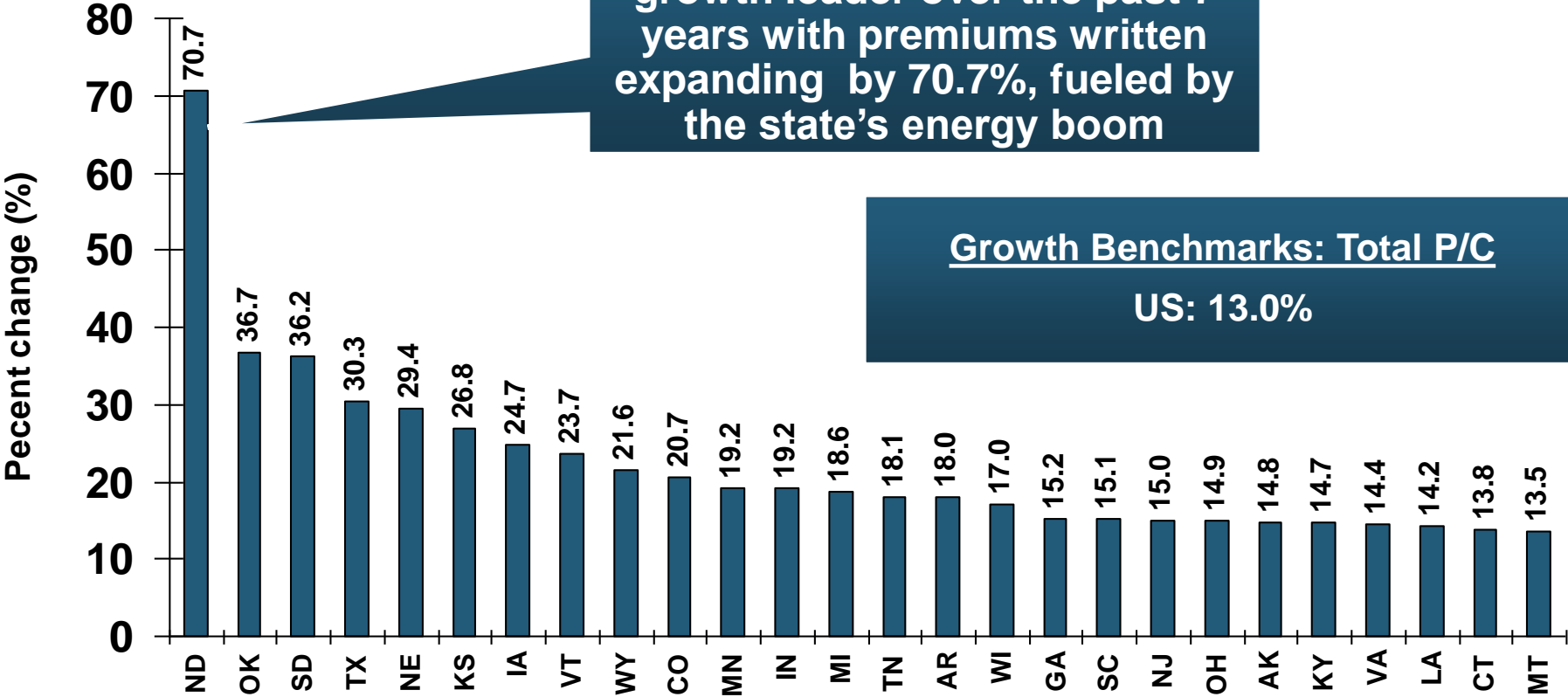


Note: Data through 1934 are based on stock companies only. Data include state funds beginning in 1998.
 Source: A.M. Best; Insurance Information Institute.

Direct Premiums Written: Total P/C Percent Change by State, 2007-2014

Top 25 States

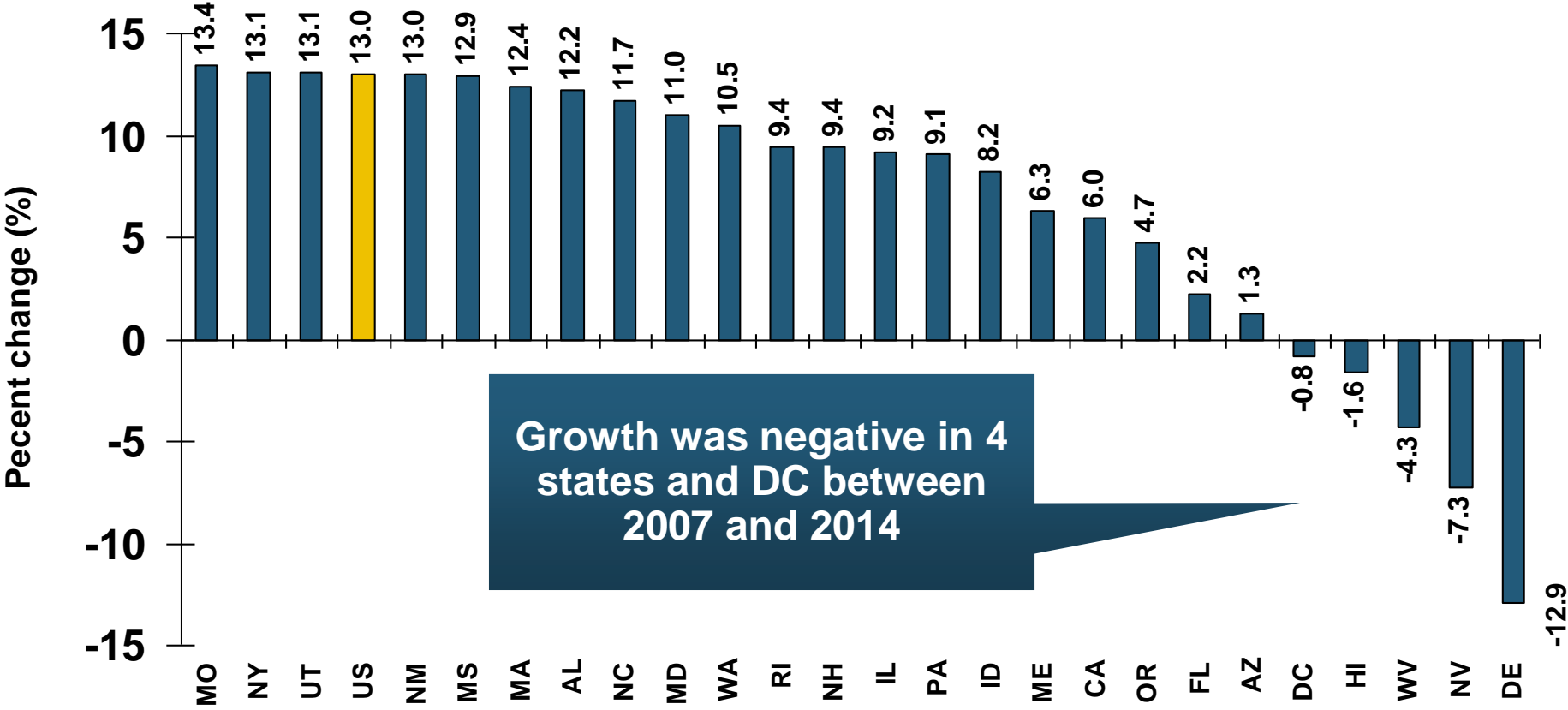
North Dakota was the country's growth leader over the past 7 years with premiums written expanding by 70.7%, fueled by the state's energy boom



Growth Benchmarks: Total P/C
US: 13.0%

Direct Premiums Written: Total P/C Percent Change by State, 2007-2014

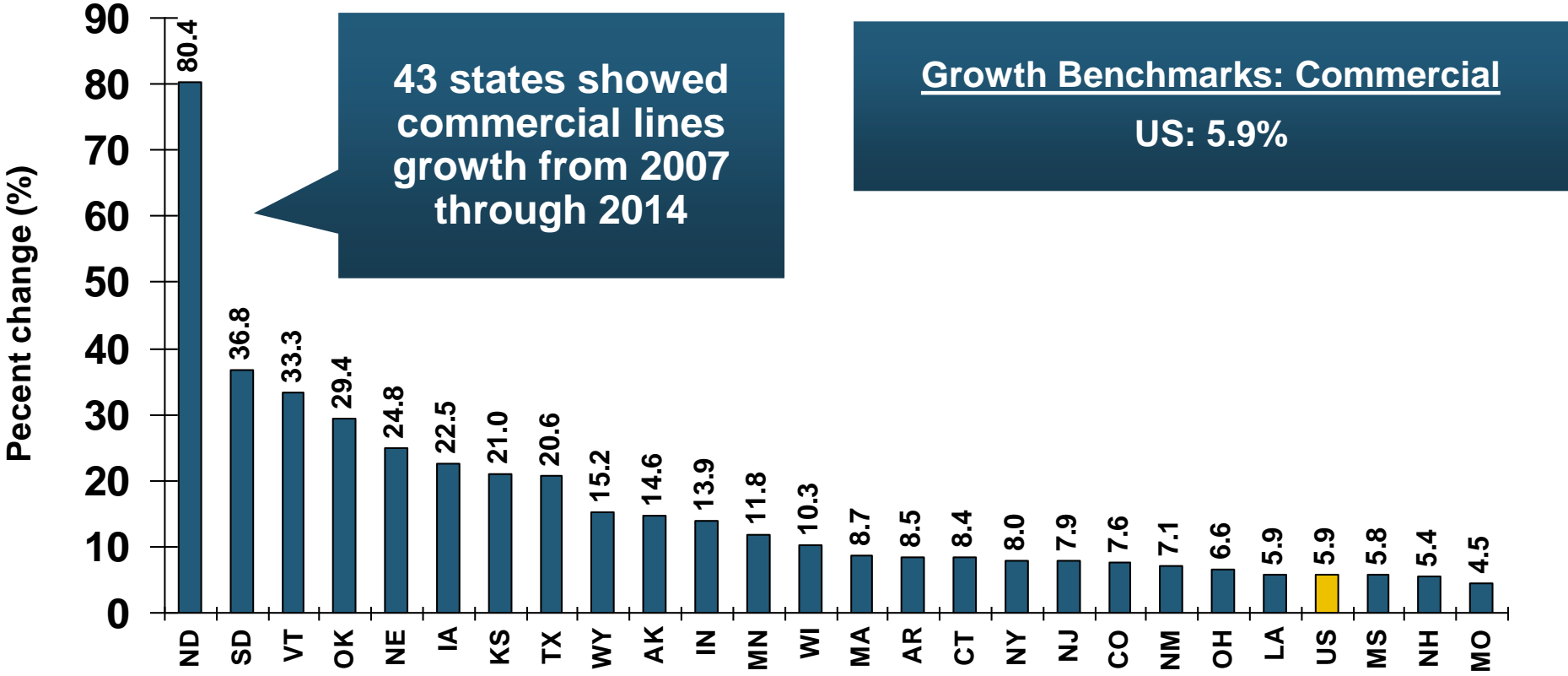
Bottom 25 States



Sources: SNL Financial LC.; Insurance Information Institute.

Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2014

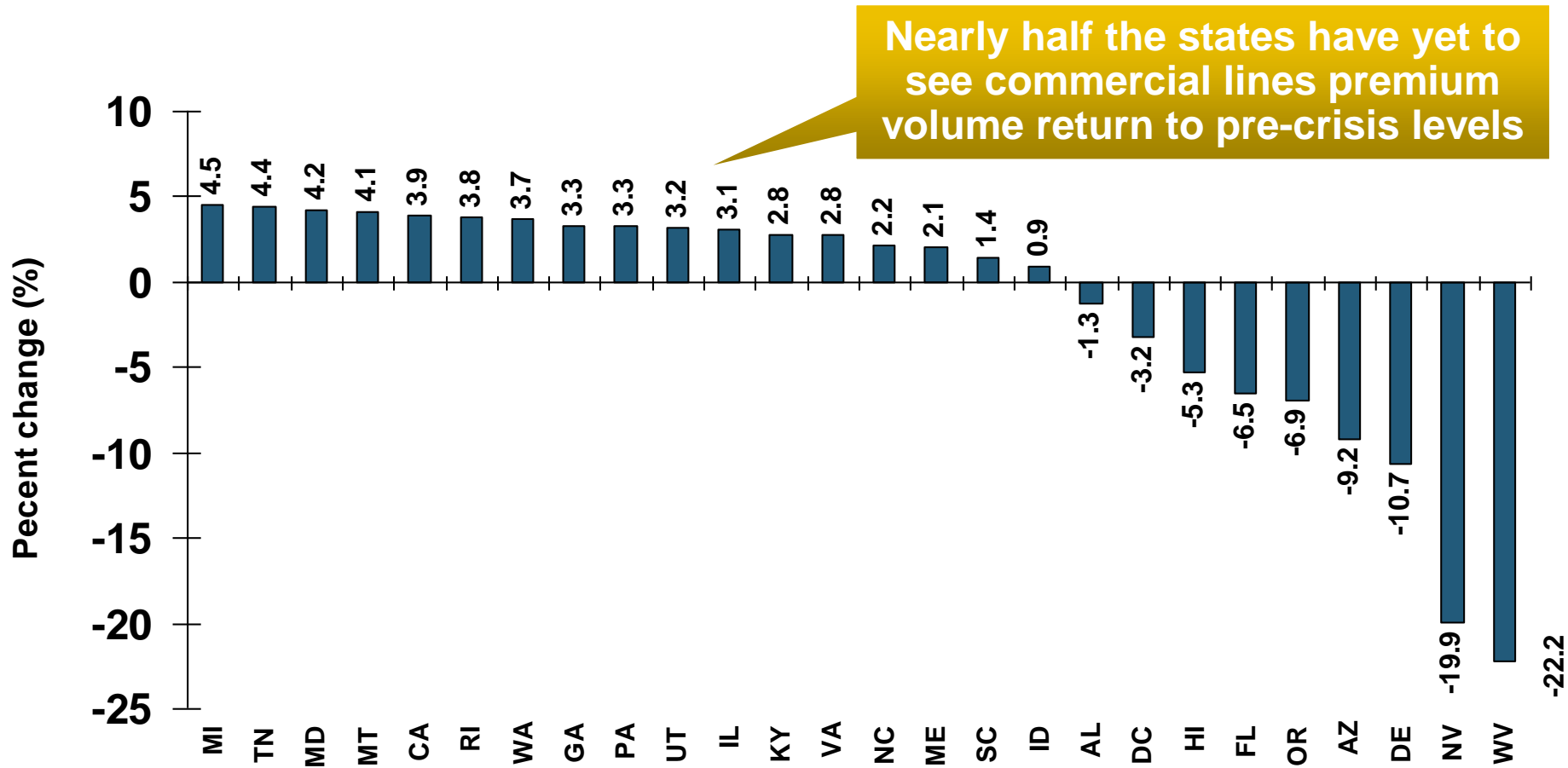
Top 25 States



Sources: SNL Financial LLC.; Insurance Information Institute.

Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2014

Bottom 25 States

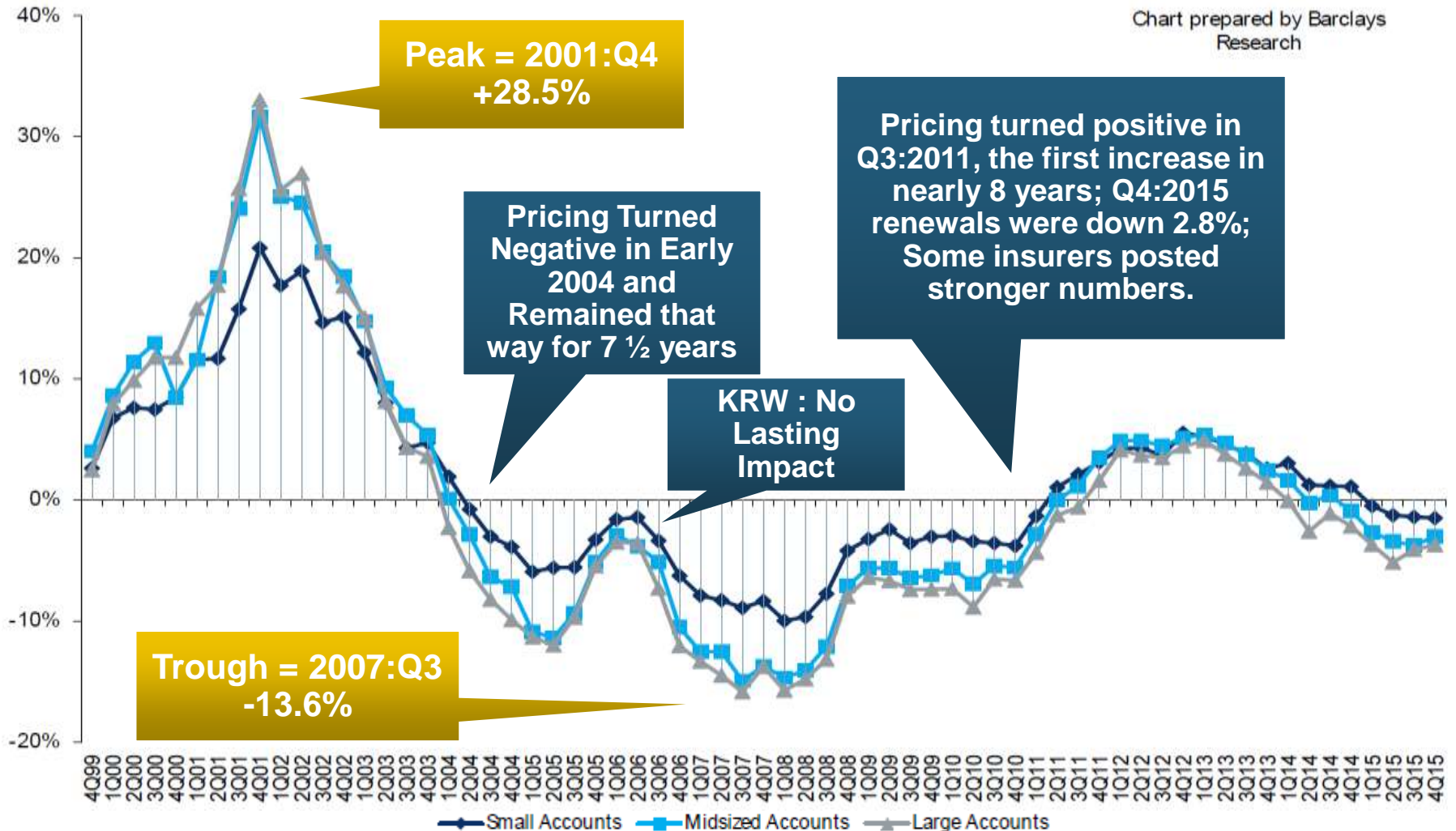


Pricing Trends

**Personal Lines Pricing Is Up
Survey Results Suggest
Commercial Pricing Has
Flattened Out**

Change in Commercial Rate Renewals, by Account Size: 1999:Q4 to 2015:Q4

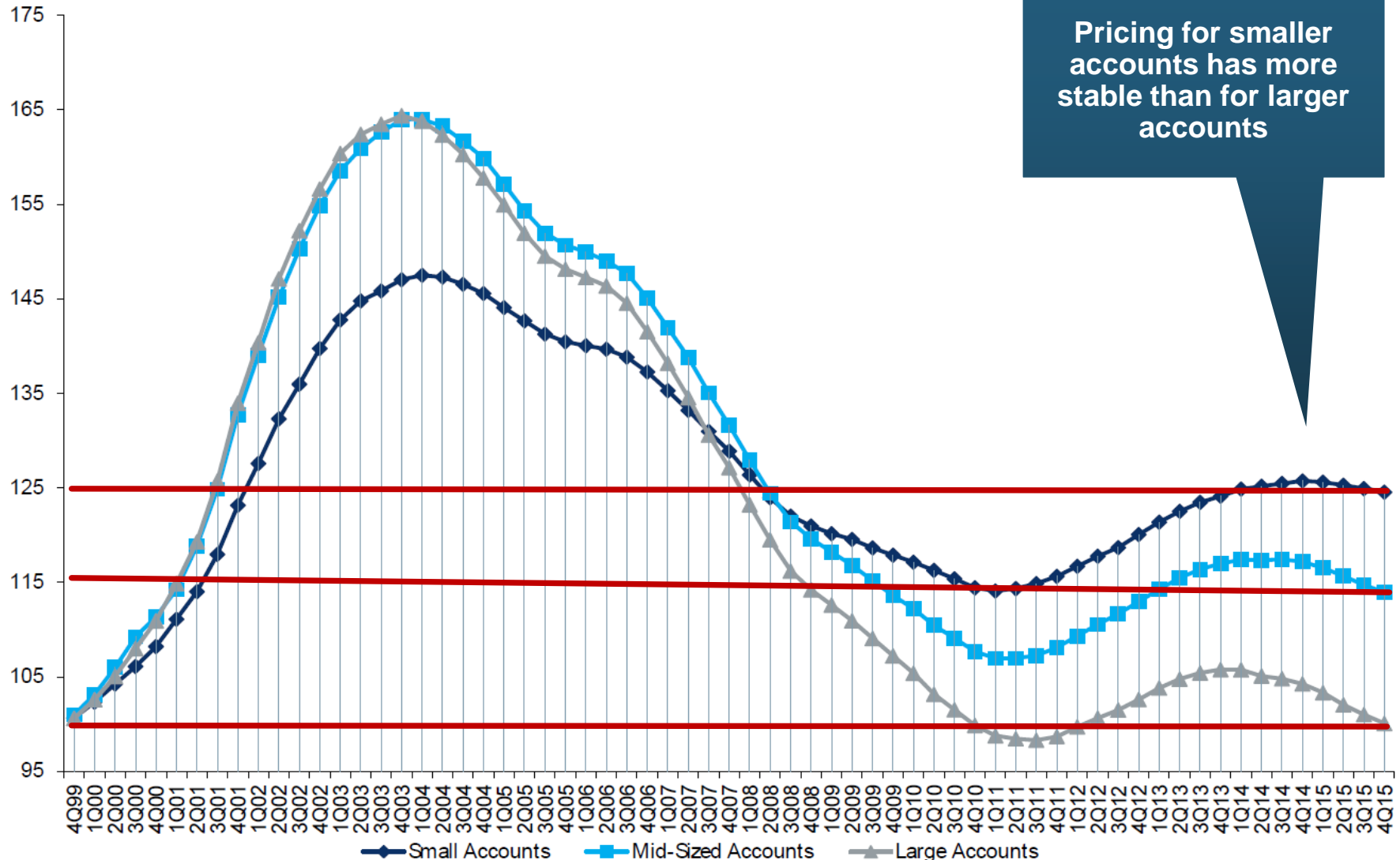
Percentage Change (%)



Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

Cumulative Qtrly. Commercial Rate Changes, by Account Size: 1999:Q4 to 2015:Q4

1999:Q4 = 100



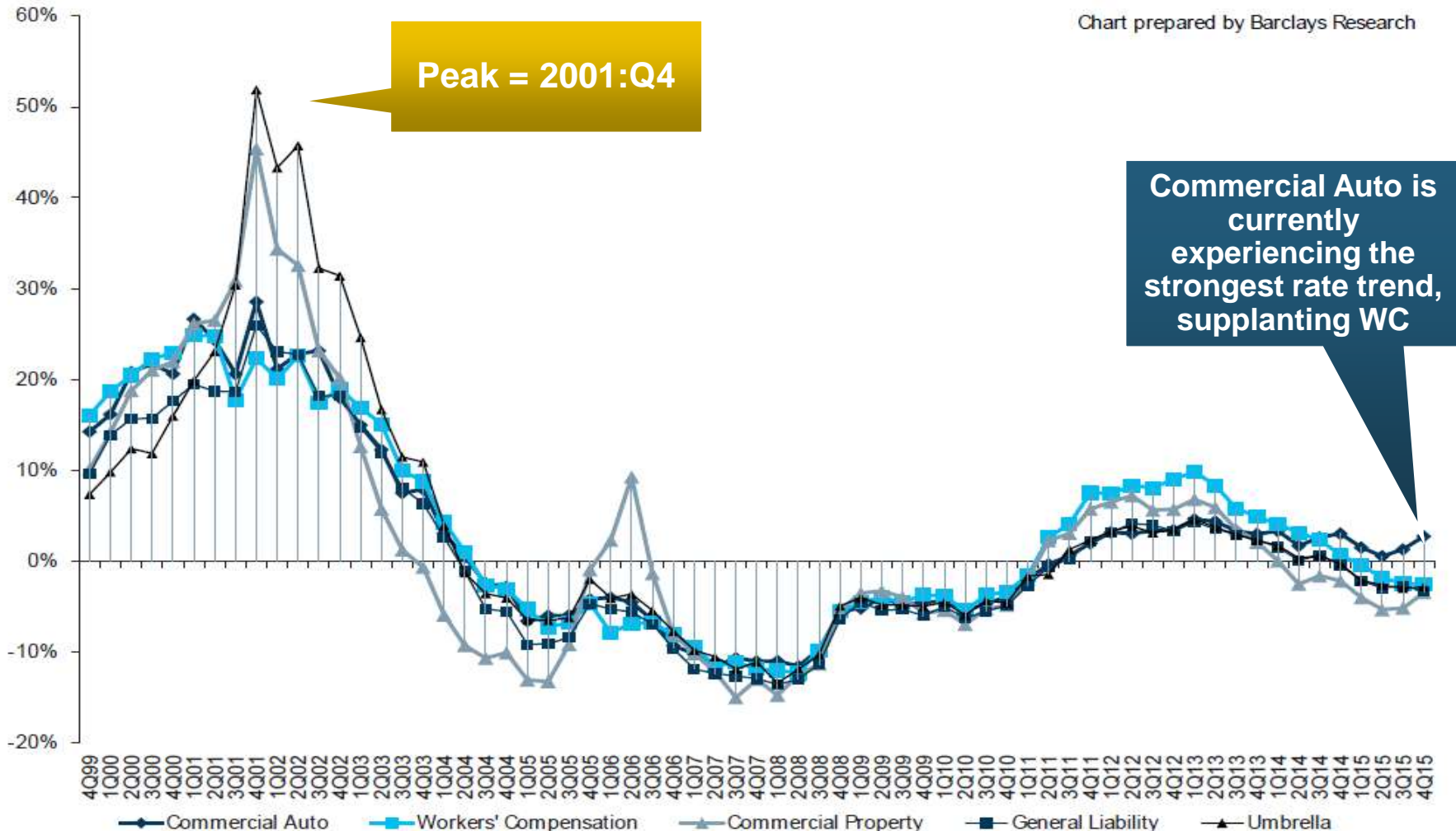
Pricing for smaller accounts has more stable than for larger accounts

NOTE: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

Change in Commercial Rate Renewals, by Line: 1999:Q4 to 2015:Q4

Percentage Change (%)

Chart prepared by Barclays Research

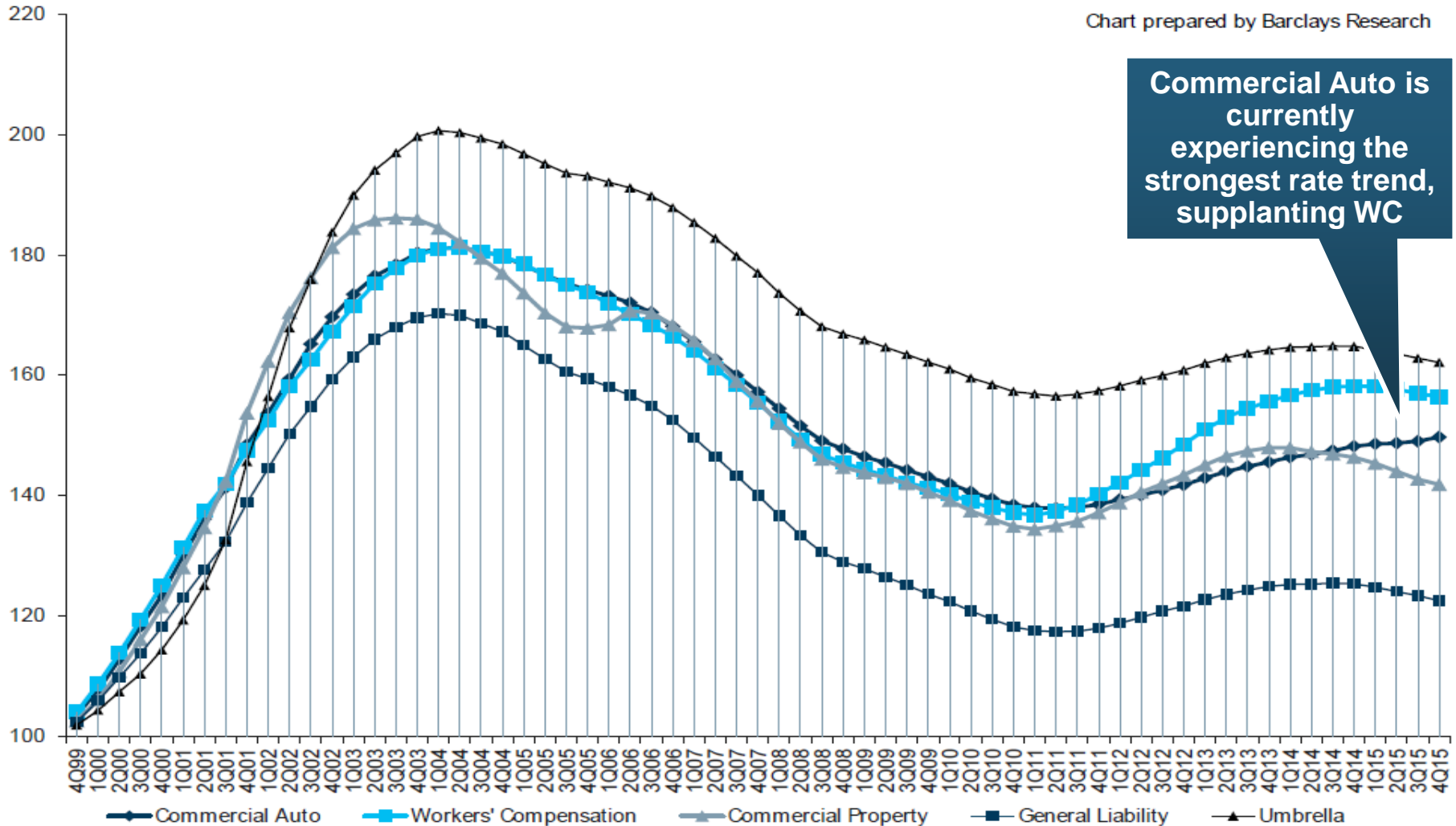


Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

Cumulative Qtrly. Rate Changes, by Line: 1999:Q4 to 2015:Q4

1999:Q4 = 100

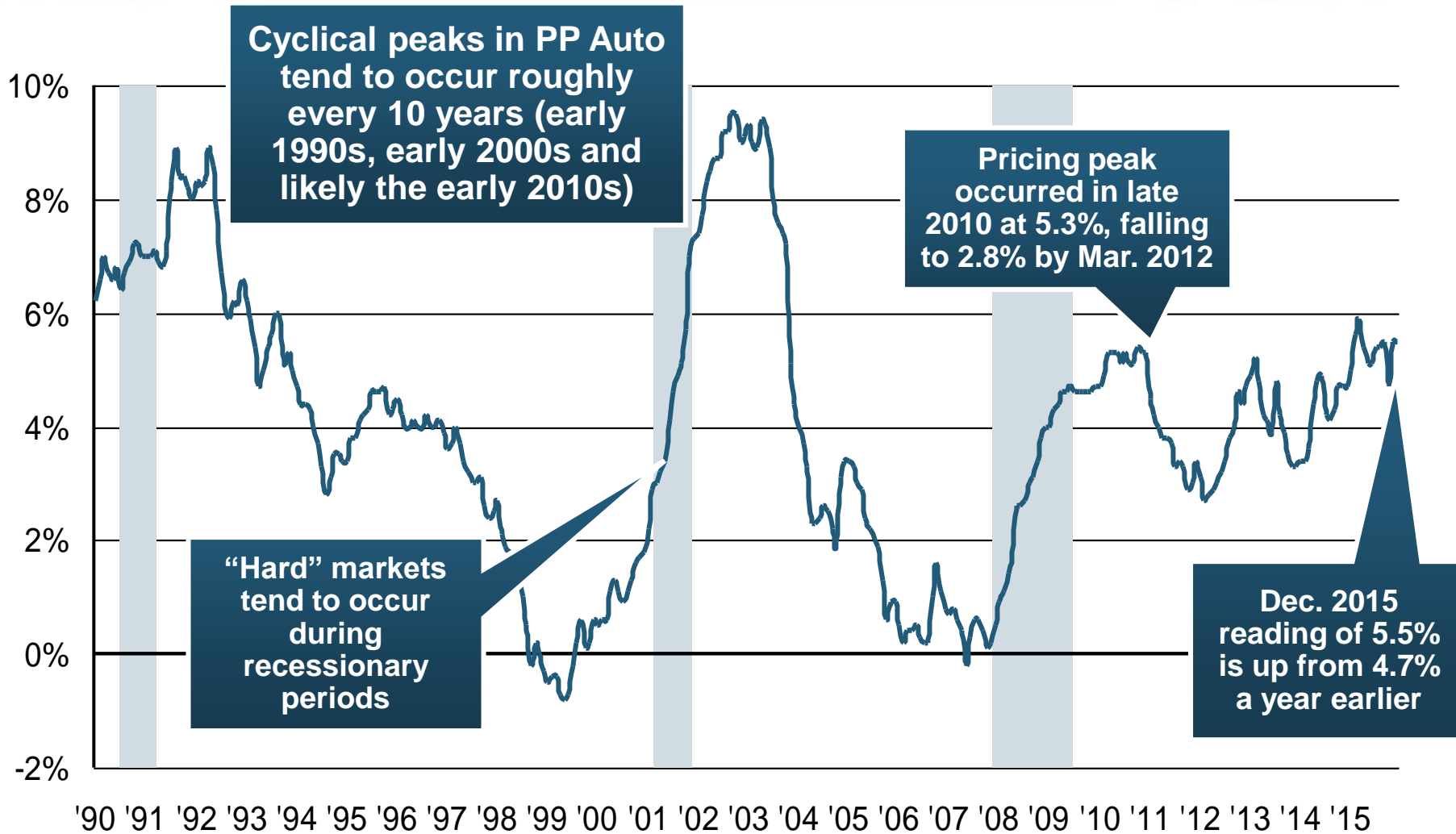
Chart prepared by Barclays Research



Commercial Auto is currently experiencing the strongest rate trend, supplanting WC

Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

Monthly Change in Auto Insurance Prices, 1991–2015*



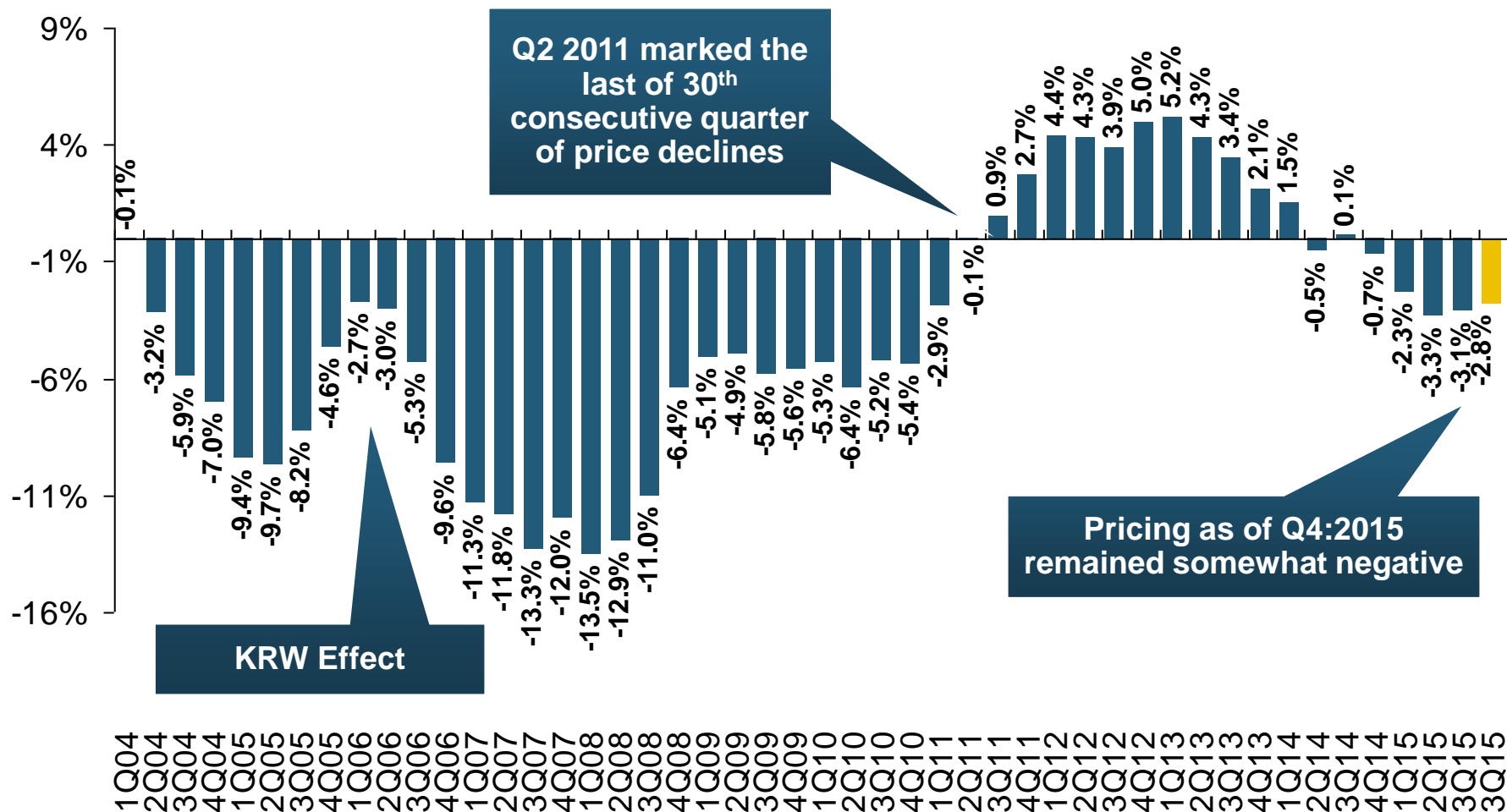
*Percentage change from same month in prior year; through Dec. 2015; seasonally adjusted

Note: Recessions indicated by gray shaded columns.

Sources: US Bureau of Labor Statistics; National Bureau of Economic Research (recession dates); Insurance Information Institutes.

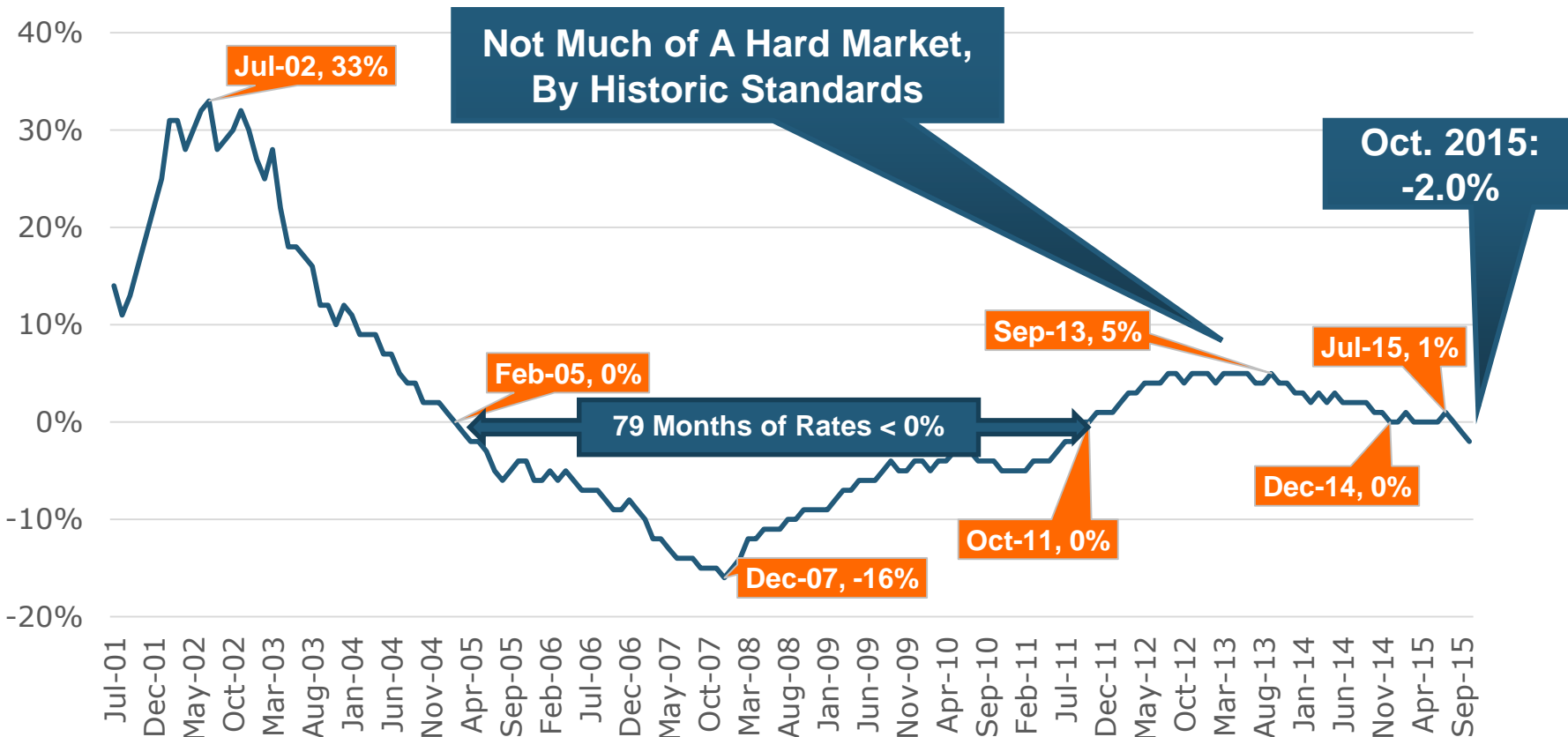
CIAB: Average Commercial Rate Change, All Lines, (1Q:2004–4Q:2015)

(Percent)



Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
 Source: Council of Insurance Agents & Brokers; Insurance Information Institute

Commercial Lines Rate Change by Month (vs. Year Earlier), July 2001 – Oct. 2015

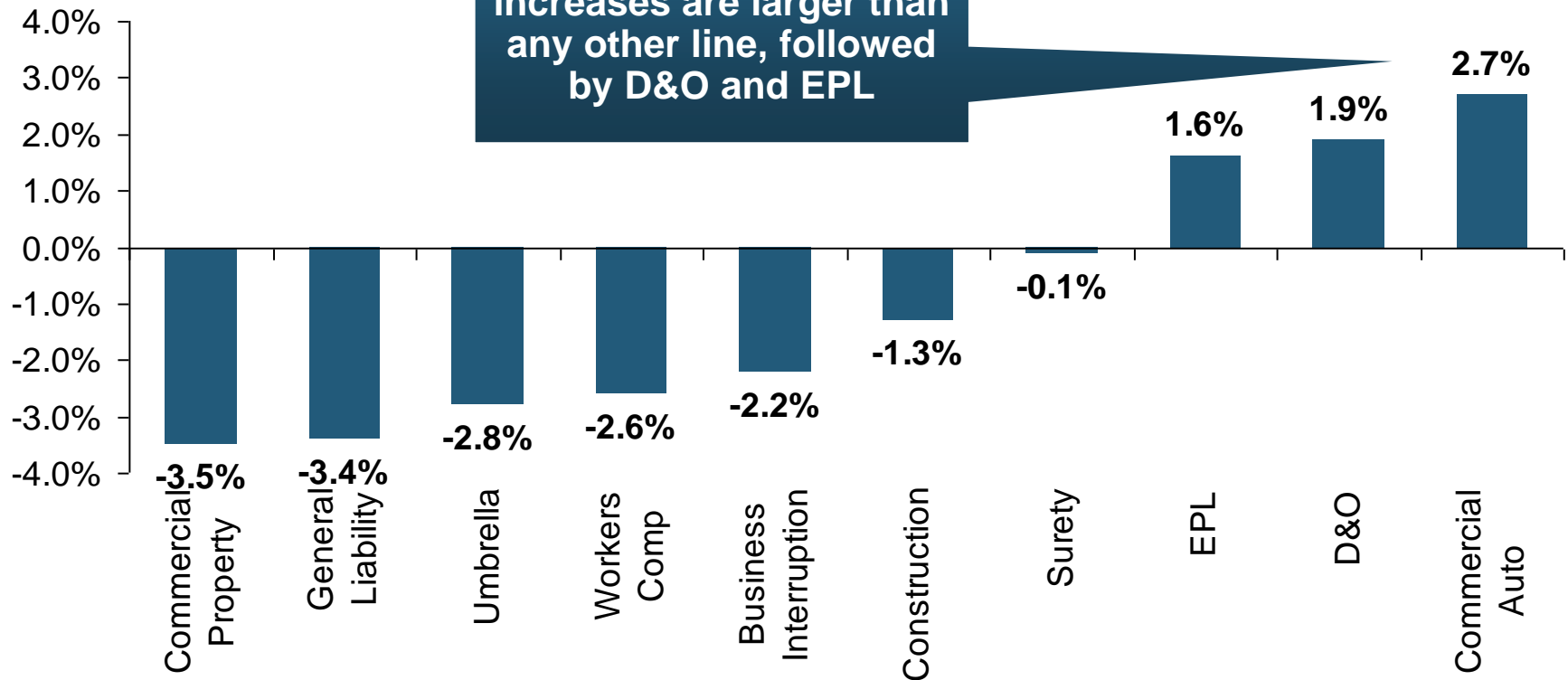


Commercial Insurance Rate Changes Are Flat to Slightly Down

SOURCE: MarketScout, Insurance Information Institute.

Change in Commercial Rate Renewals, by Line: 2015:Q4

Percentage Change (%)

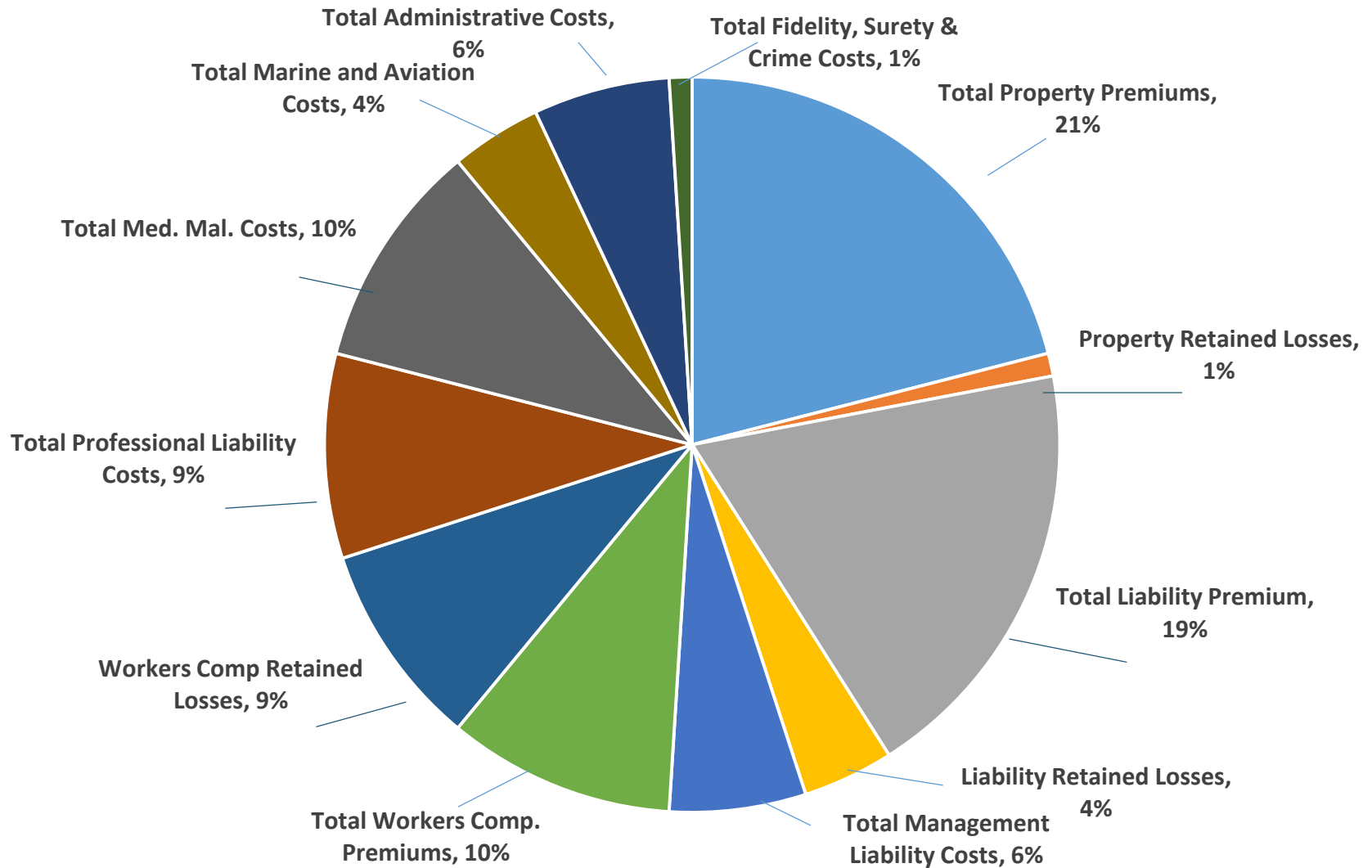


Major Commercial Lines Renewals Were Mixed to Down in Q4:2015; EPL, D&O and Commercial Auto Saw Gains

Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Insurance Information Institute.

How the Risk Dollar is Spent

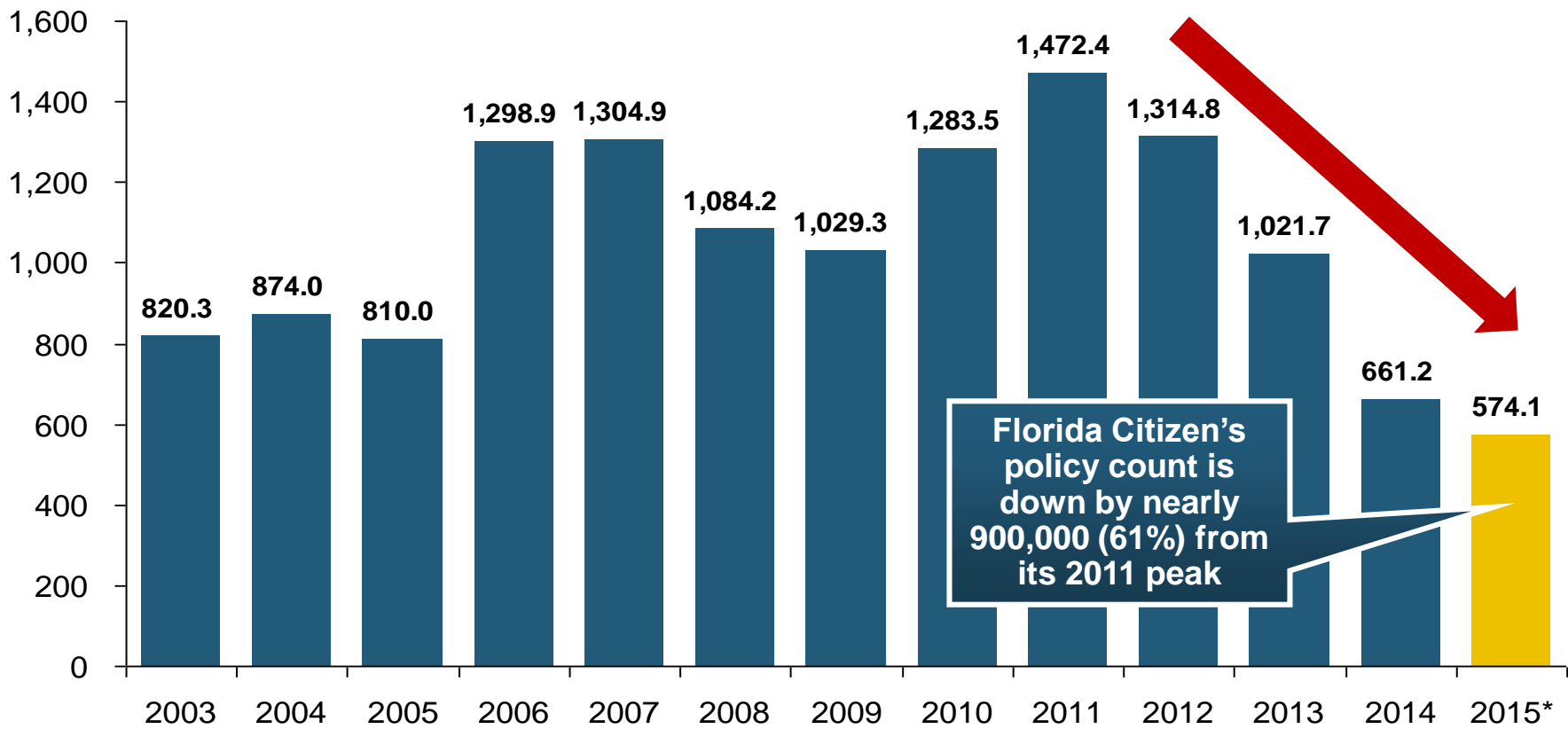
(U.S. Firms with Revenues Under \$1 Bill)





Underwriting Performance

Florida Citizens Policy Count, 2003 – 2015* (Thousands)

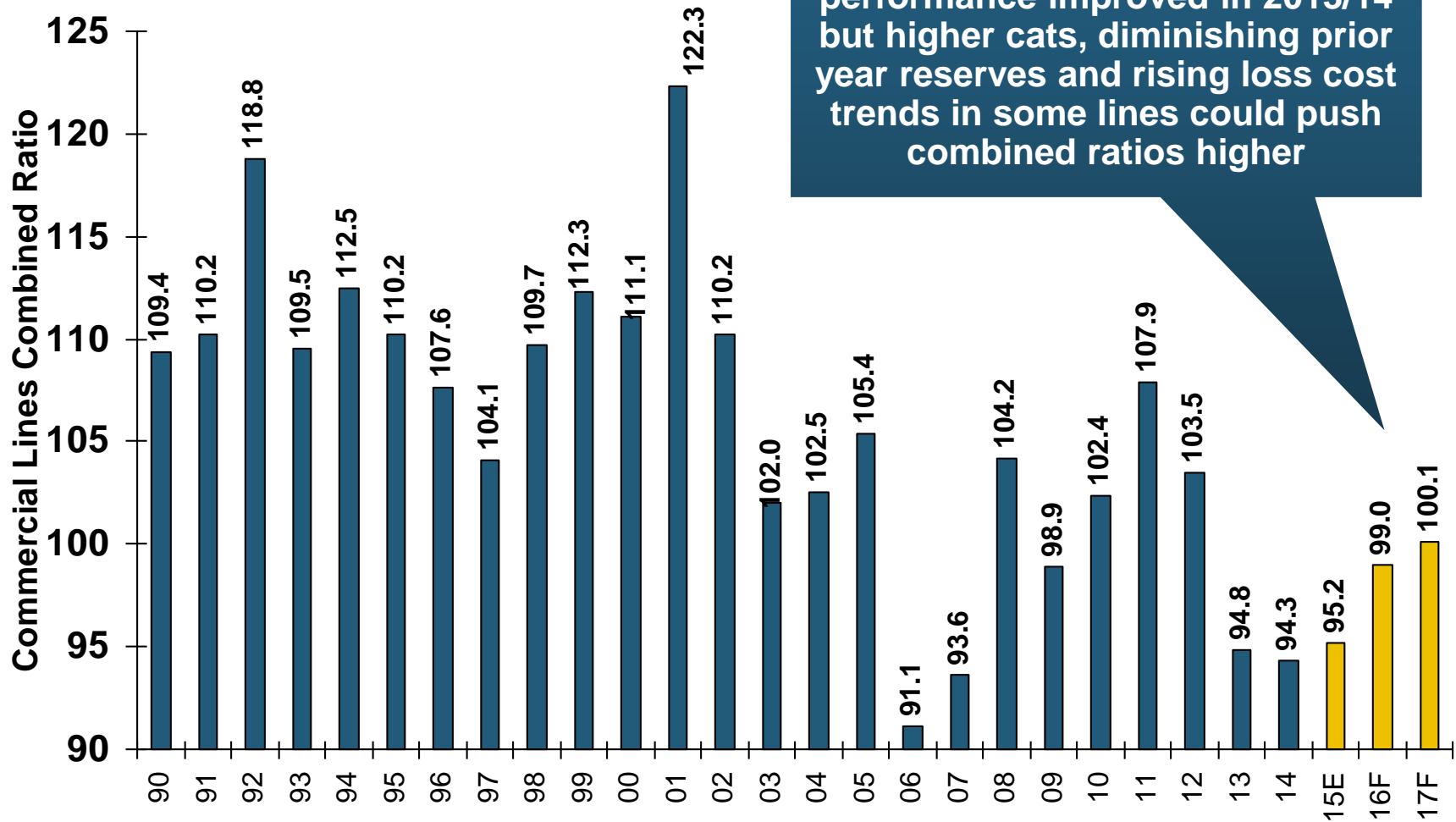


A lack of major hurricanes, ample private sector/reinsurer capital and capital market interest—combined with structural changes to Citizens—have combined to take Citizens policy count and exposure to their lowest levels in many years

*As of October 6, 2015. All other figures are as of Dec. 31.

Source: Florida Citizens <https://www.citizensfla.com/about/bookofbusiness/>; Insurance Information Institute (I.I.I.).

Commercial Lines Combined Ratio, 1990-2017F*

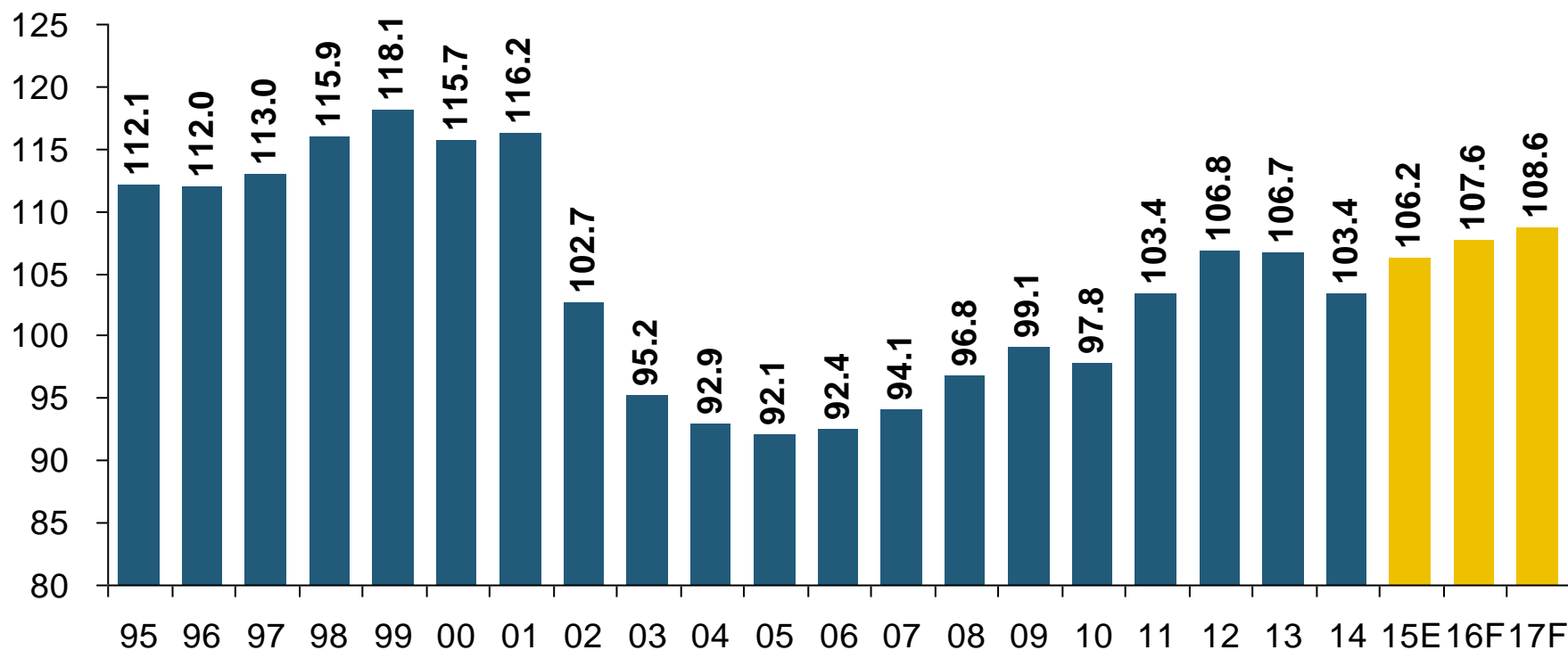


Commercial lines underwriting performance improved in 2013/14 but higher cats, diminishing prior year reserves and rising loss cost trends in some lines could push combined ratios higher

*2007-2012 figures exclude mortgage and financial guaranty segments.

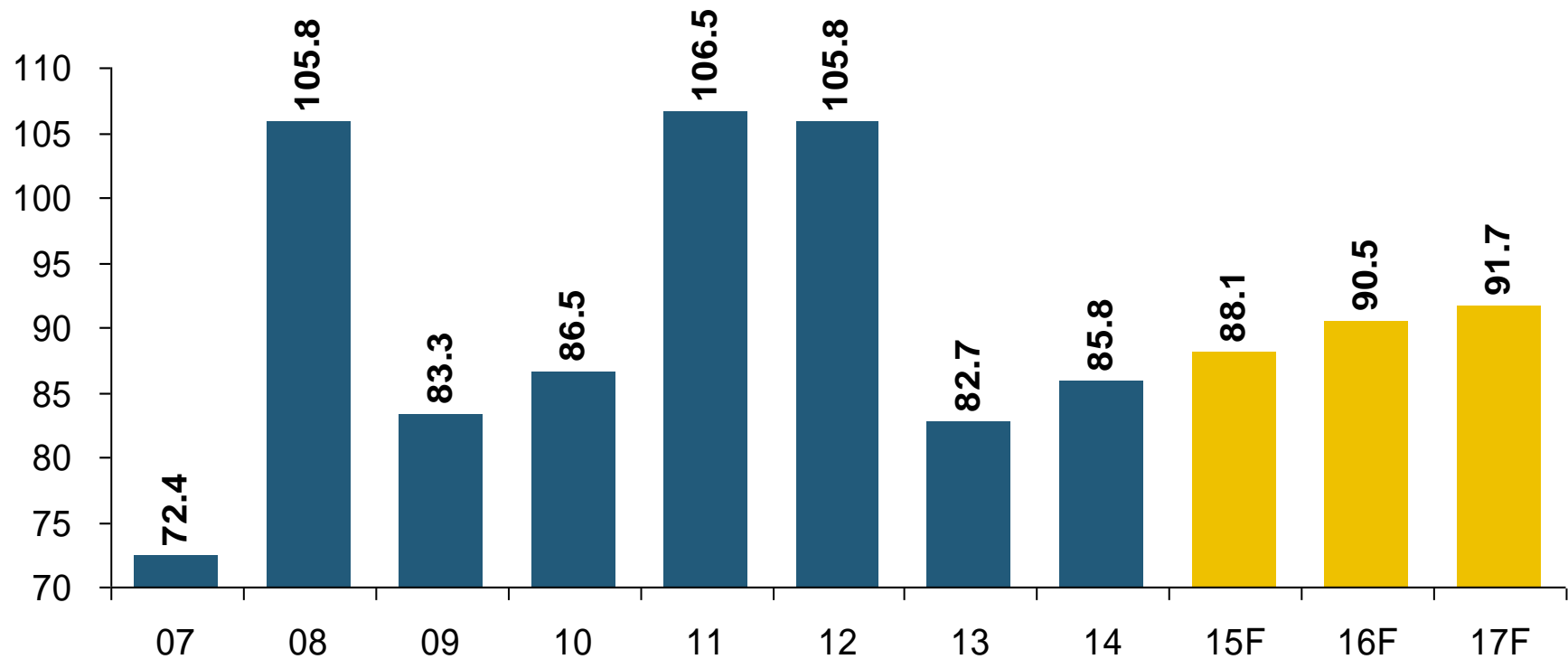
Source: A.M. Best (1990-2014); Conning (2015E-17F) Insurance Information Institute.

Commercial Auto Combined Ratio: 1993–2017F



Commercial Auto Results Are Challenged as Rate Gains Barely Have Yet to Offset Adverse Frequency and Severity Trends

Commercial Property Combined Ratio: 2007–2017F

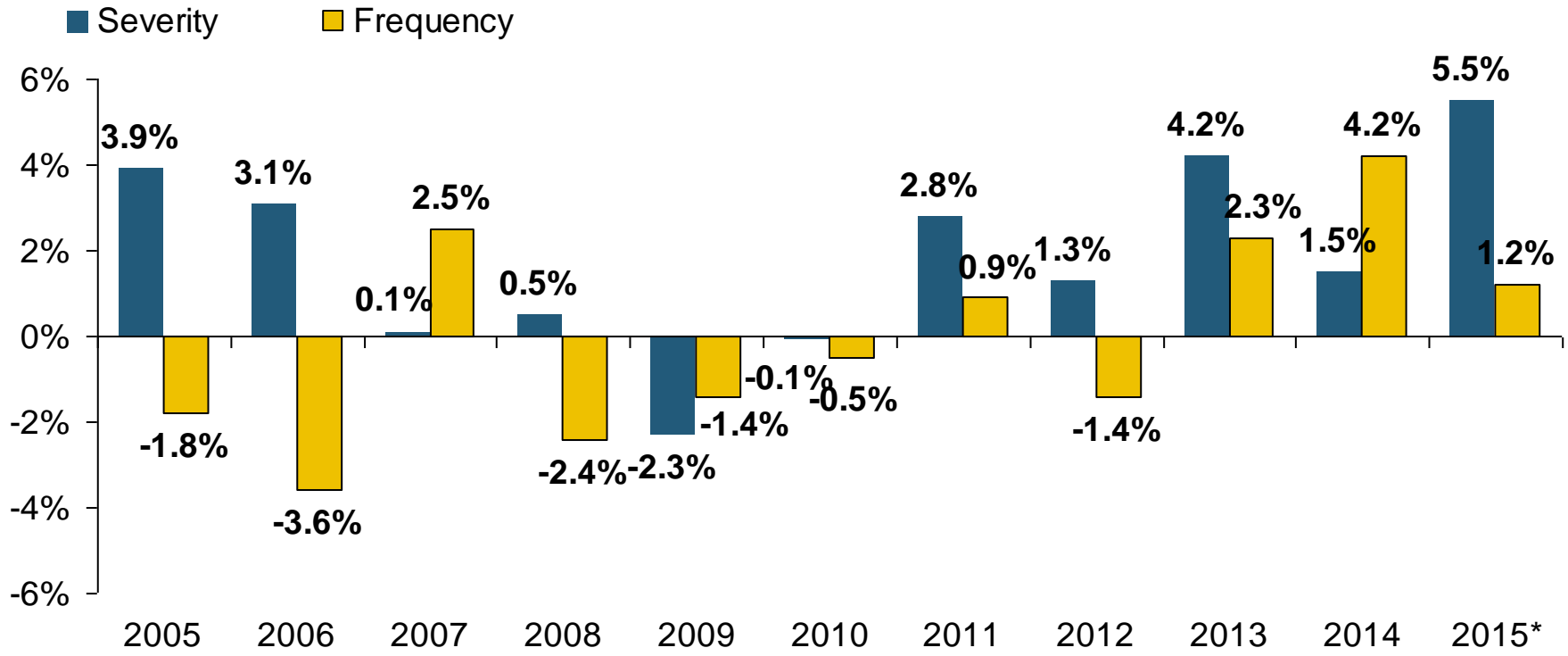


**Commercial Property Underwriting Performance
Has Improved in Recent Years, Largely Due to
Diminished CAT Activity**

Collision Coverage: Severity & Frequency Trends Are Both Higher in 2015*



Annual Change, 2005 through 2015*

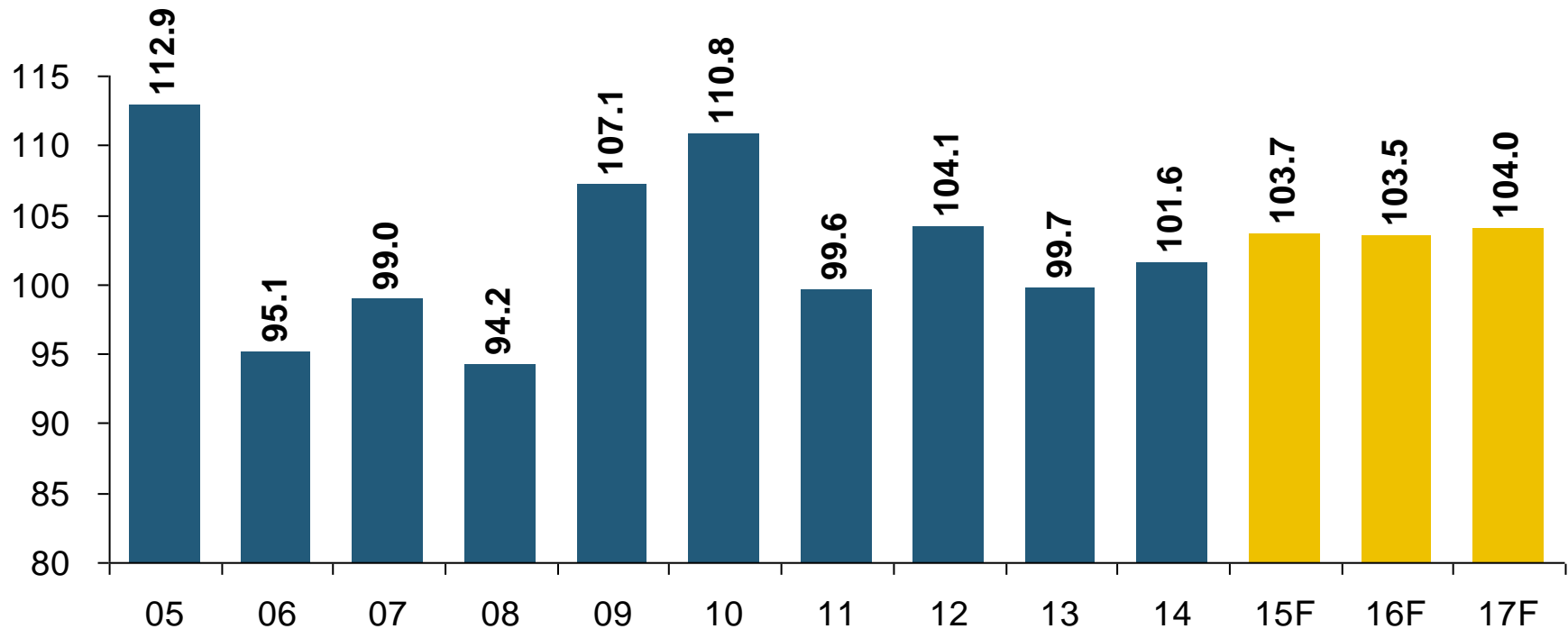


The Recession, High Fuel Prices Helped Temper Frequency and Severity, But this Trend Has Clearly Reversed, Consistent with Experience from Past Recoveries

*2015 figure is for the 4 quarters ending with 2015:Q3.

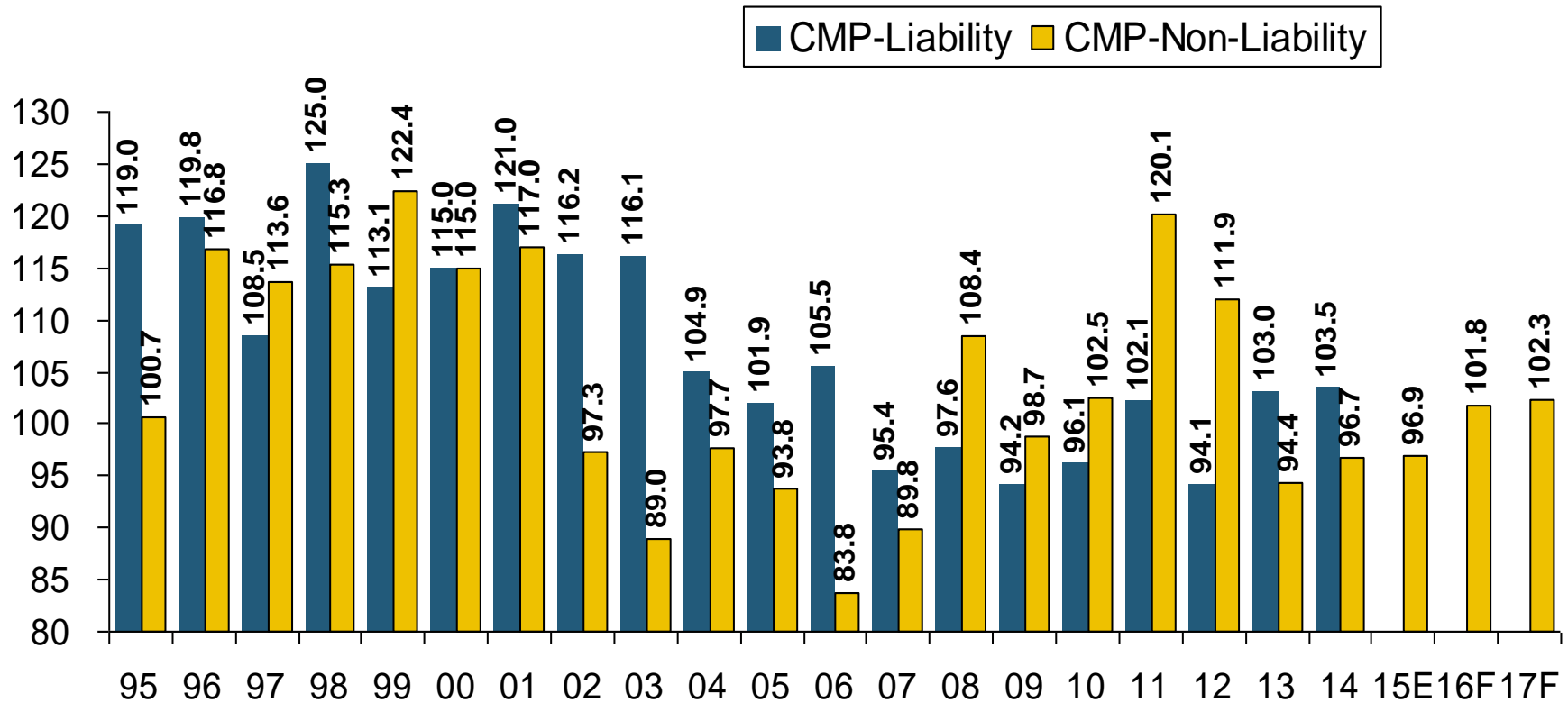
Source: ISO/PCI *Fast Track* data; Insurance Information Institute

General Liability Combined Ratio: 2005–2017F



**Commercial General Liability Underwriting
Performance Has Been Volatile in Recent Years**

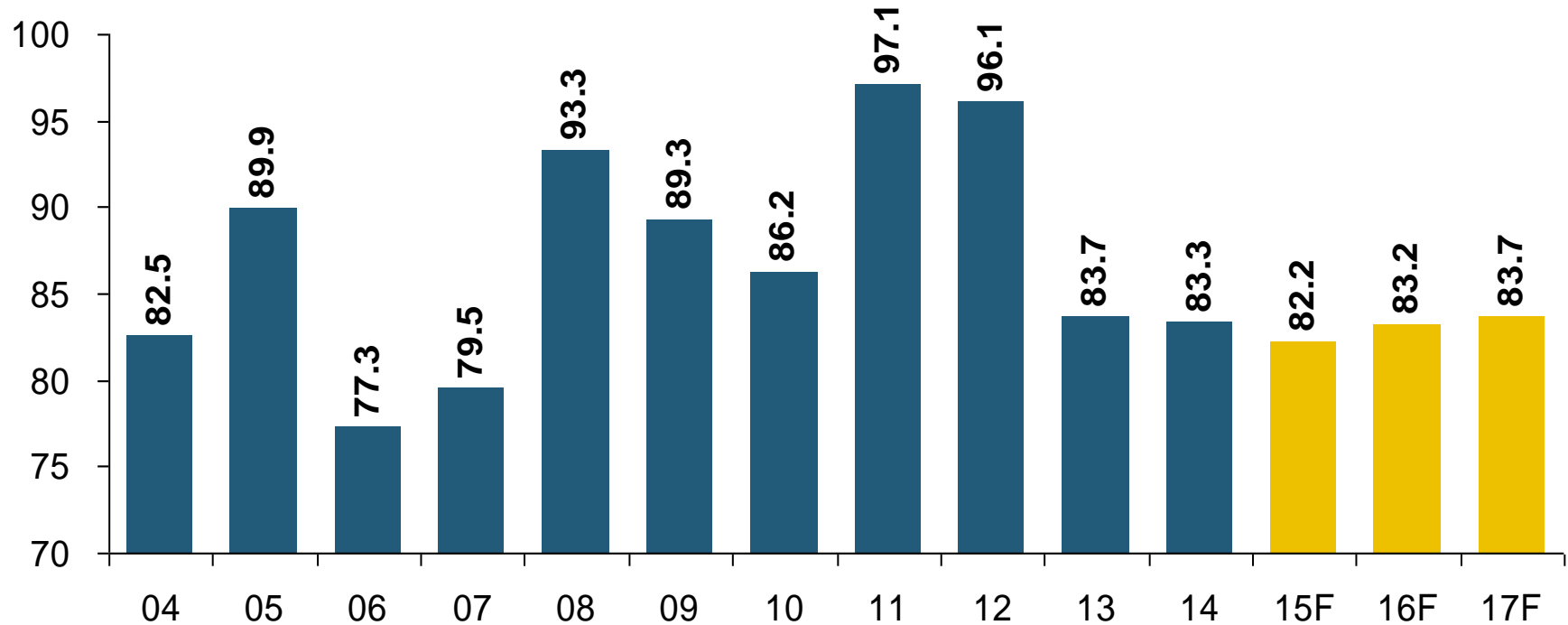
Commercial Multi-Peril Combined Ratio: 1995–2017F



Commercial Multi-Peril Underwriting Performance is Expected to Deteriorate Slightly in the 2015 - 2017 Period Assuming Normal Catastrophe Loss Activity

*2015E-2017F figures are Conning figures for the combined liability and non-liability components.
Sources: A.M. Best; Conning; Insurance Information Institute.

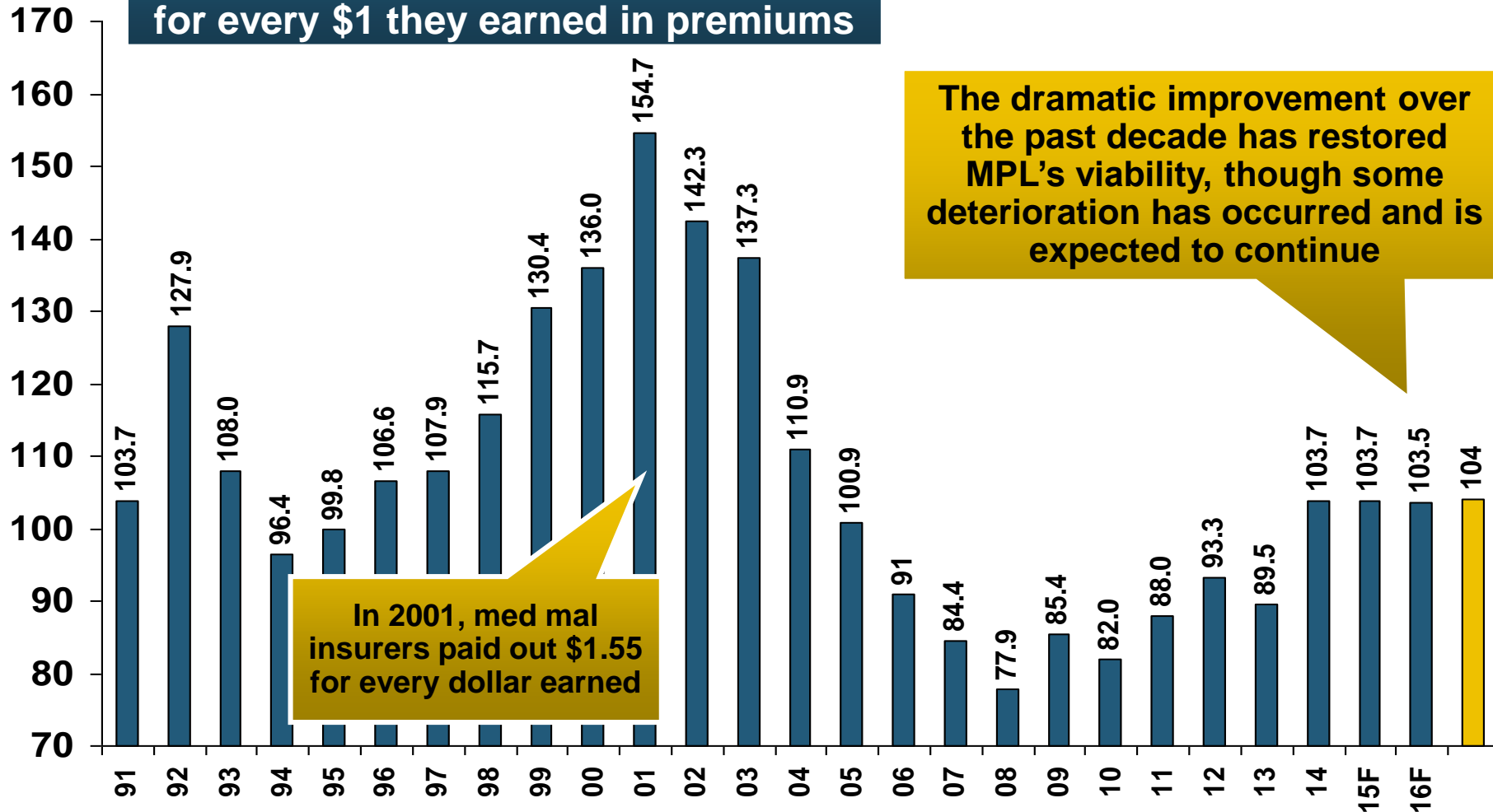
Inland Marine Combined Ratio: 2004–2017F



**Inland Marine Underwriting Performance Has Been
Consistently Strong for Many Years**

Medical Malpractice Combined Ratio vs. All Lines Combined Ratio, 1991-2017F

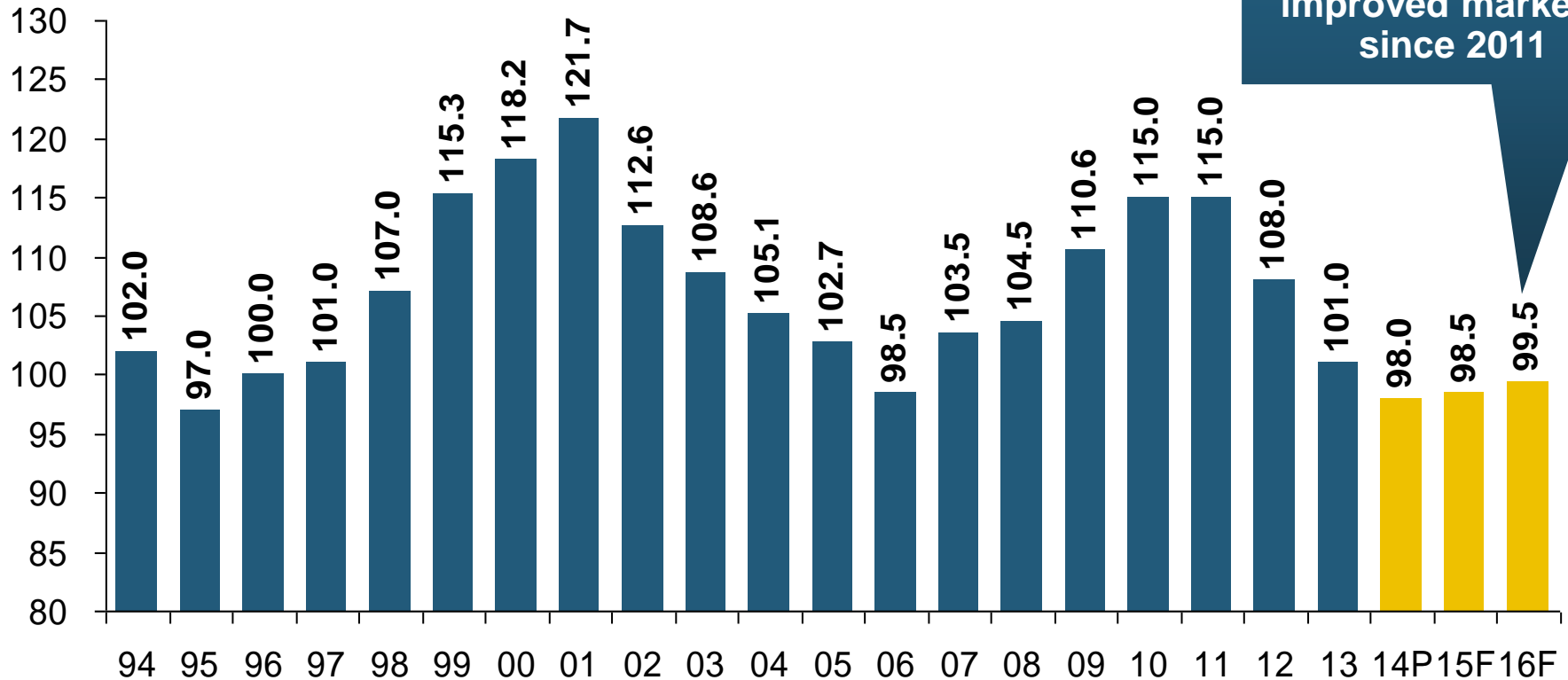
MPL insurers in 2015 paid out an estimated \$1.04 in loss and expense for every \$1 they earned in premiums



The dramatic improvement over the past decade has restored MPL's viability, though some deterioration has occurred and is expected to continue

In 2001, med mal insurers paid out \$1.55 for every dollar earned

Workers Compensation Combined Ratio: 1994–2016F



WC results have improved markedly since 2011

Workers Comp Results Began to Improve in 2012. Underwriting Results Deteriorated Markedly from 2007-2010/11 and Were the Worst They Had Been in a Decade.

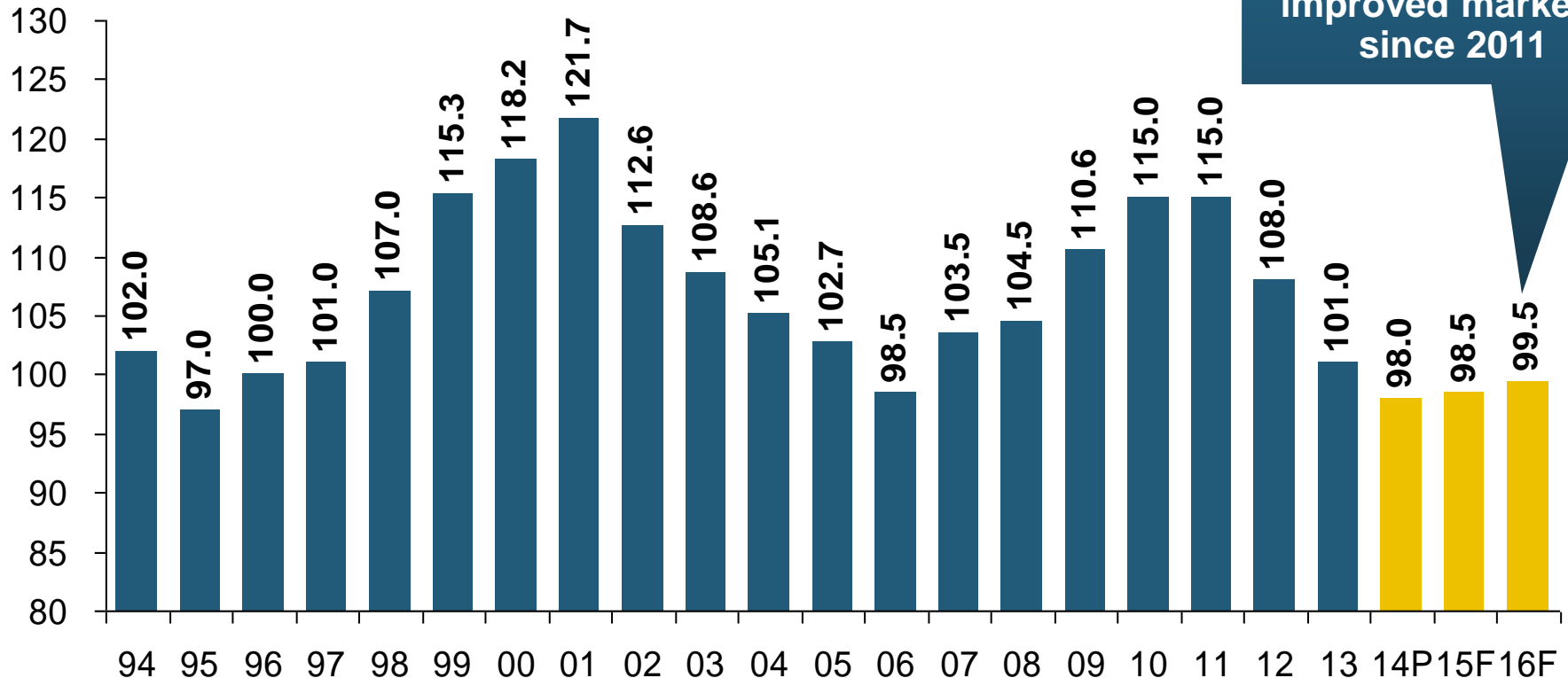
Sources: A.M. Best (1994-2009); NCCI (2010-2014P) and are for private carriers only; Insurance Information Institute (2015-16F).



Workers Compensation Operating Environment

**Workers Comp Results Have Improved
Substantially in Recent Years**

Workers Compensation Combined Ratio: 1994–2016F



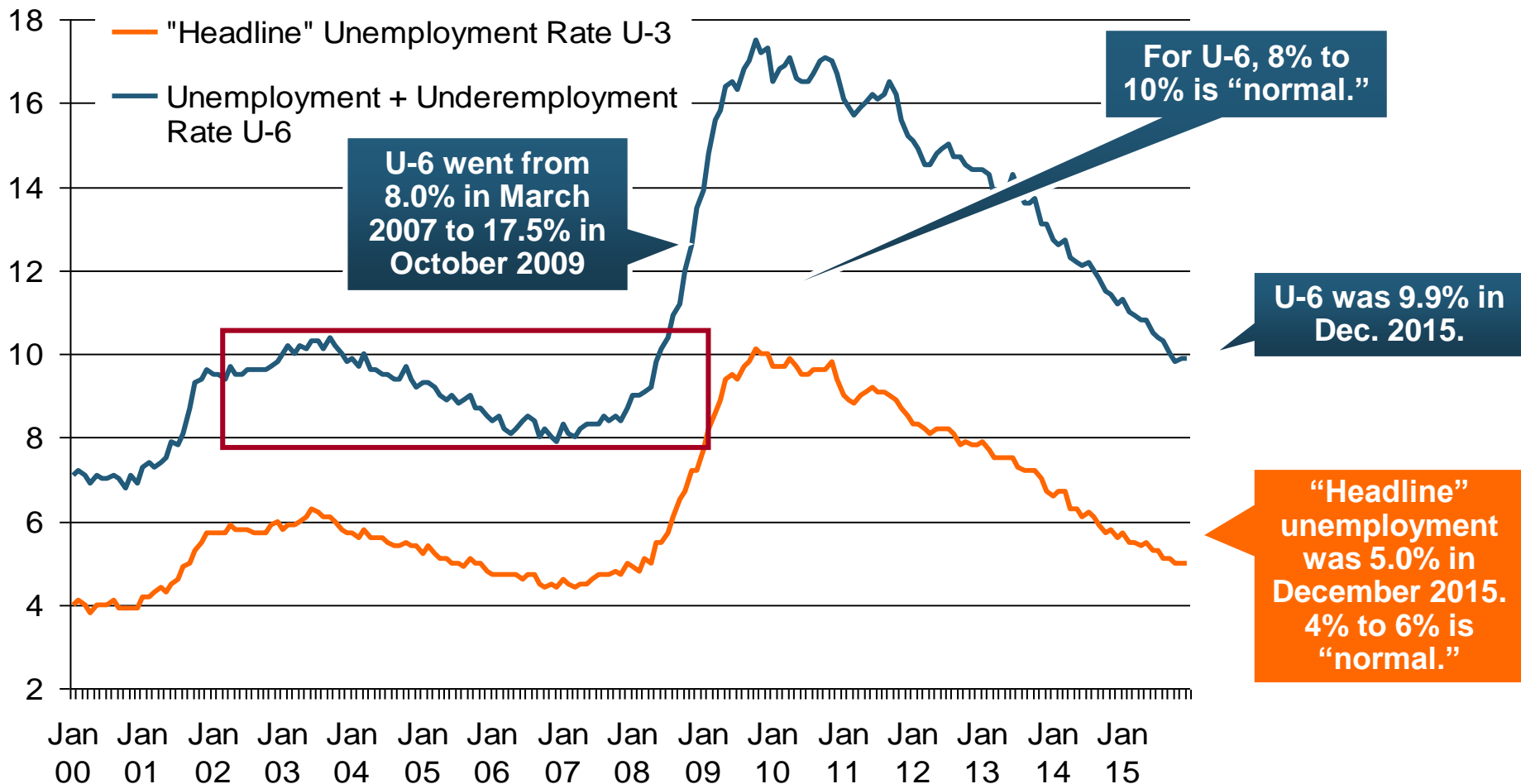
WC results have improved markedly since 2011

Workers Comp Results Began to Improve in 2012. Underwriting Results Deteriorated Markedly from 2007-2010/11 and Were the Worst They Had Been in a Decade.

Sources: A.M. Best (1994-2009); NCCI (2010-2014P) and are for private carriers only; Insurance Information Institute (2015-16F).

Unemployment and Underemployment Rates: Still Falling

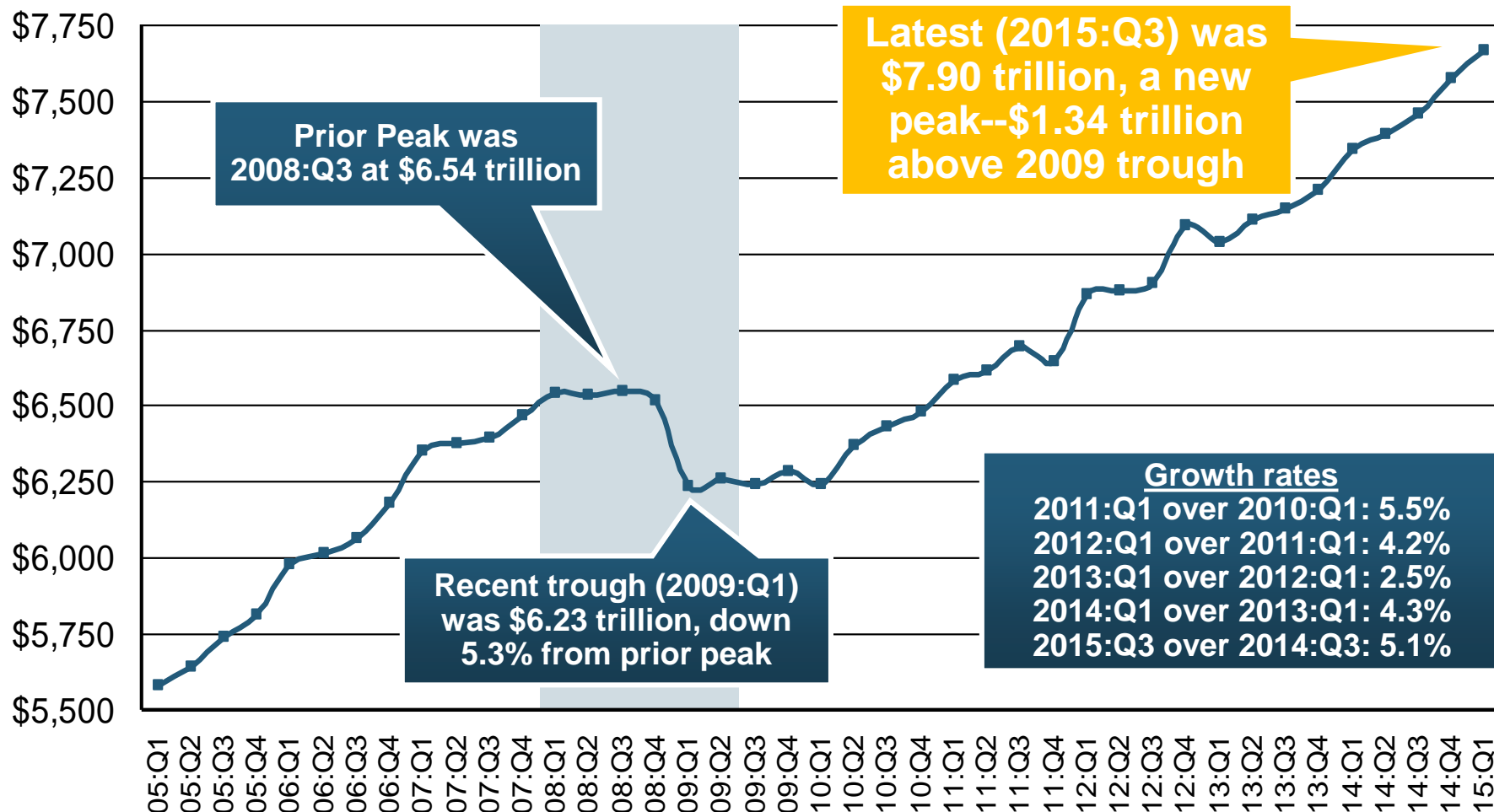
January 2000 through December 2015,
Seasonally Adjusted (%)



High unemployment and underemployment still constrain overall economic growth, but the job market is now clearly improving.

Nonfarm Payroll (Wages and Salaries): Quarterly, 2005–2015:Q3

Billions



Note: Recession indicated by gray shaded column. Data are seasonally adjusted annual rates.

Sources: <http://research.stlouisfed.org/fred2/series/WASCUR>; National Bureau of Economic Research (recession dates); Insurance Information Institute.

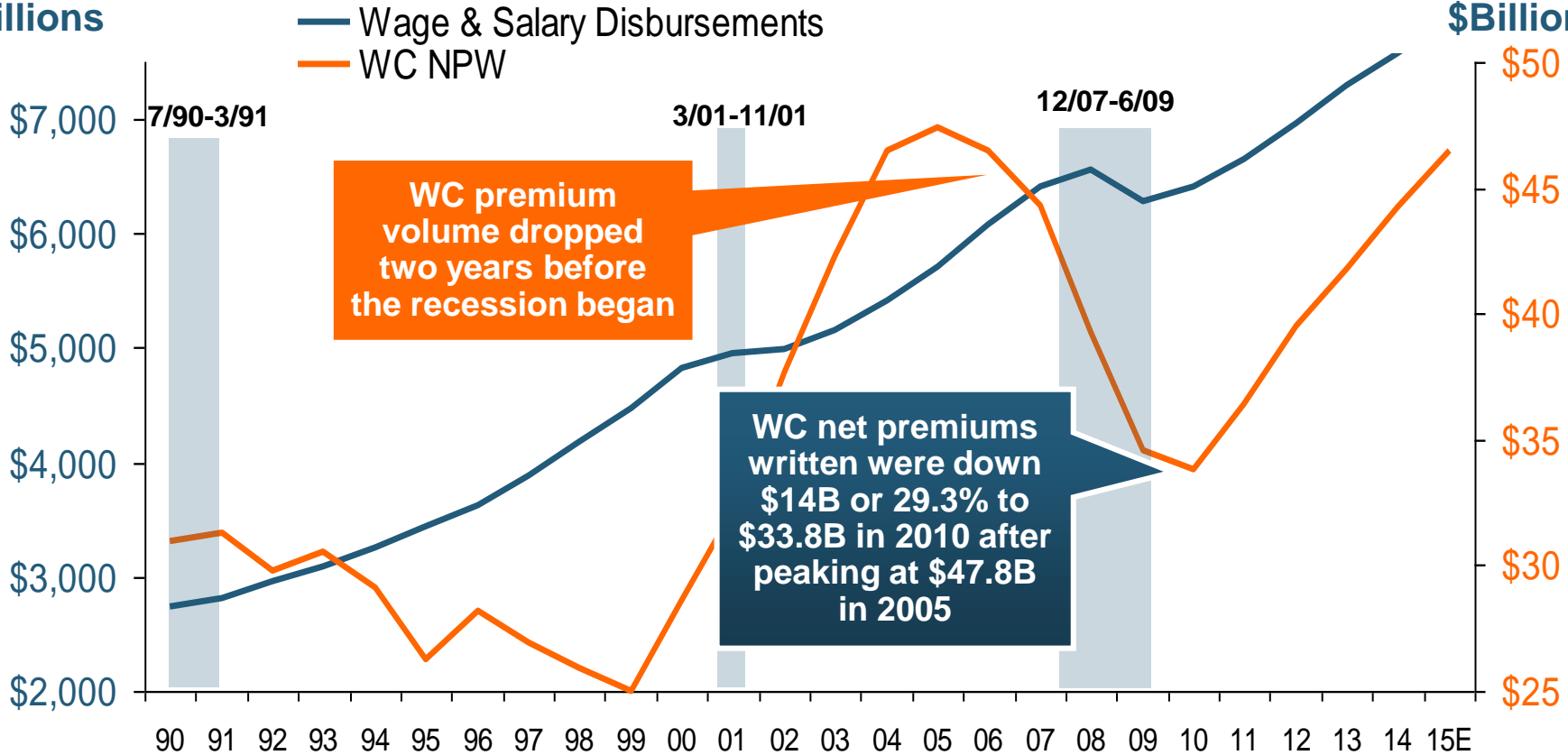
Payroll vs. Workers Comp Net Written Premiums, 1990-2015E

Payroll Base*

WC NWP

\$Billions

\$Billions



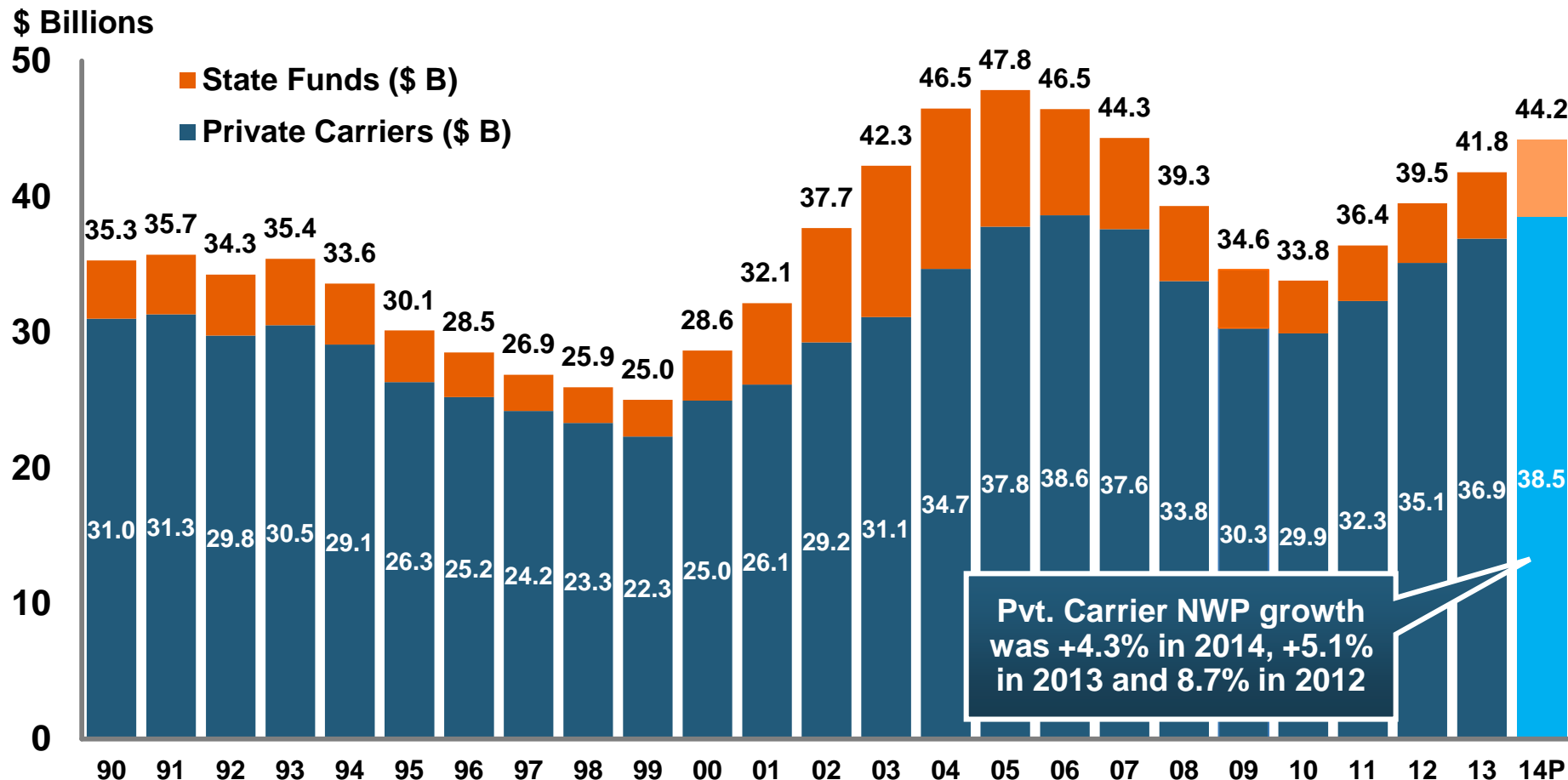
Continued Payroll Growth and Rate Gains Suggest WC NWP Will Grow Again in 2016

*Private employment; Shaded areas indicate recessions. WC premiums are from NCCI through 2014; I.I.I. estimate for 2015.

Sources: NBER (recessions); Federal Reserve Bank of St. Louis at <http://research.stlouisfed.org/fred2/series/WASCUR> (annualized as of Q3 2015); NCCI; I.I.I.

Workers Compensation Premium: Fourth Consecutive Year of Increase

Net Written Premium



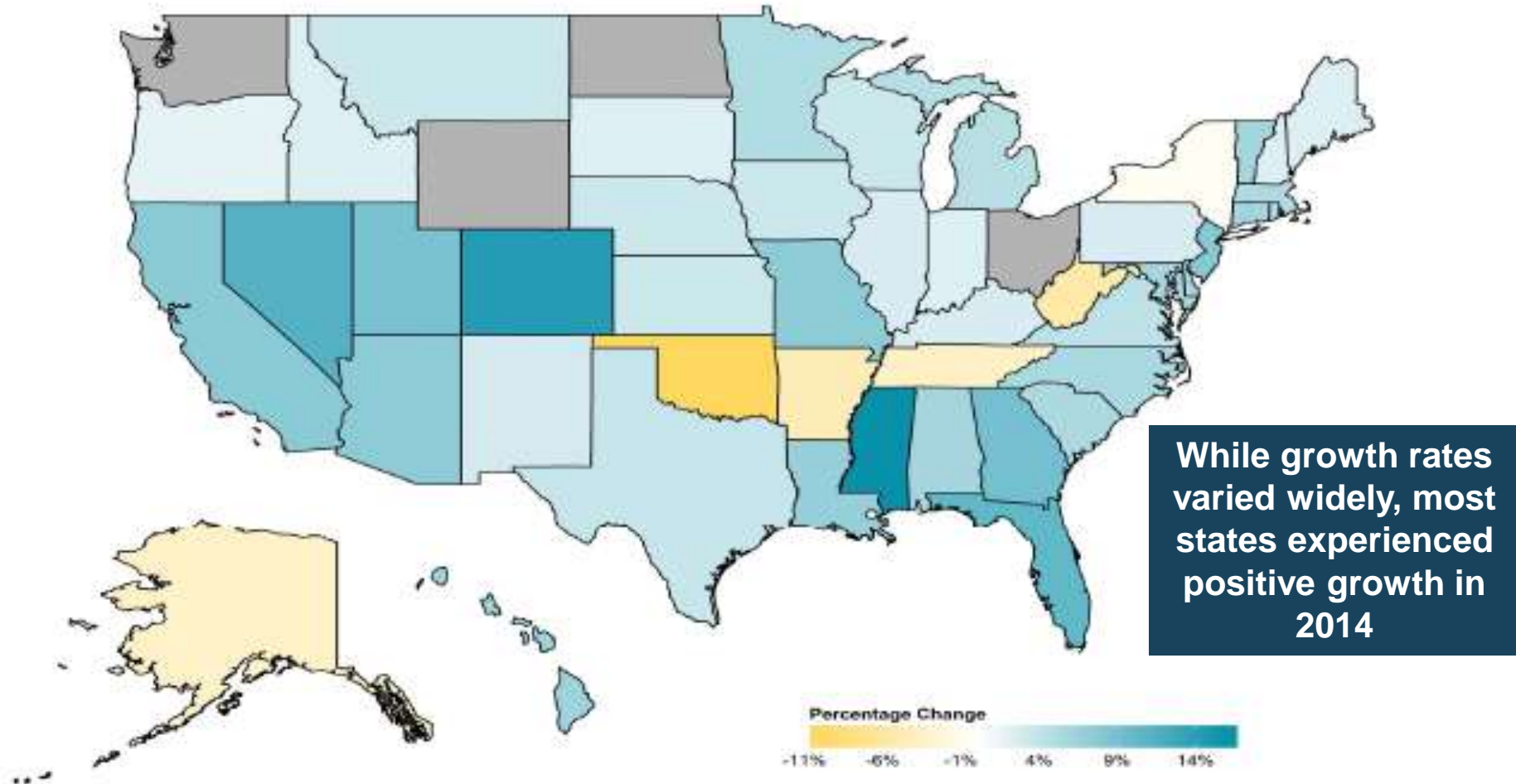
p Preliminary

Source: NCCI from 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, UT.
Each calendar year total for State Funds includes all funds operating as a state fund that year.

2014 Workers Compensation Direct Written Premium Growth, by State*

PRIVATE CARRIERS: Overall 2014 Growth = +4.6%



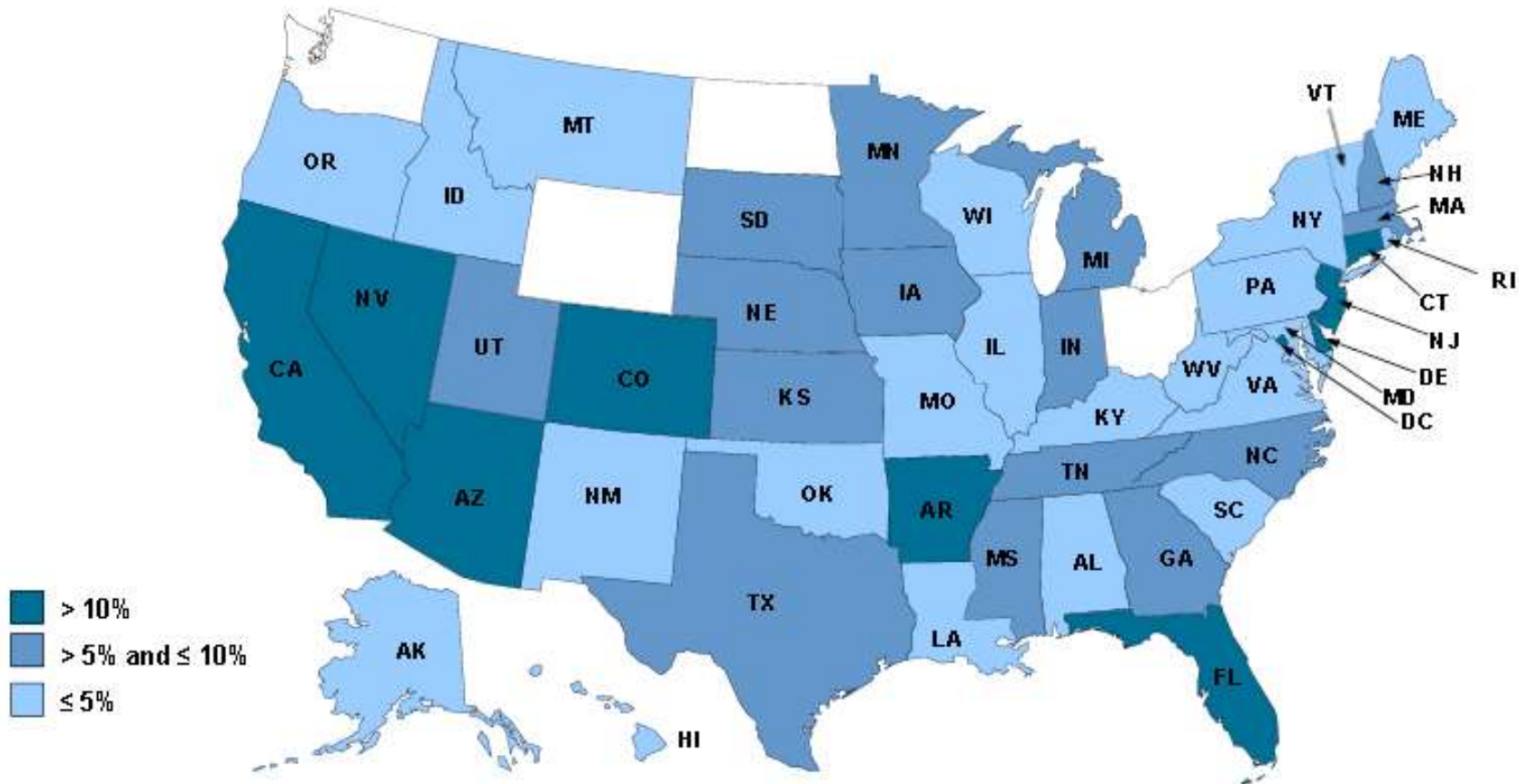
*Excludes monopolistic fund states (in gray): OH, ND, WA and WY.

Source: NCCI.

2013 Workers Compensation Direct Written Premium Growth, by State*

PRIVATE CARRIERS: Overall 2013 Growth = +5.4%

While growth rates varied widely, all states experienced positive growth in 2013



*Excludes monopolistic fund states (in white): OH, ND, WA and WY.

Source: NCCI.

Workers Compensation Components of Written Premium Change, 2013 to 2014

Written Premium Change from 2013 to 2014

Net Written Premium—Countrywide	+4.6%
Direct Written Premium—Countrywide	+4.6%
Direct Written Premium—NCCI States	+4.5%
Components of DWP Change for NCCI States	
Change in Carrier Estimated Payroll	+4.7%
Change in Bureau Loss Costs and Mix	-1.4%
Change in Carrier Discounting	+0.4%
Change in Other Factors	+0.8%
Combined Effect	+4.5%

Growth is now almost entirely payroll driven

Sources: Countrywide: Annual Statement data.

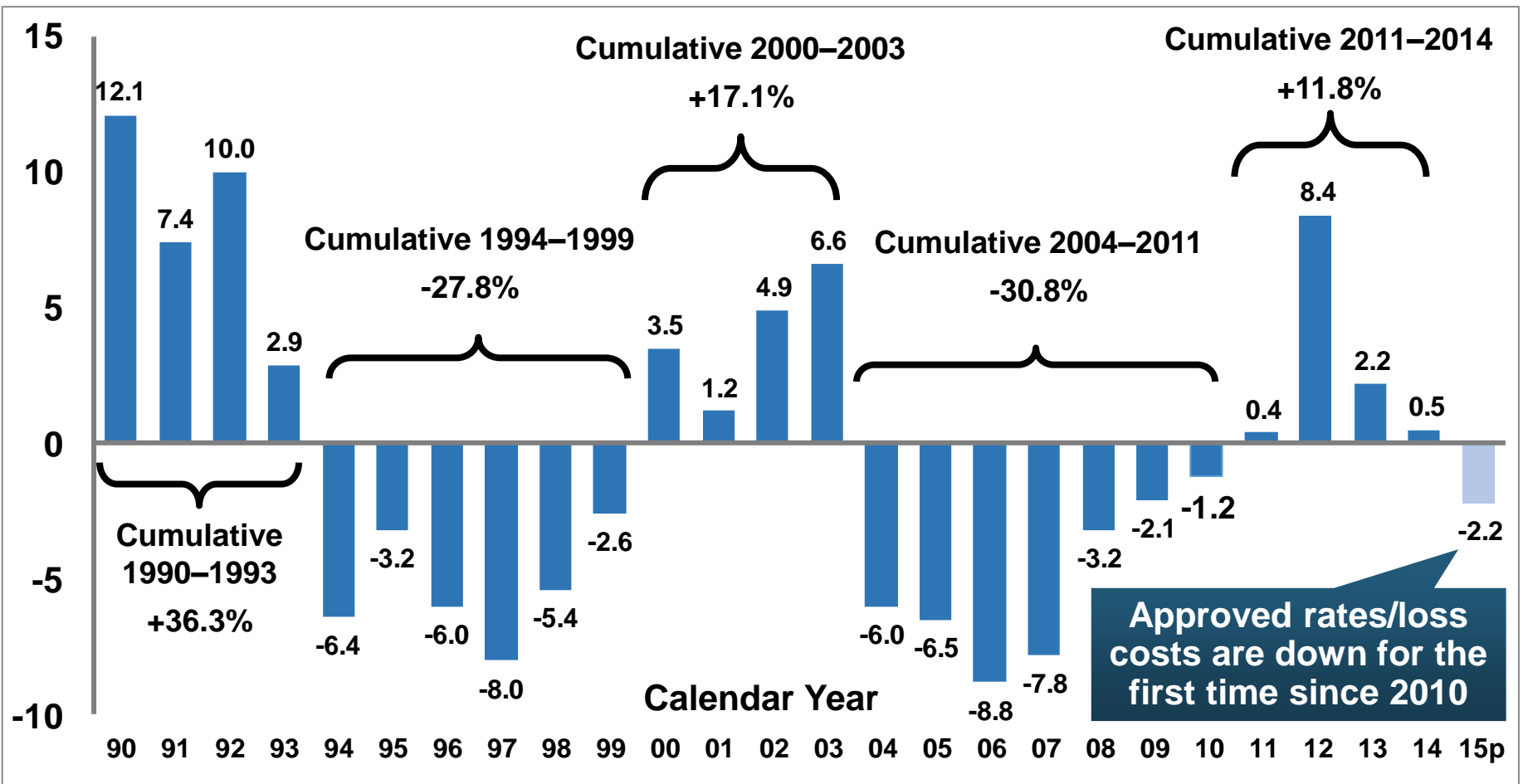
NCCI States: Annual Statement Statutory Page 14 for all states where NCCI provides ratemaking services.

Components: NCCI Policy data.

WC Approved Changes in Bureau Premium Level (Rates/Loss Costs)

By Effective Date for Total Market

Percent



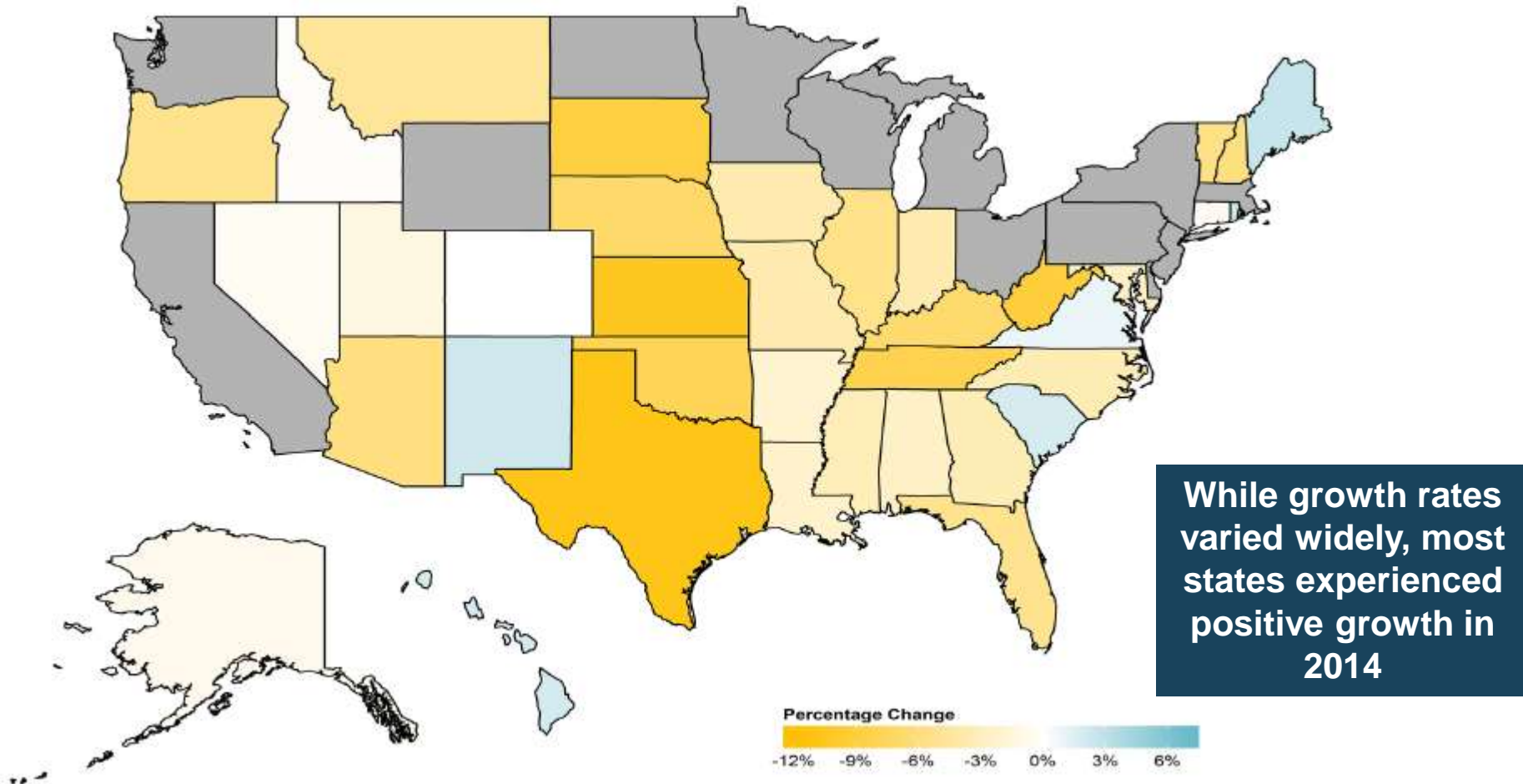
*States approved through 4/24/15.

Note: Bureau premium level changes are countrywide approved changes in advisory rates, loss costs and assigned risk rates as filed by applicable rating organization, relative to those previously approved.

Source: NCCI.

WC Approved or Filed and Pending Change in NCCI Premium Level by State

Latest Change for Voluntary Market

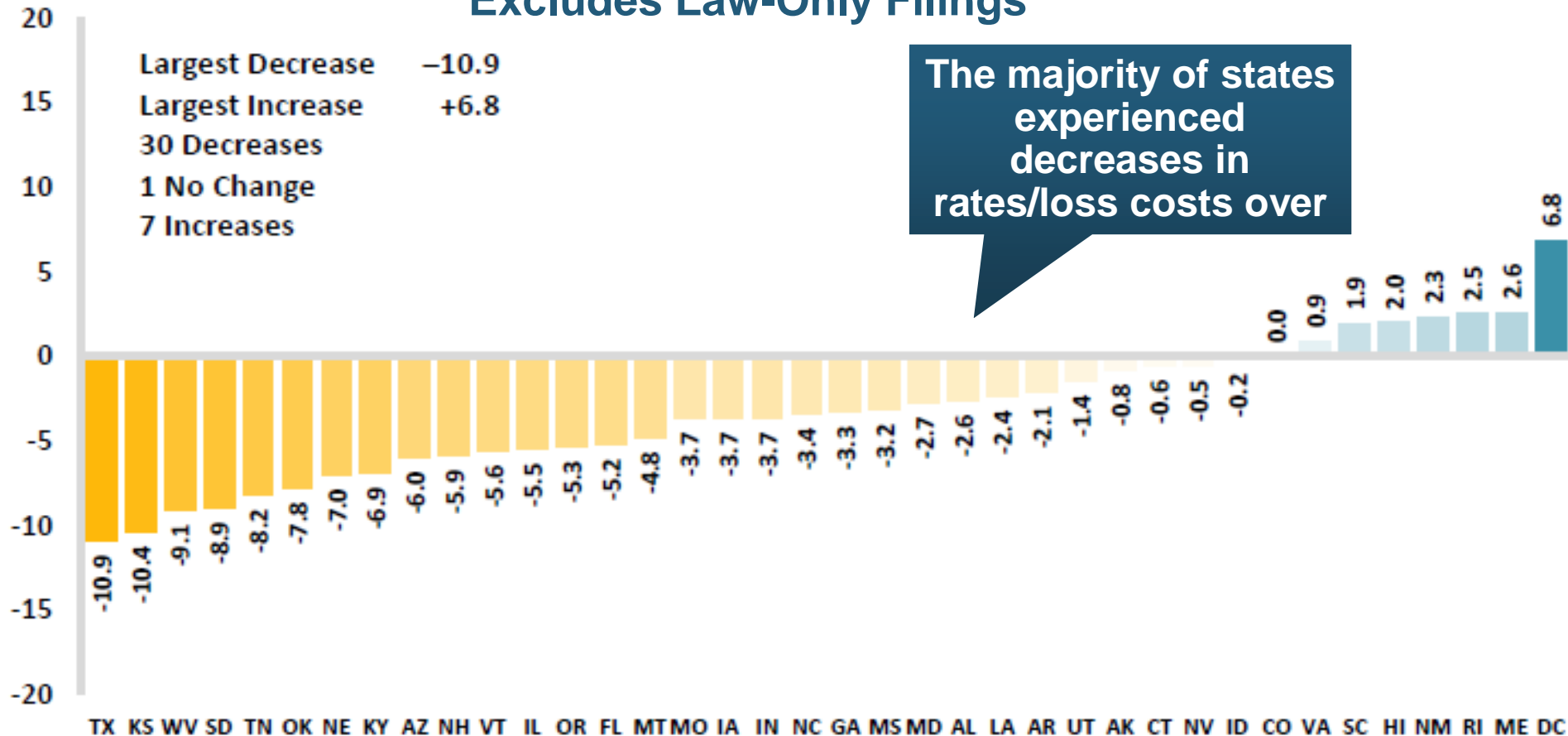


*Excludes monopolistic fund states (in gray): OH, ND, WA and WY.

Source: NCCI.

WC Approved or Filed and Pending Change in NCCI Premium Level by State

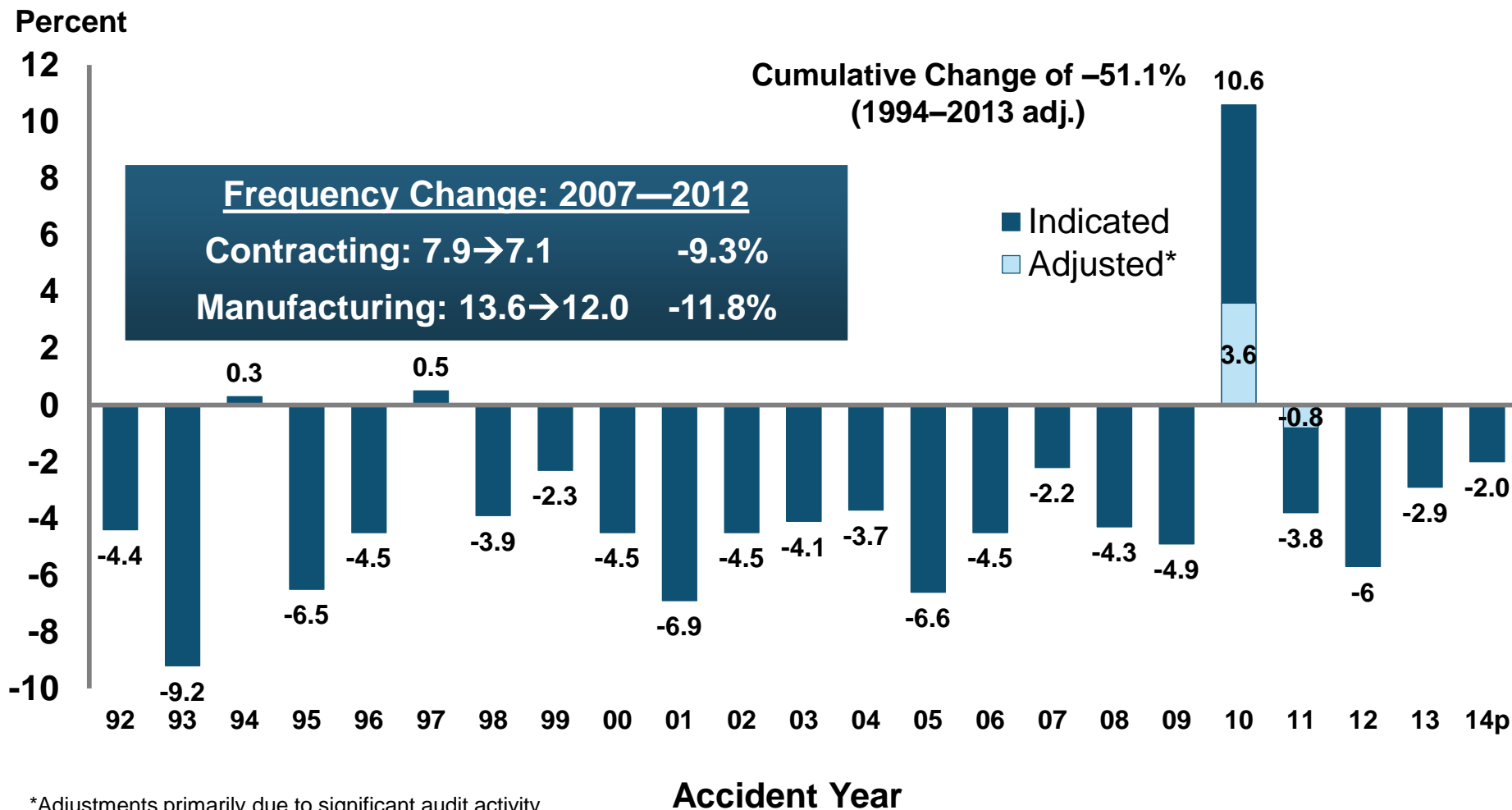
Latest Change for Voluntary Market Excludes Law-Only Filings



Note: Premium level changes are approved changes are approved or filed and pending changes in advisory rates, loss costs and rating values as of 4/24/15 as filed by applicable rating organization, relative to those previously approved. SC is filed and pending. IN and NC are in cooperation with state rating bureaus.

Source: NCCI.

Workers Compensation Lost-Time Claim Frequency Declined in 2014



*Adjustments primarily due to significant audit activity.

2014p: Preliminary based on data valued as of 12/31/2014.

Source: NCCI Financial Call data, developed to ultimate and adjusted to current wage and voluntary loss cost level; Excludes high deductible policies; 1994-2013: Based on data through 12/31/13. Data for all states where NCCI provides ratemaking services, excluding WV.

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

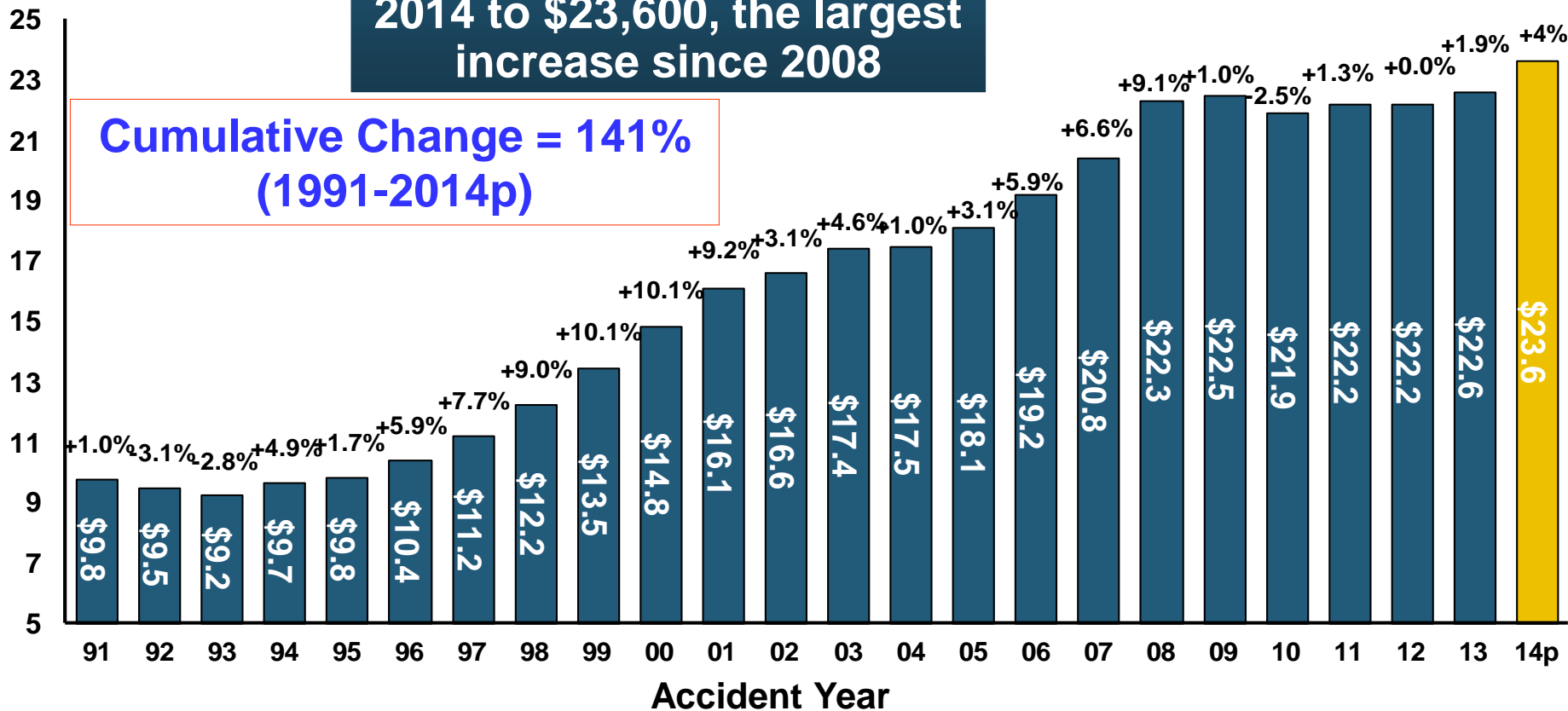
Workers Comp Indemnity Claim Costs: Modest Increase in 2014

Average Indemnity Cost per Lost-Time Claim

Average indemnity costs per claim were up 4% in 2014 to \$23,600, the largest increase since 2008

Indemnity Claim Cost (\$ 000s)

Cumulative Change = 141% (1991-2014p)

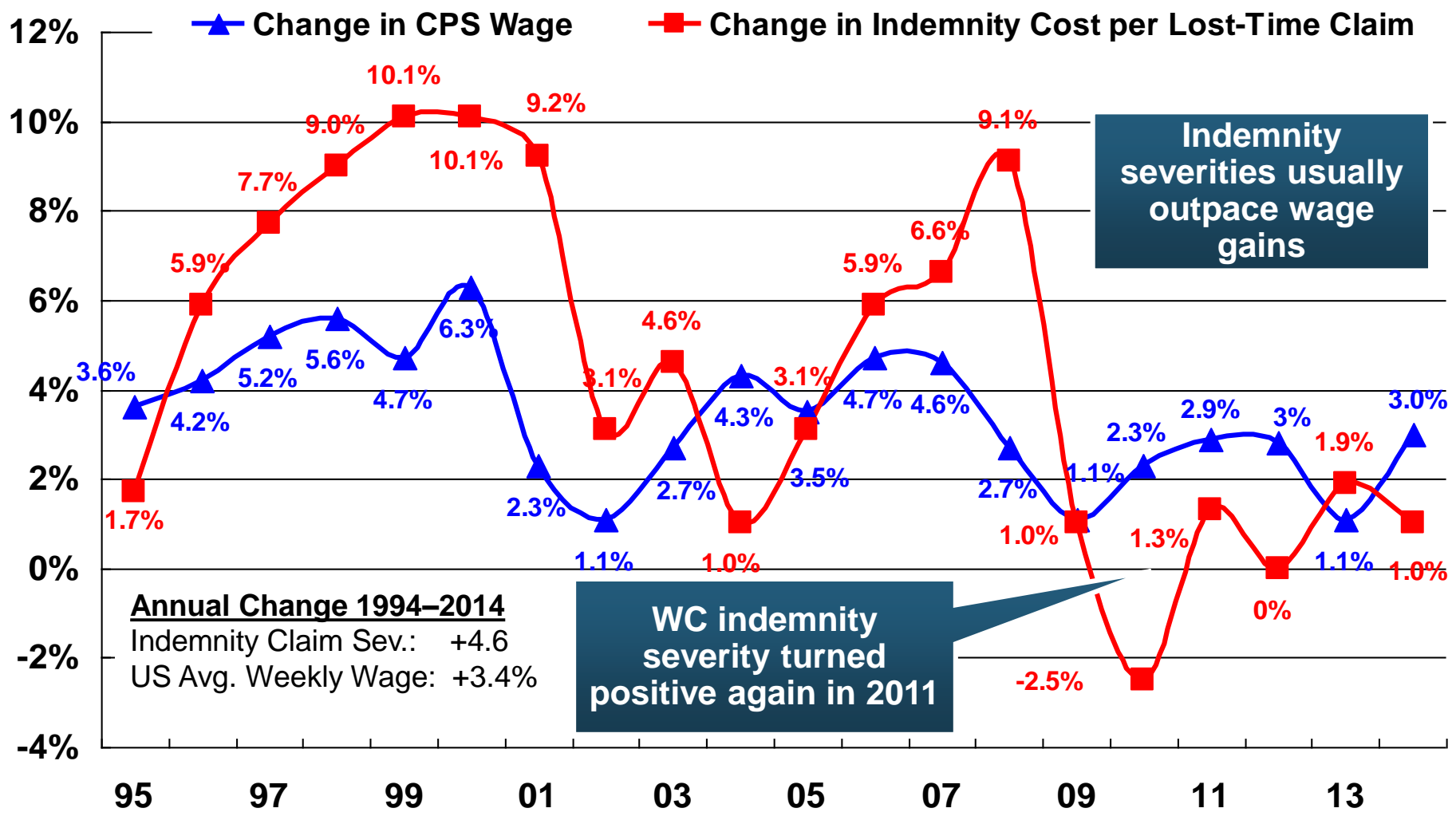


2014p: Preliminary based on data valued as of 12/31/2014.

1991-2013: Based on data through 12/31/2013, developed to ultimate

Based on the states where NCCI provides ratemaking services including state funds, excluding WV; Excludes high deductible policies.

WC Indemnity Severity vs. Wage Inflation, 1995 -2014p



2014p: Preliminary based on data valued as of 12/31/2014; 1991-2010: Based on data through 12/31/2010, developed to ultimate. Based on the states where NCCI provides ratemaking services. Excludes the effects of deductible policies. CPS = Current Population Survey.
 Source: NCCI

Workers Compensation Medical Severity: Moderate Increase in 2014

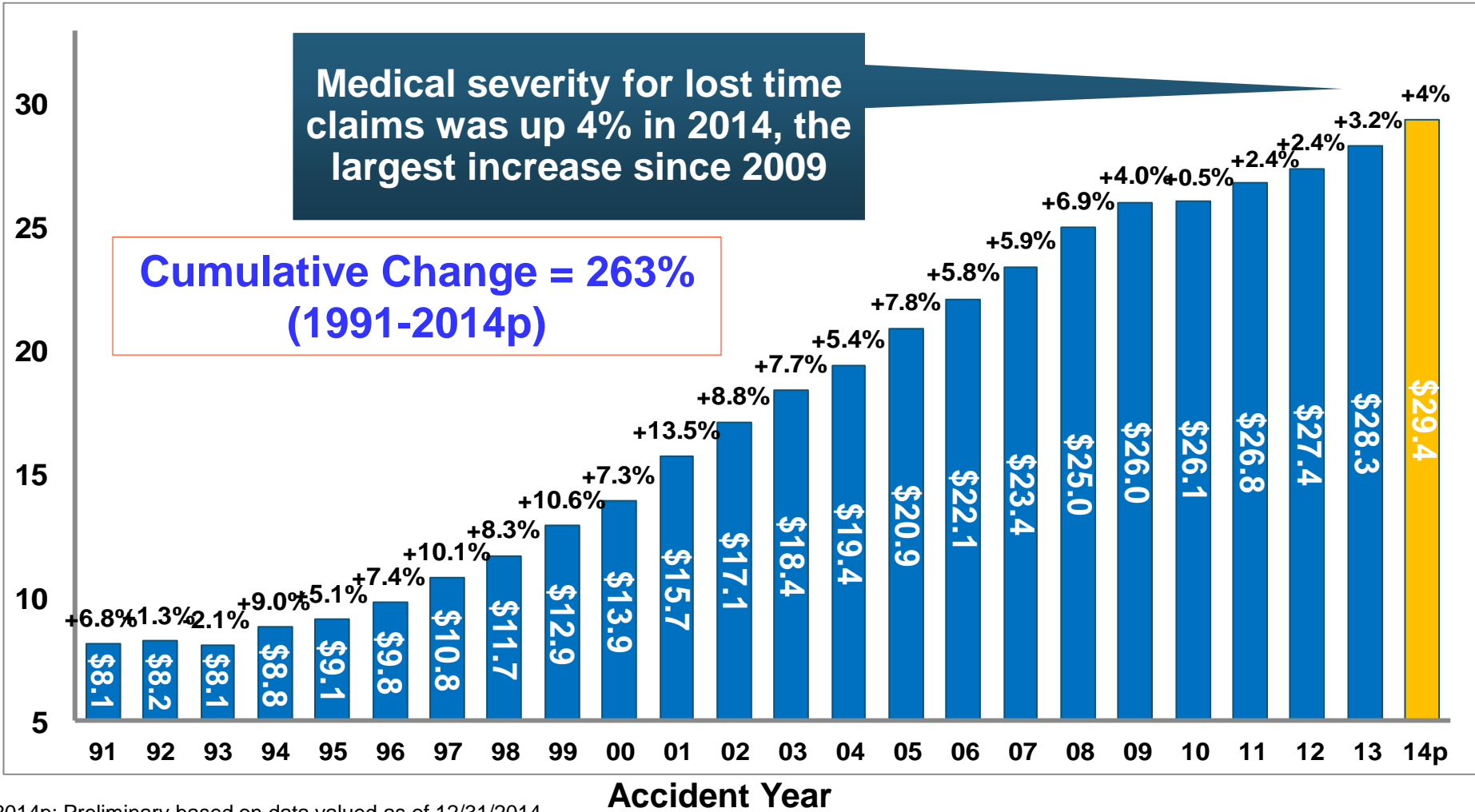


Medical Claim Cost (\$000s)

Average Medical Cost per Lost-Time Claim

Medical severity for lost time claims was up 4% in 2014, the largest increase since 2009

Cumulative Change = 263% (1991-2014p)

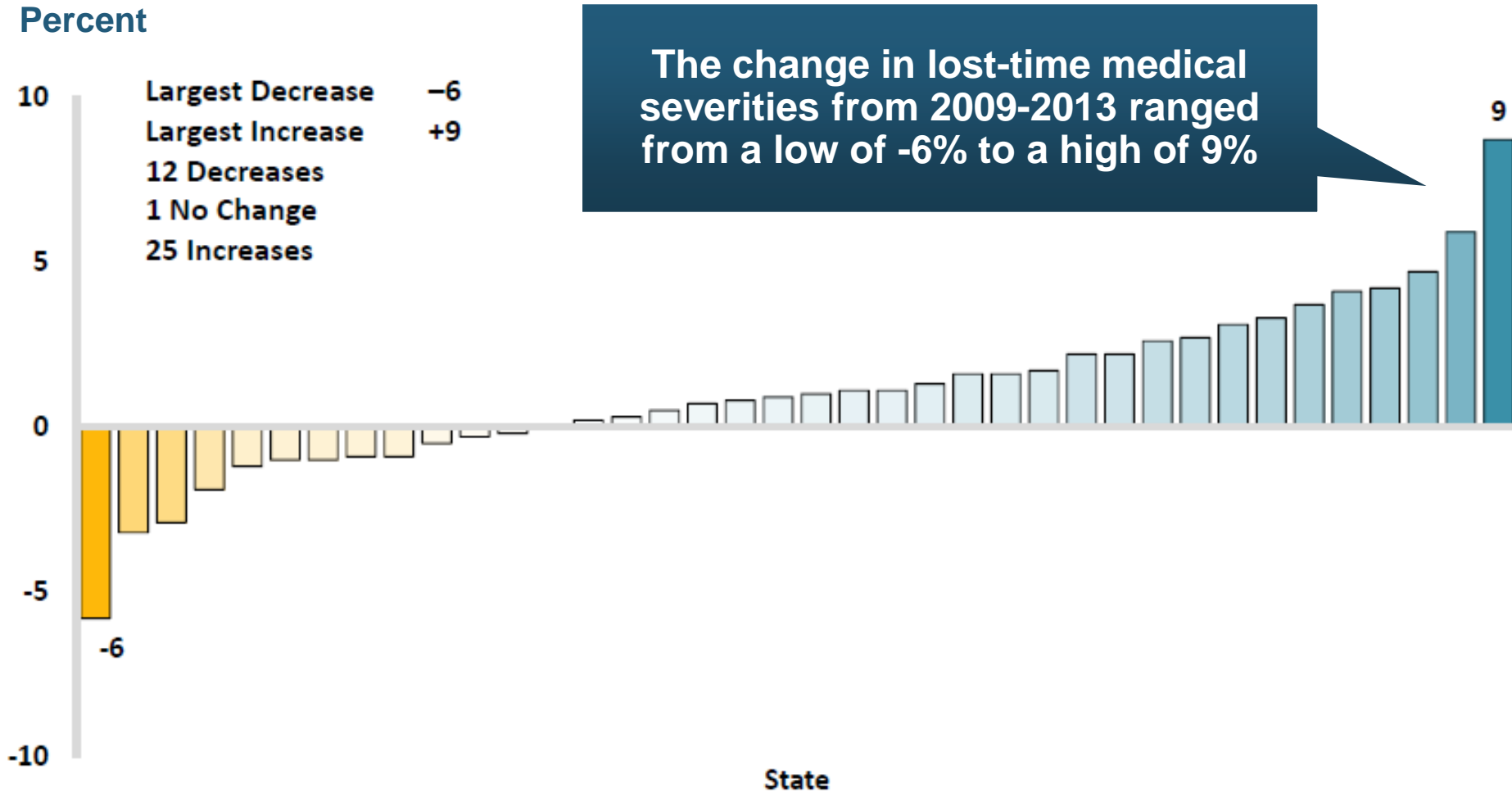


2014p: Preliminary based on data valued as of 12/31/2014.

1991-2013: Based on data through 12/31/2013, developed to ultimate

Based on the states where NCCI provides ratemaking services including state funds, excluding WV; Excludes high deductible policies.

Workers Comp Change in Medical Severity by State, Avg. Annual Change, 2009-2013



Source: NCCI's Analysis of Frequency and Severity of Claims Across the Country as of 12/31/13 on ncci.com.
Values reflect methodology and state data underlying the most recent rate/lost cost filing.
TX changes are for the years 2010-2013.

Annual Inflation Rates, (CPI-U, %), 1990–2016F

Annual Inflation Rates (%)



Inflation peaked at 5.6% in August 2008 on high energy and commodity crisis. The recession and the collapse of the commodity bubble reduced inflationary pressures in 2009/10

Inflationary expectations have slipped (due in part to falling energy costs) allowing the Fed to maintain low interest rates

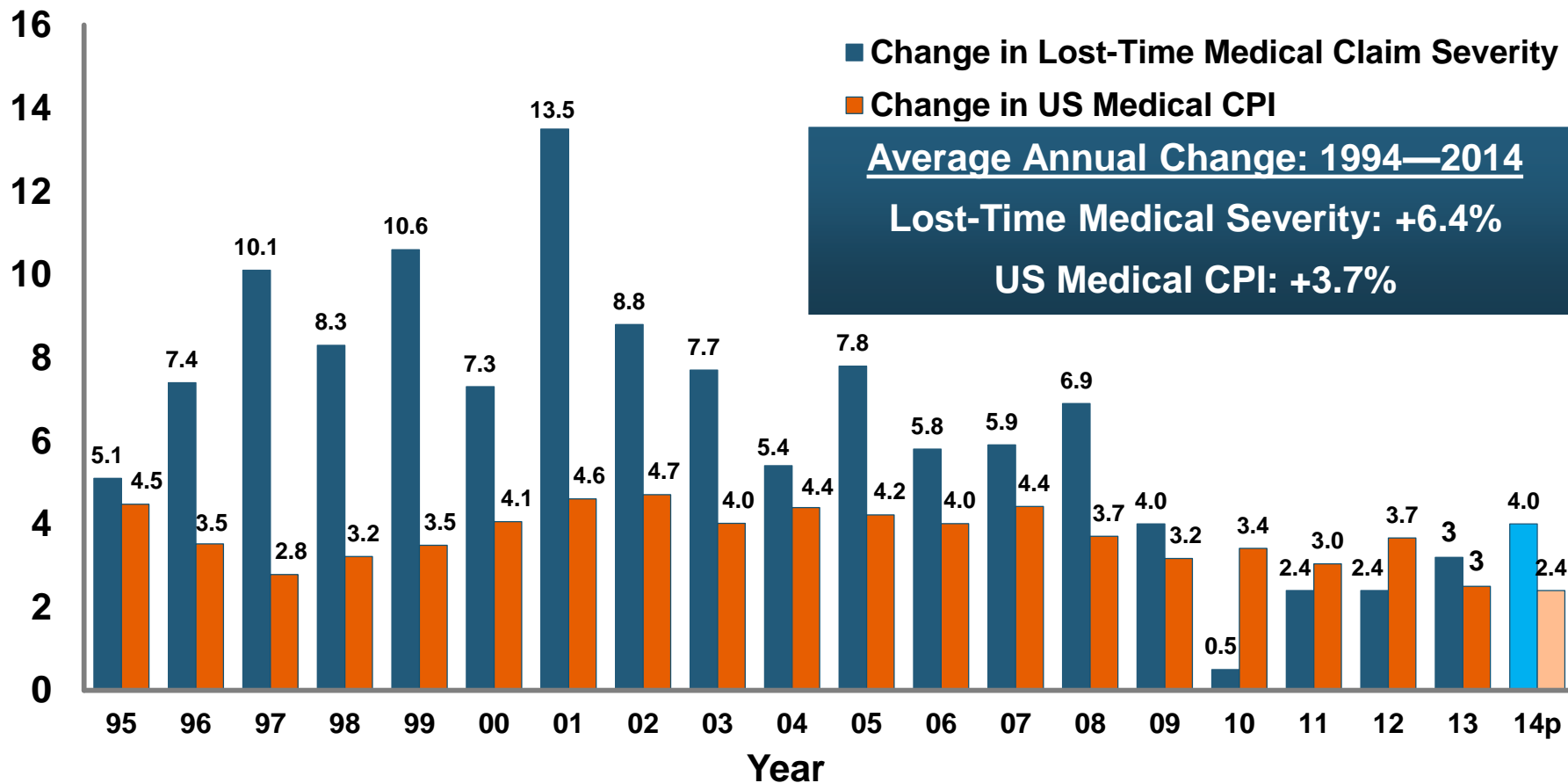
Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators, 5/15 (forecasts).

Workers Compensation Change in Medical Severity

Comparison to Change in Medical Consumer Price Index (CPI)

Percent Change



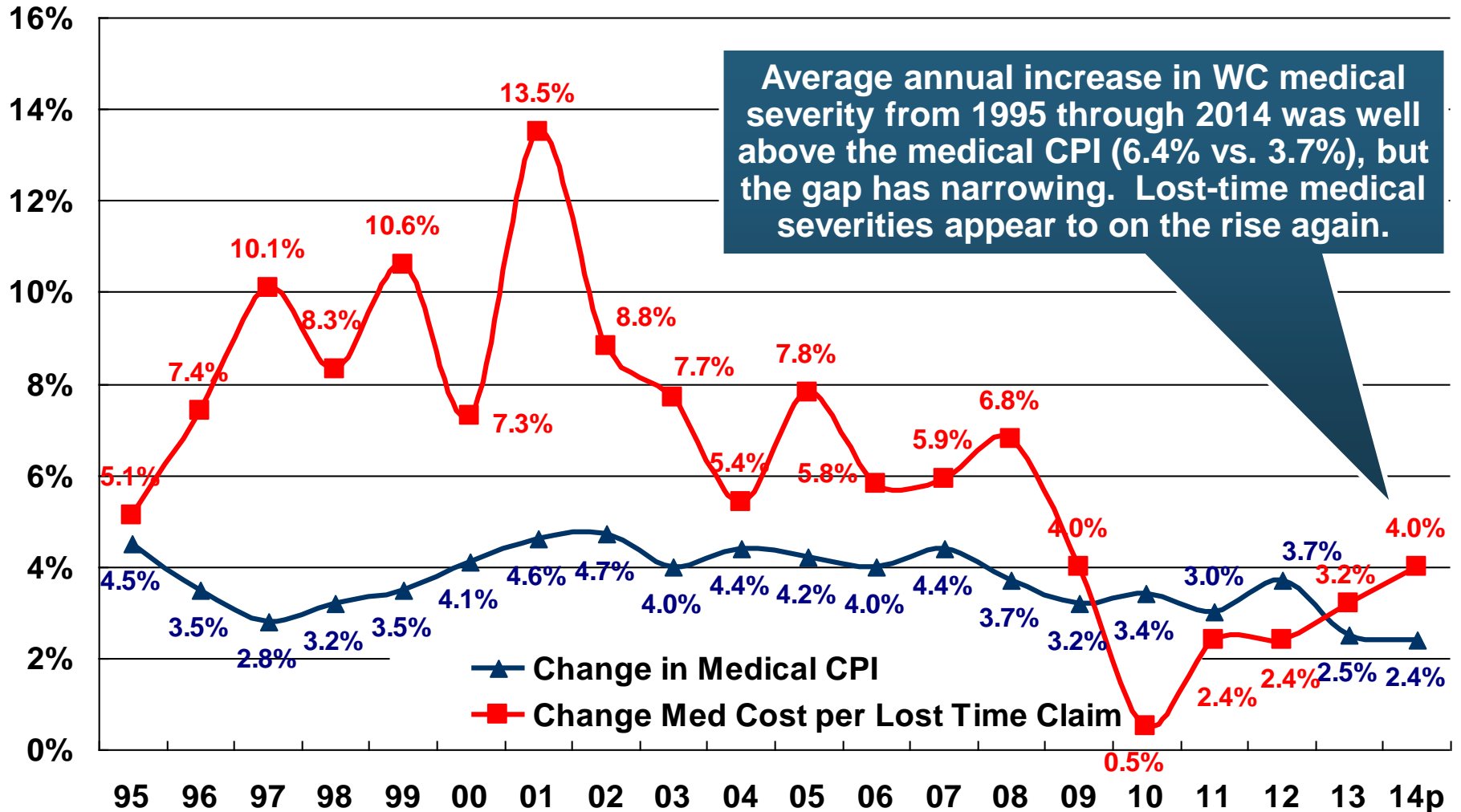
2014p: Preliminary based on data valued as of 12/31/2014.

Sources: Severity: 995-2013: Based on data through 12/31/2013, developed to ultimate

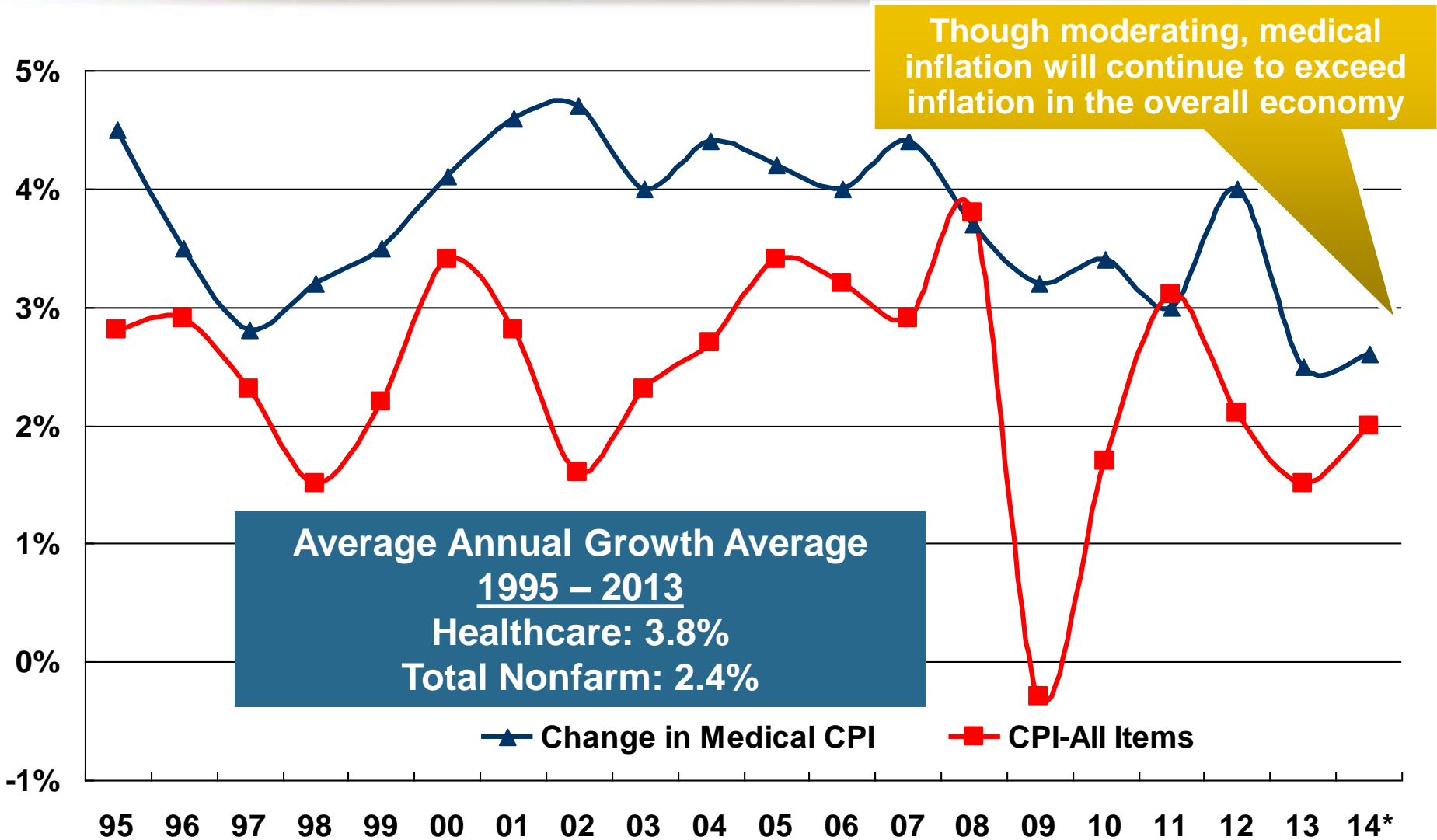
Based on the states where NCCI provides ratemaking services including state funds, excluding WV; Excludes high deductible policies.

US Medical CPI: US Bureau of Labor Statistics.

WC Medical Severity Generally Outpaces the Medical CPI Rate



Medical Cost Inflation vs. Overall CPI, 1995 – 2014*



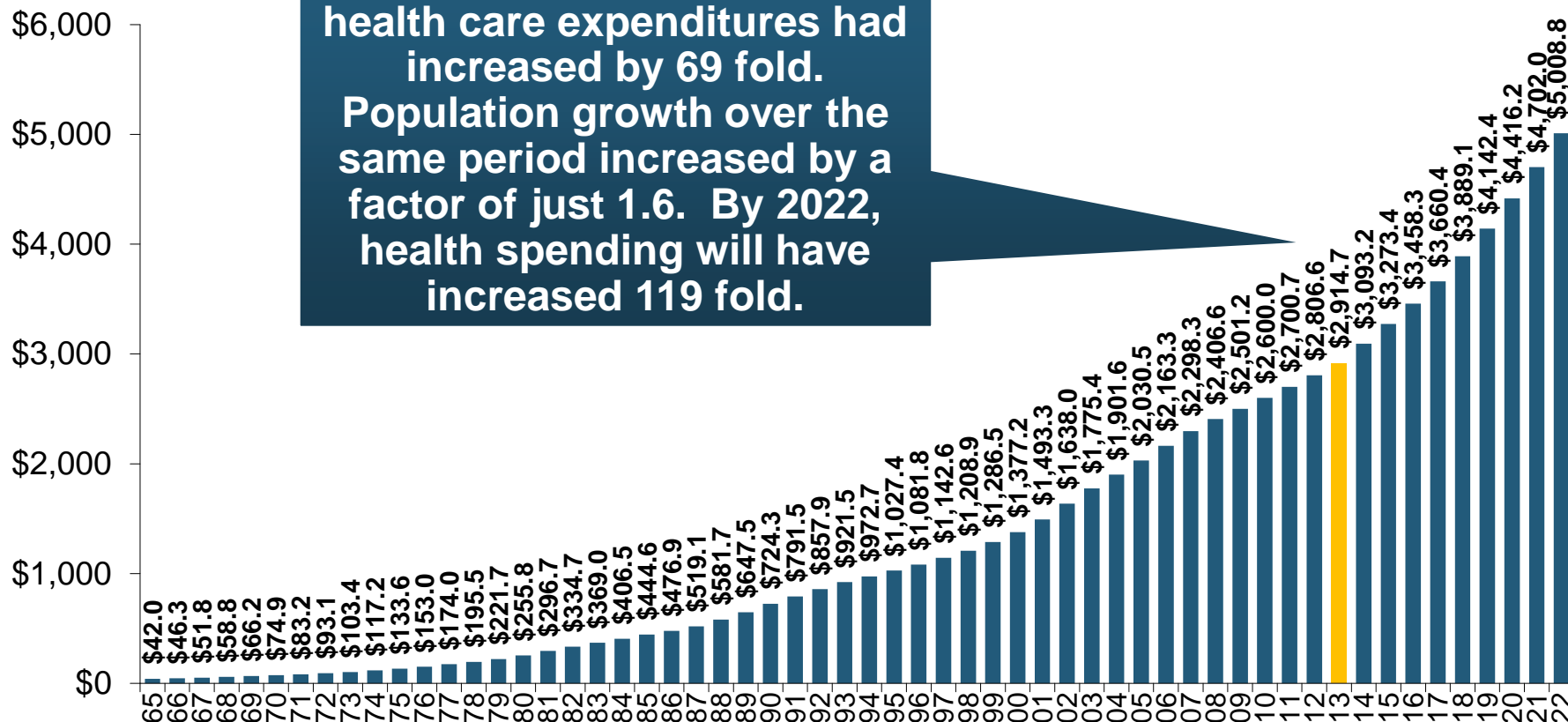
*July 2014 compared to July 2013.

Sources: Med CPI from US Bureau of Labor Statistics, WC med severity from NCCI based on NCCI states.

U.S. Health Care Expenditures, 1965–2022F

\$ Billions

From 1965 through 2013, US health care expenditures had increased by 69 fold. Population growth over the same period increased by a factor of just 1.6. By 2022, health spending will have increased 119 fold.

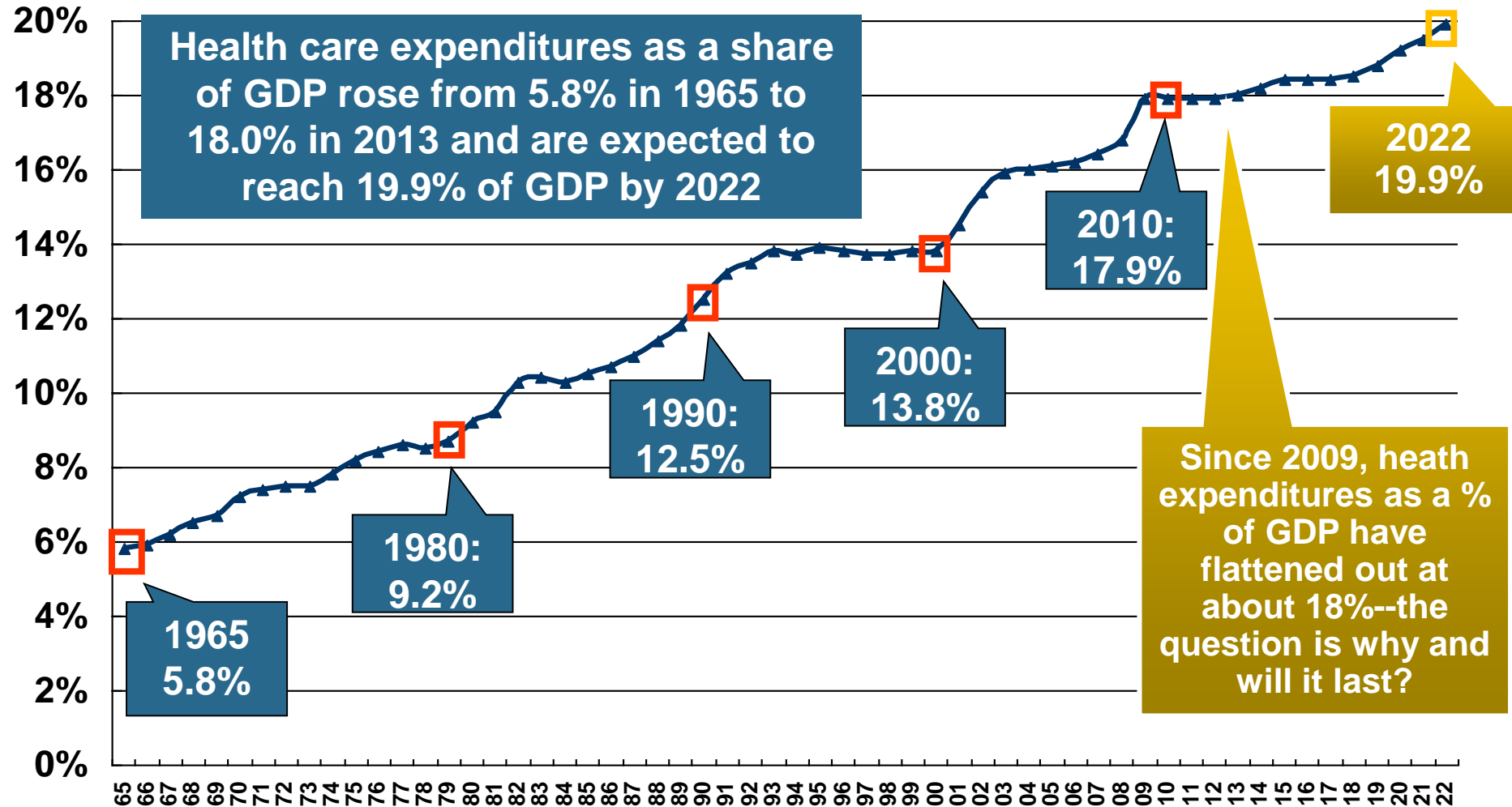


U.S. health care expenditures have been on a relentless climb for most of the past half century, far outstripping population growth, inflation of GDP growth

Sources: Centers for Medicare & Medicaid Services, Office of the Actuary at <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html> accessed 3/14/14; Insurance Information Institute.

National Health Care Expenditures as a Share of GDP, 1965 – 2022F*

% of GDP



Sources: Centers for Medicare & Medicaid Services, Office of the Actuary at <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html> accessed 3/14/14; Insurance Information Institute.

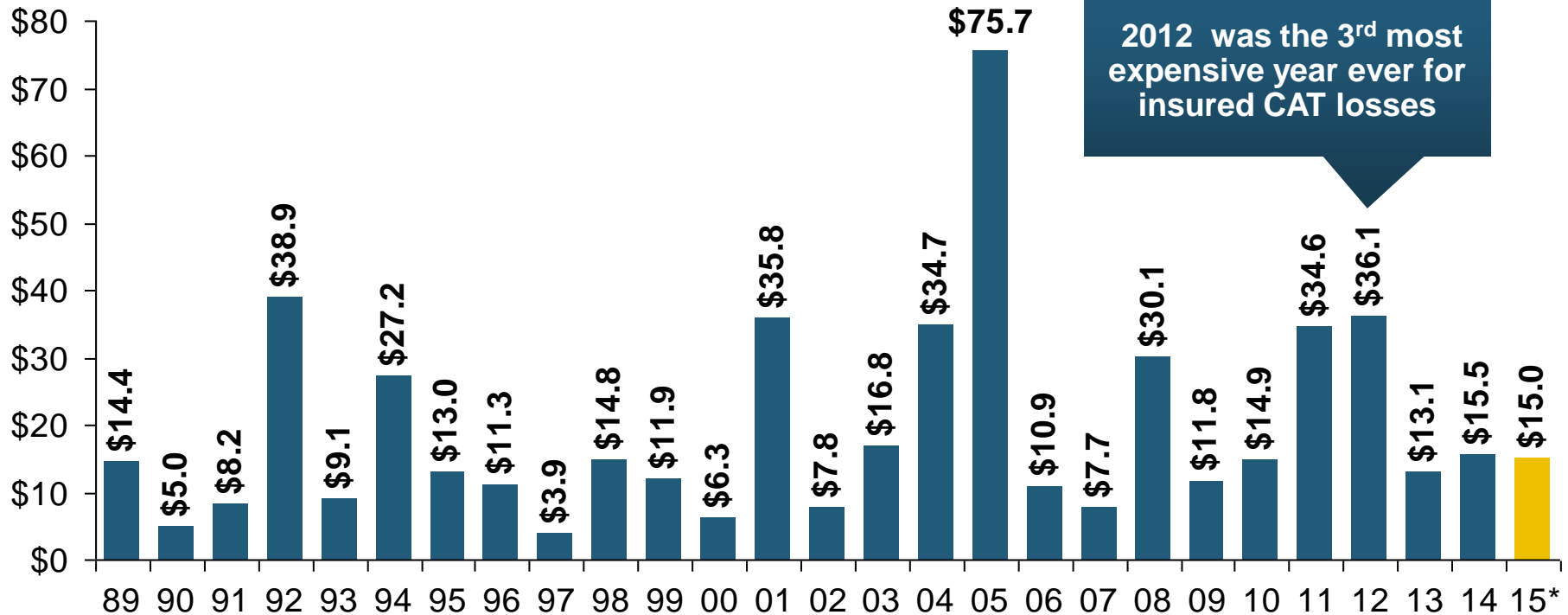
Insured Catastrophe Losses

**2013/14 and 2015 Experienced Below
Average CAT Activity After Very High CAT
Losses in 2011/12**

***Winter Storm Losses Far Above Average in
2014 and 2015***

U.S. Insured Catastrophe Losses

(\$ Billions, \$ 2015)



2012 was the 3rd most expensive year ever for insured CAT losses

2013/14/15 Were Welcome Respite from 2011/12, among the Costliest Years for Insured Disaster Losses in US History. Longer-term Trend is for more—not fewer—Costly Events

\$15B in insured CAT losses though 12/31/15 (est.)

*Estimate through 12/31/15 in 2015 dollars.

Note: 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01 (\$25.9B 2011 dollars). Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B (\$15.6B in 2011 dollars.)

Sources: Property Claims Service/ISO; Insurance Information Institute.

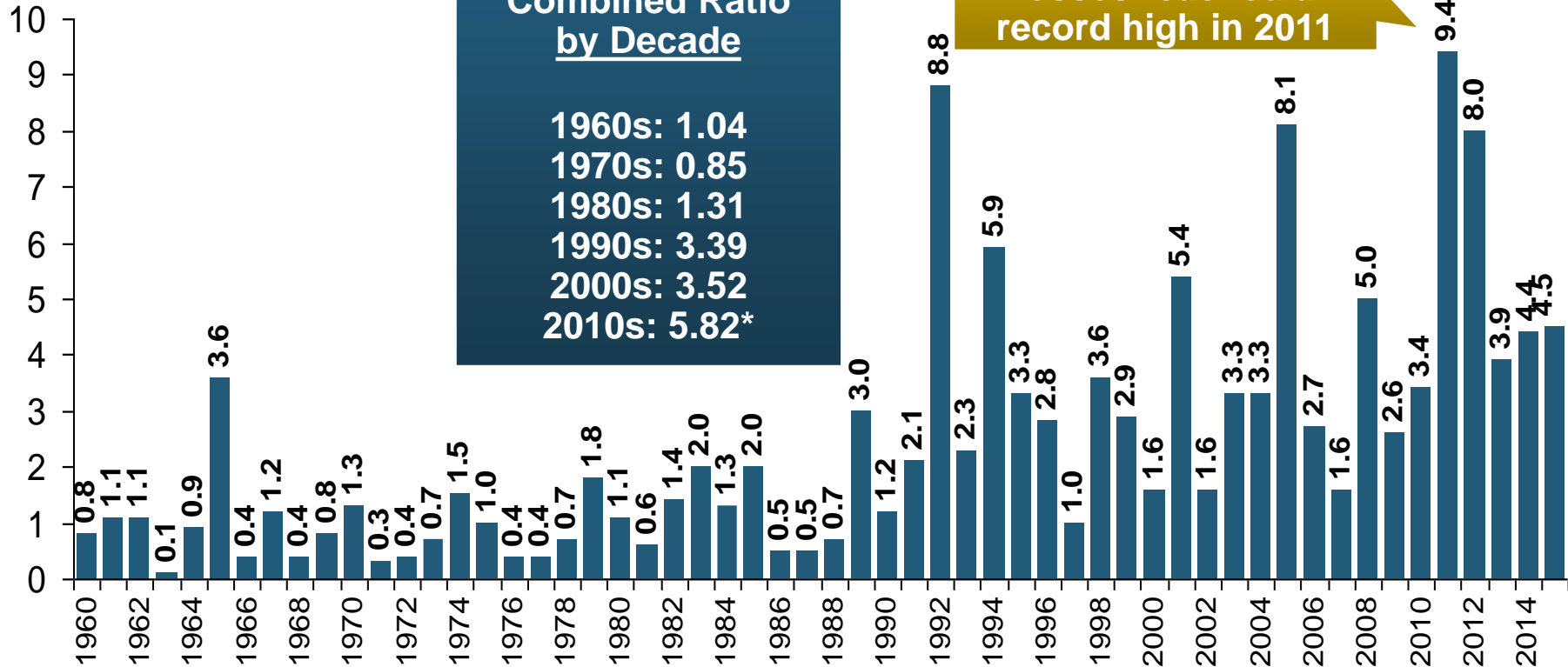
Combined Ratio Points Associated with Catastrophe Losses: 1960 – 2015F*

Combined Ratio Points

Avg. CAT Loss Component of the Combined Ratio by Decade

1960s: 1.04
 1970s: 0.85
 1980s: 1.31
 1990s: 3.39
 2000s: 3.52
 2010s: 5.82*

Catastrophe losses as a share of all losses reached a record high in 2011



The Catastrophe Loss Component of Private Insurer Losses Has Increased Sharply in Recent Decades

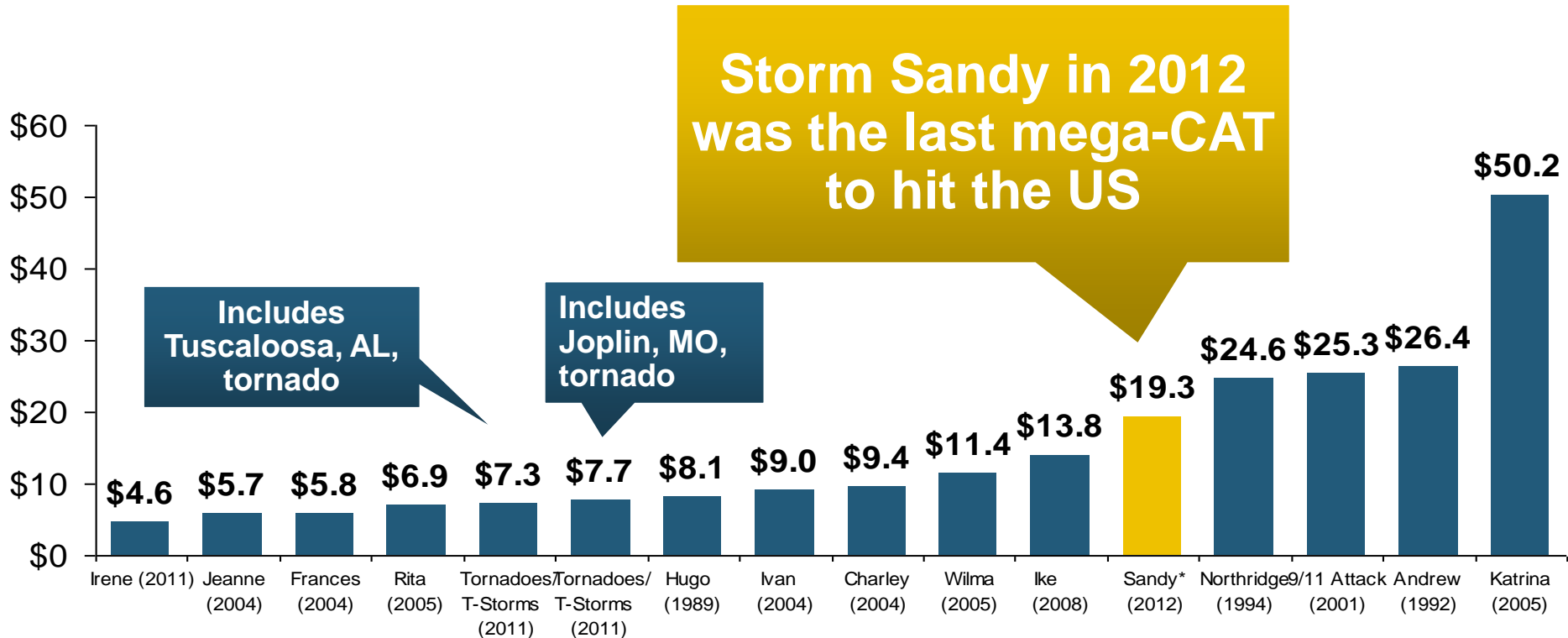
*2010s represent 2010-2014.

Notes: Private carrier losses only. Excludes loss adjustment expenses and reinsurance reinstatement premiums. Figures are adjusted for losses ultimately paid by foreign insurers and reinsurers.

Source: ISO (1960-2010); A.M. Best (2011-15E) Insurance Information Institute.

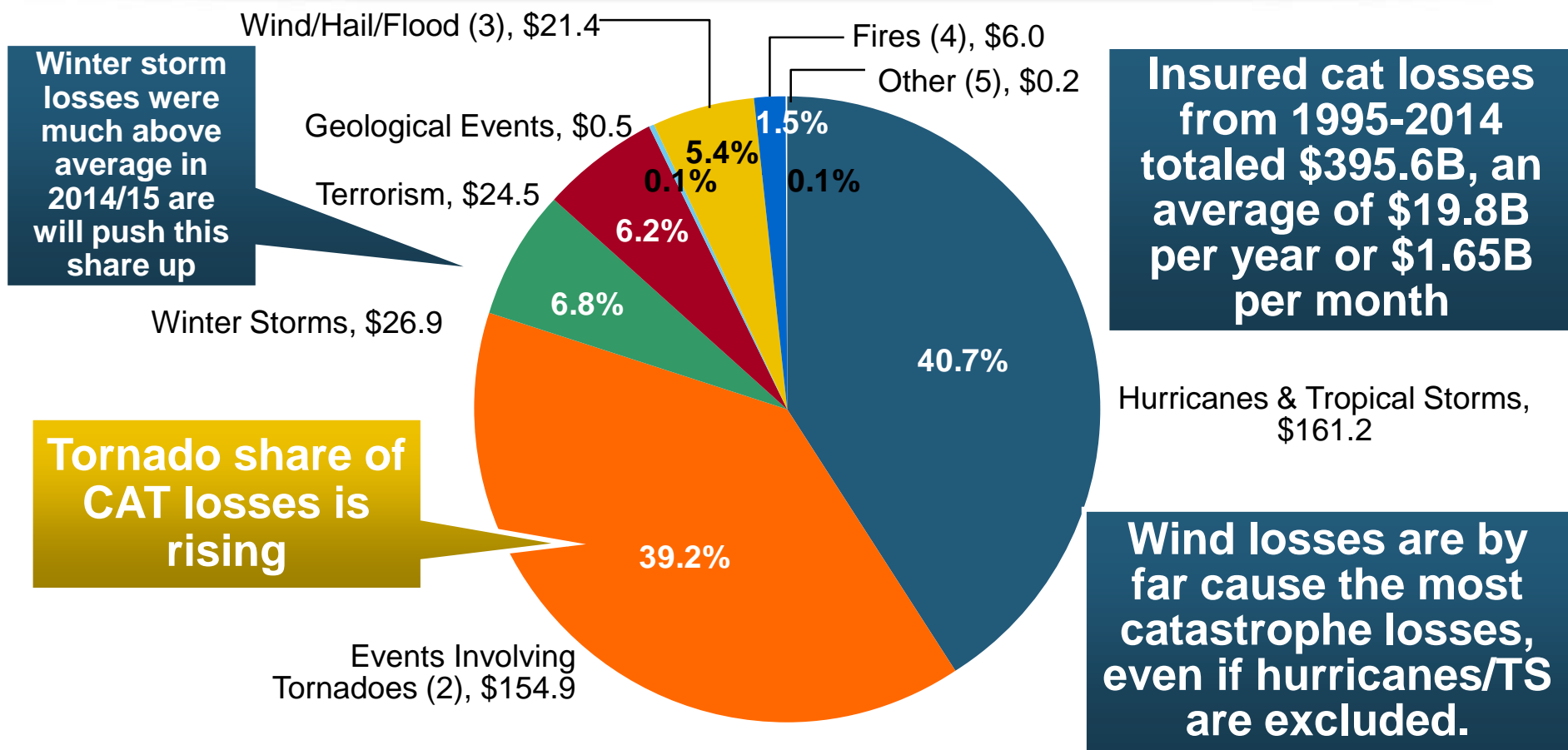
Top 16 Most Costly Disasters in U.S. History—Katrina Still Ranks #1

(Insured Losses, 2014 Dollars, \$ Billions)



12 of the 16 Most Expensive Events in US History Have Occurred Since 2004

Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1995–2014¹



Winter storm losses were much above average in 2014/15 are will push this share up

Insured cat losses from 1995-2014 totaled \$395.6B, an average of \$19.8B per year or \$1.65B per month

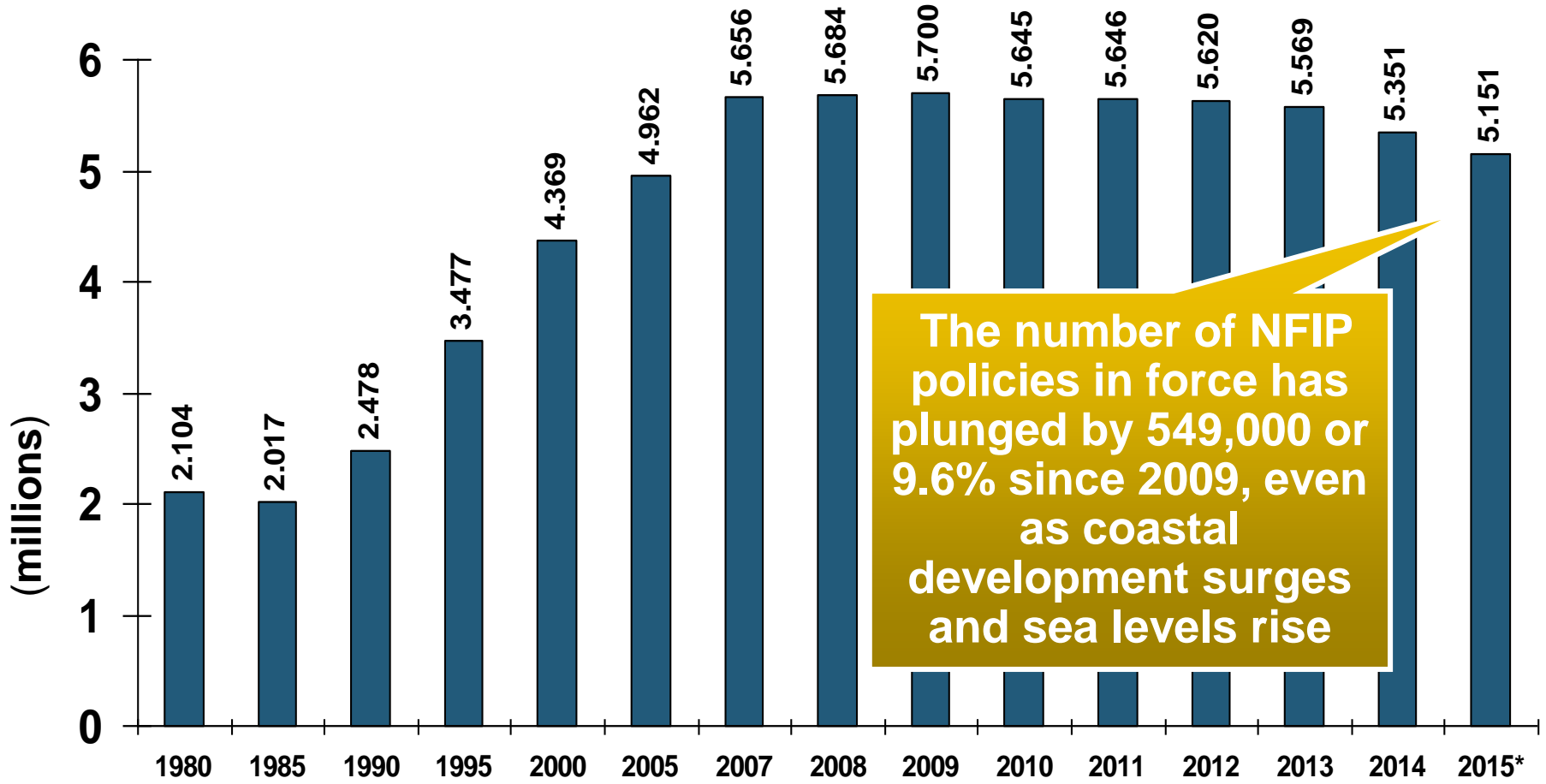
Tornado share of CAT losses is rising

Wind losses are by far cause the most catastrophe losses, even if hurricanes/TS are excluded.

1. Catastrophes are defined as events causing direct insured losses to property of \$25 million or more in 2014 dollars.
2. Excludes snow.
3. Does not include NFIP flood losses
4. Includes wildland fires
5. Includes civil disorders, water damage, utility disruptions and non-property losses such as those covered by workers compensation.

Source: ISO's Property Claim Services Unit.

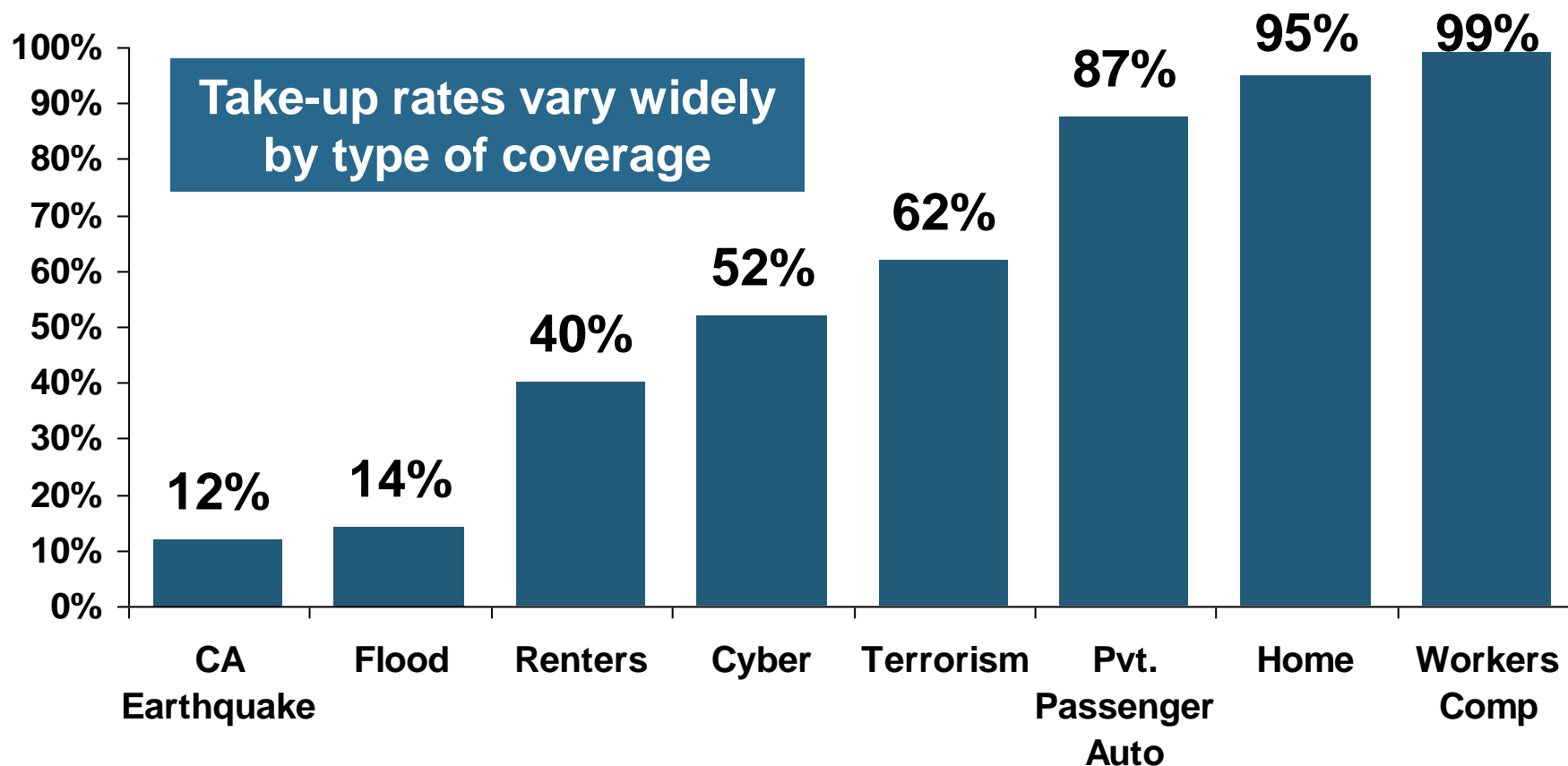
Number of National Flood Insurance Program Policies in Force at Year-End, 1980-2015*



Source: National Flood Insurance Program.
* As of July, 2015

Take-Up Rates for Various Types of Insurance in the U.S.

Take-Up Rate



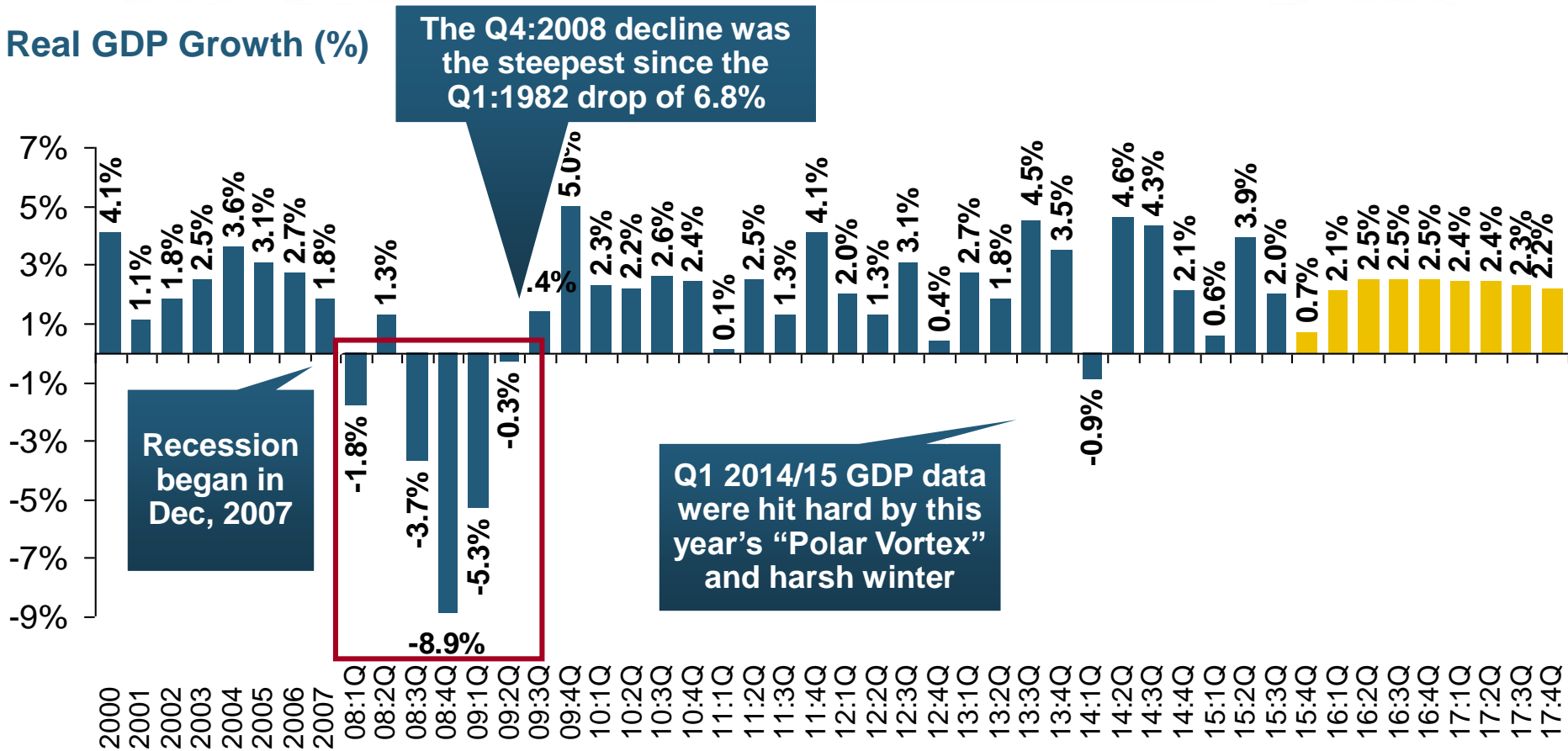
Sources: CA Earthquake (WSJ, <http://www.wsj.com/articles/california-pushes-homeowners-to-insure-against-earthquakes-1440980138>); Flood and Renters (I.I.I. June 2015 Pulse Survey); Cyber (Advisen, 2015); Terrorism (Marsh Global Analytics, 2014 *Terrorism Risk Insurance Report*, April 2014; data for 2013); Pvt. Passenger Auto (Insurance Research Council, *Uninsured Motorists*, 2014 Edition, data for 2012); Home and Workers Comp (I.I.I. estimates); Insurance Information Institute research.

THE ECONOMY

**The Strength of the Economy Will Greatly
Influence Insurer Exposure Base
Across Most Lines**

US Real GDP Growth*

Real GDP Growth (%)

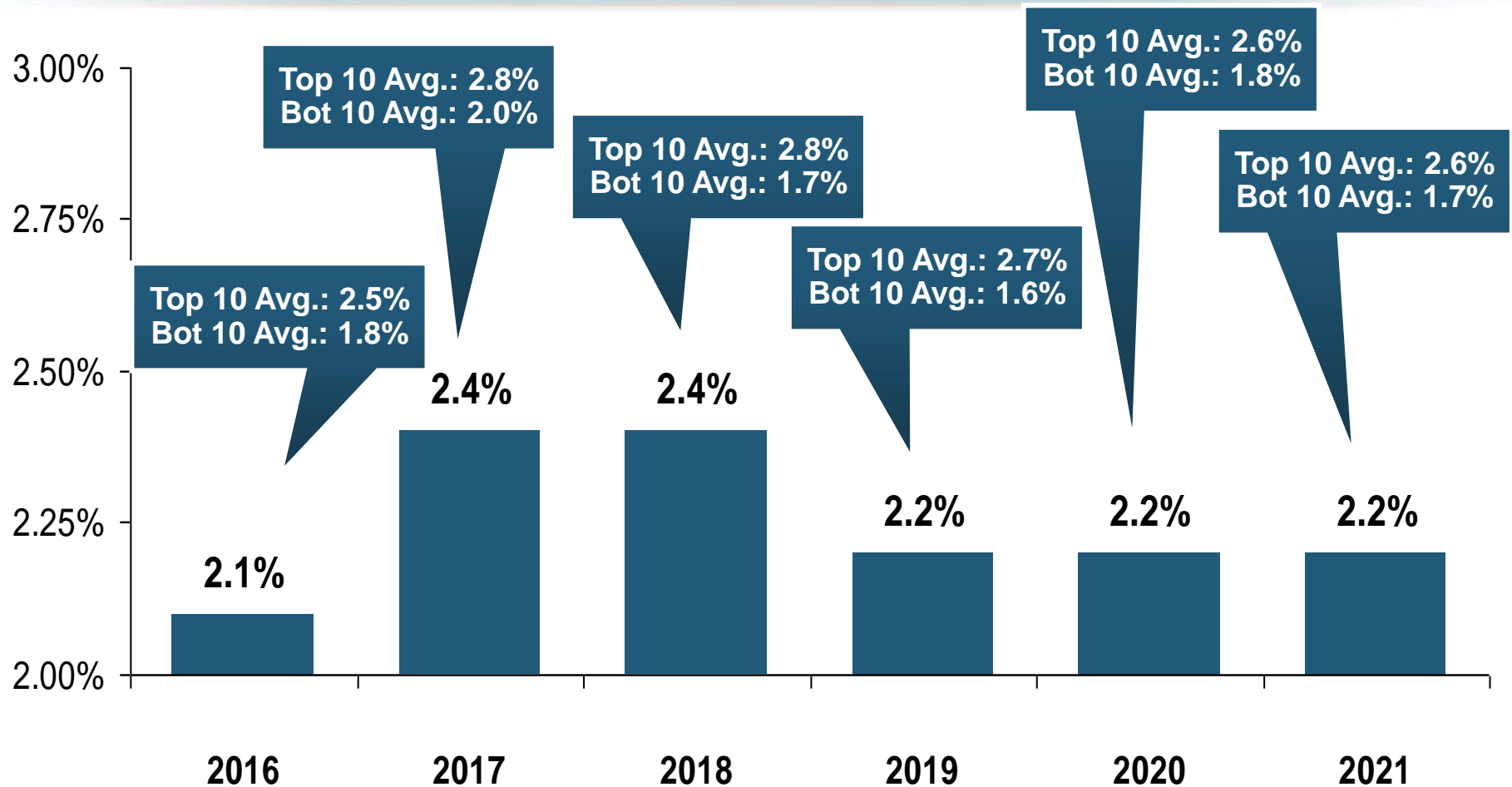


Demand for Insurance Should Increase in 2016 as GDP Growth Continues at a Steady, Albeit Moderate Pace and Gradually Benefits the Economy Broadly

* Estimates/Forecasts from Blue Chip Economic Indicators.

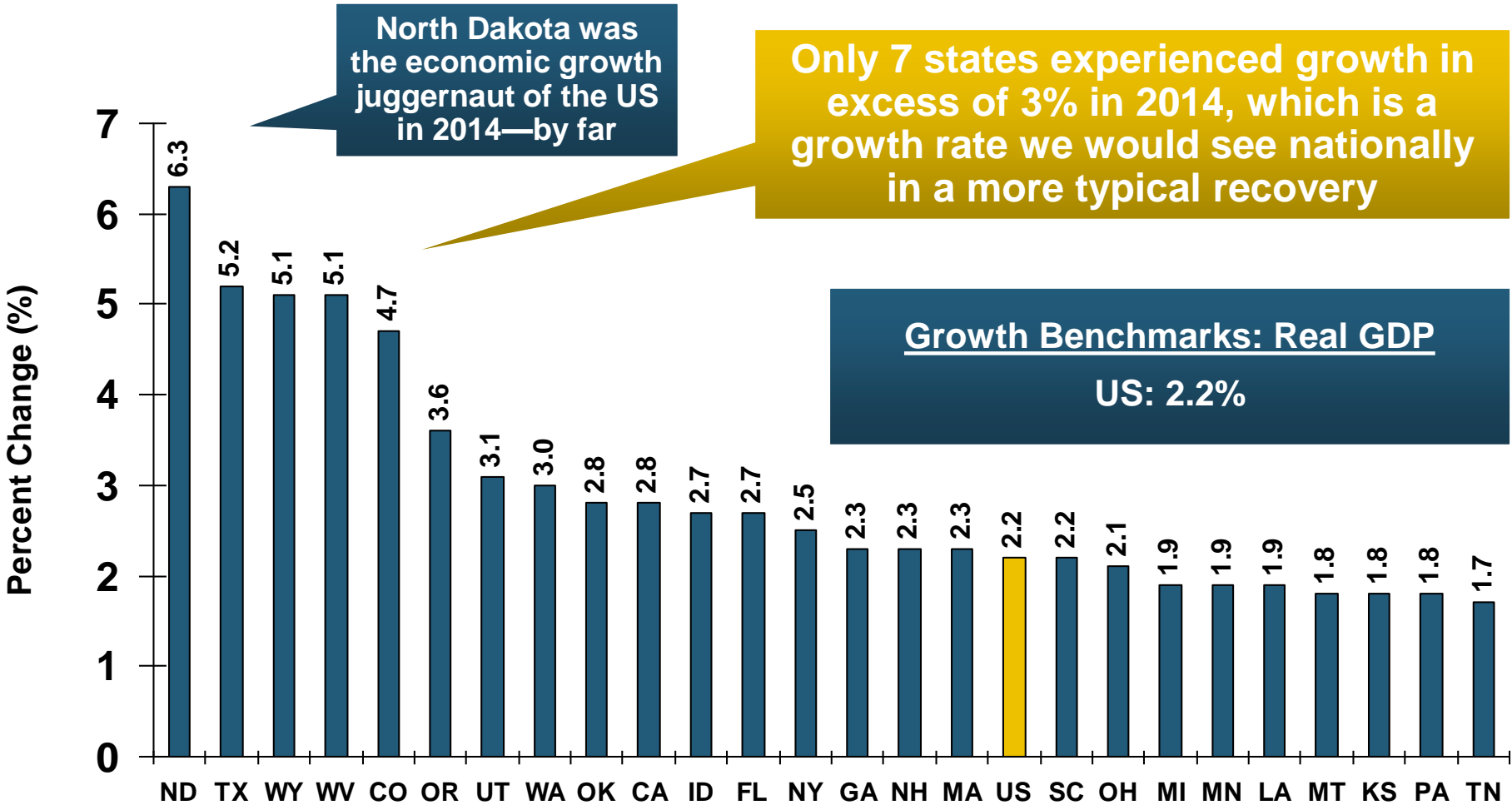
Source: US Department of Commerce, Blue Economic Indicators 2/16; Insurance Information Institute.

2016-2021 Real GDP Growth: Median Forecast for the US



All forecasts expect US growth to be moderate in 2016-18 and to slow in the last years of the decade, perhaps expecting a recession in that time frame.

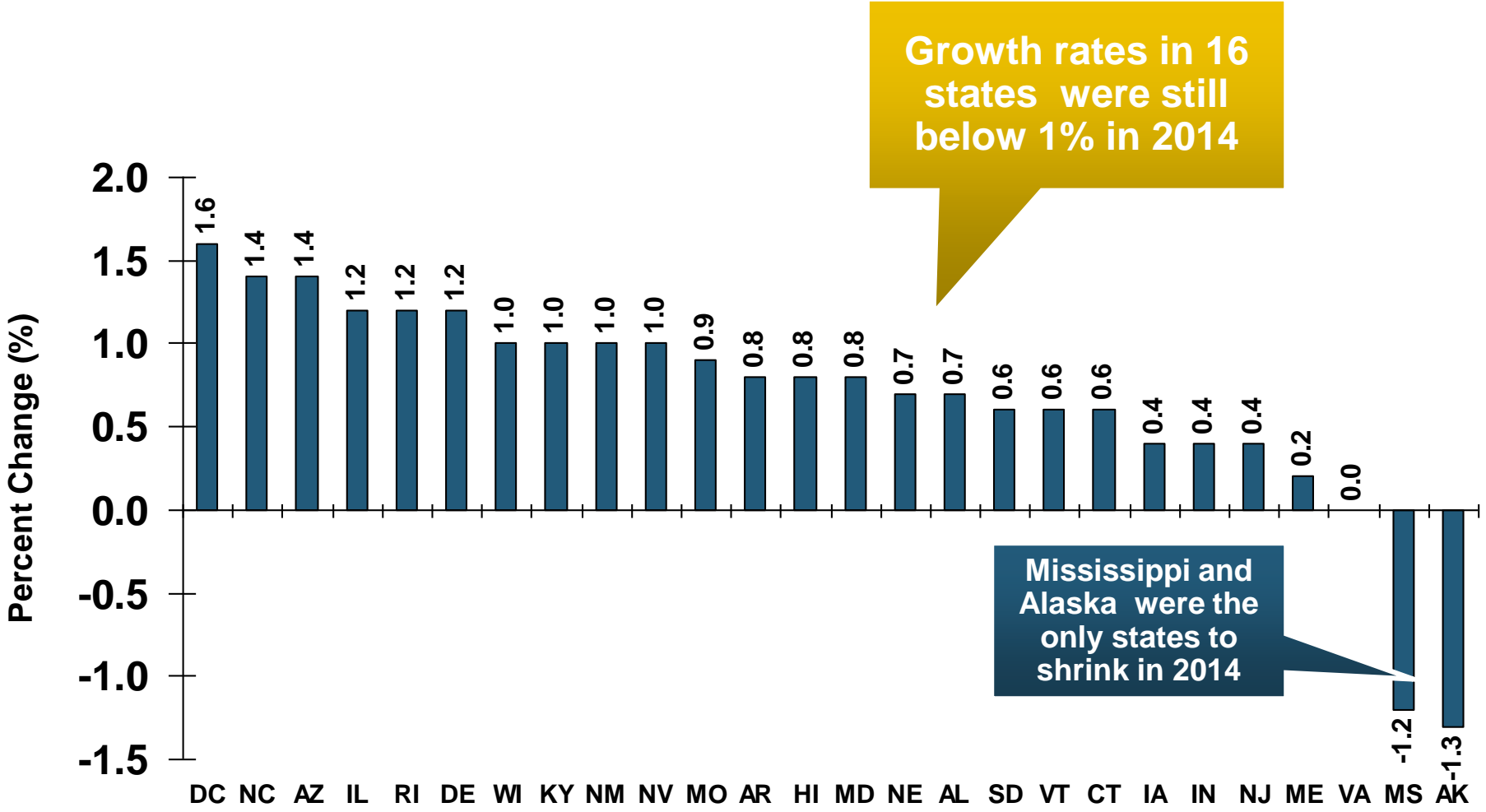
Real GDP by State Percent Change, 2014*: Highest 25 States



*Advance statistics

Sources: [U.S. Bureau of Economic Analysis](#); Insurance Information Institute.

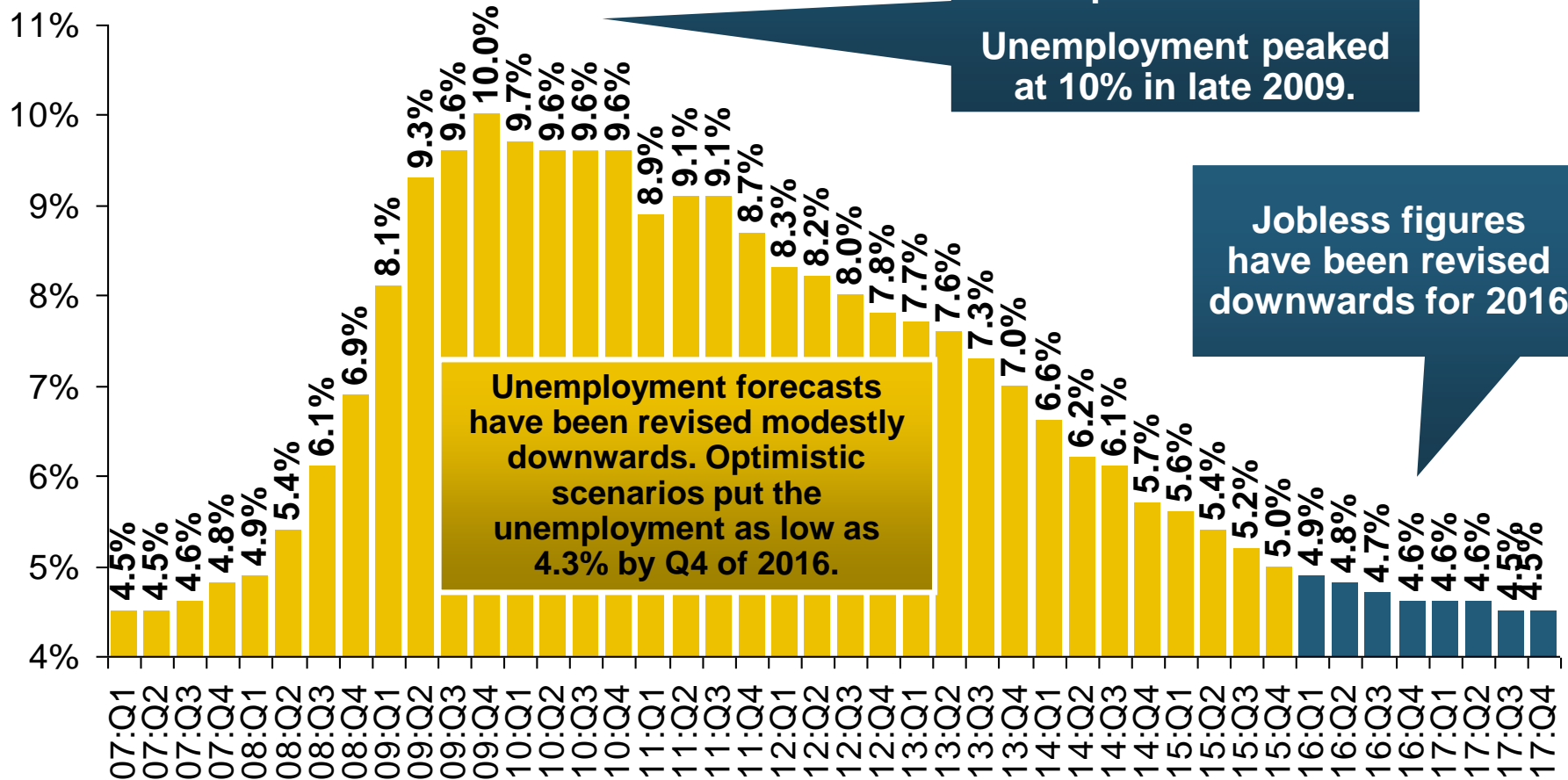
Real GDP by State Percent Change, 2014*: Lowest 25 States



*Advance statistics
Sources: [US Bureau of Economic Analysis](#); Insurance Information Institute.

US Unemployment Rate Forecast

2007:Q1 to 2016:Q4F*



Rising unemployment eroded payrolls and WC's exposure base.
Unemployment peaked at 10% in late 2009.

Jobless figures have been revised downwards for 2016

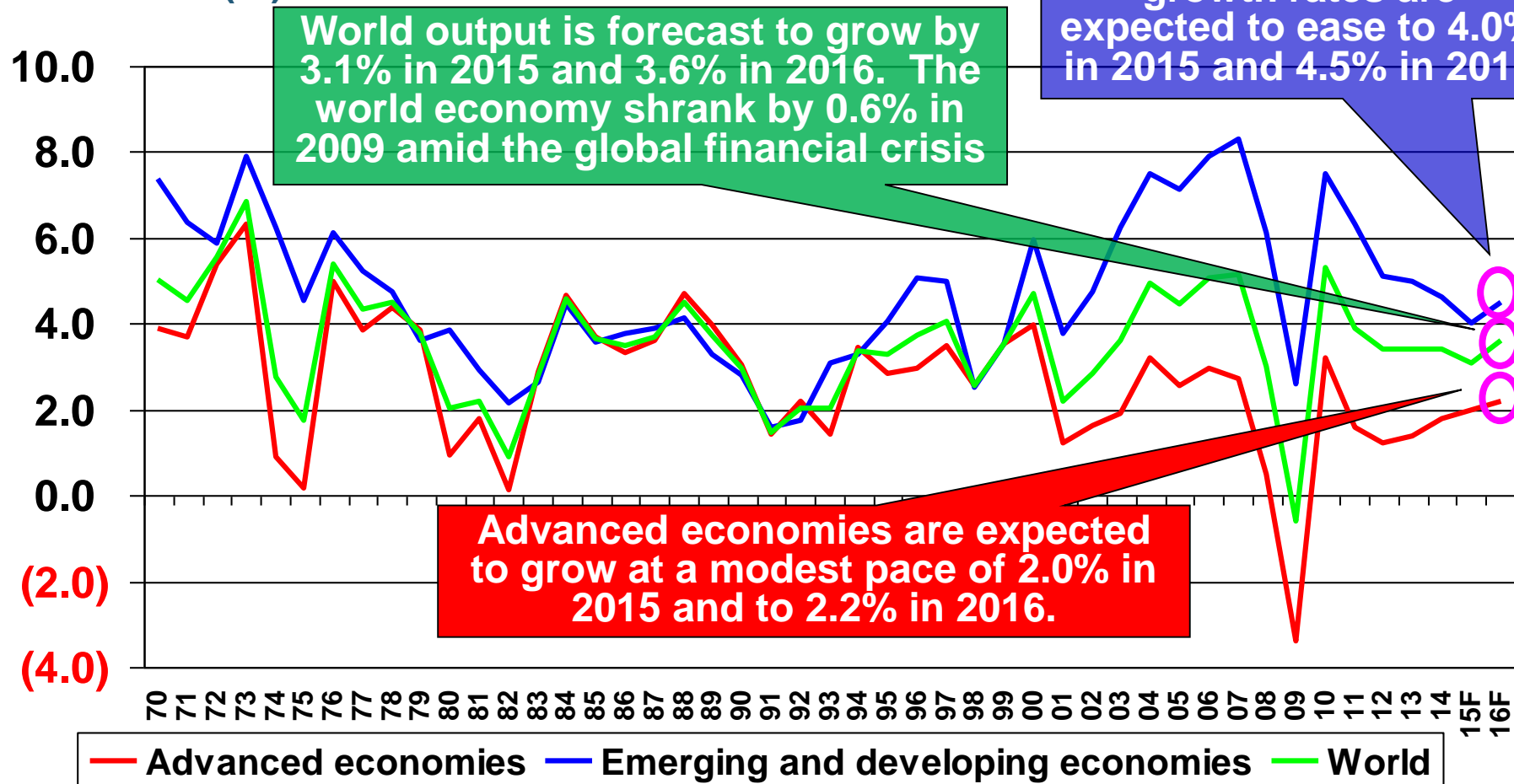
Unemployment forecasts have been revised modestly downwards. Optimistic scenarios put the unemployment as low as 4.3% by Q4 of 2016.

* = actual; = forecasts

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (1/16 edition); Insurance Information Institute.

GDP Growth: Advanced & Emerging Economies vs. World, 1970-2016F

GDP Growth (%)



World output is forecast to grow by 3.1% in 2015 and 3.6% in 2016. The world economy shrank by 0.6% in 2009 amid the global financial crisis

Emerging economy growth rates are expected to ease to 4.0% in 2015 and 4.5% in 2016

Advanced economies are expected to grow at a modest pace of 2.0% in 2015 and to 2.2% in 2016.

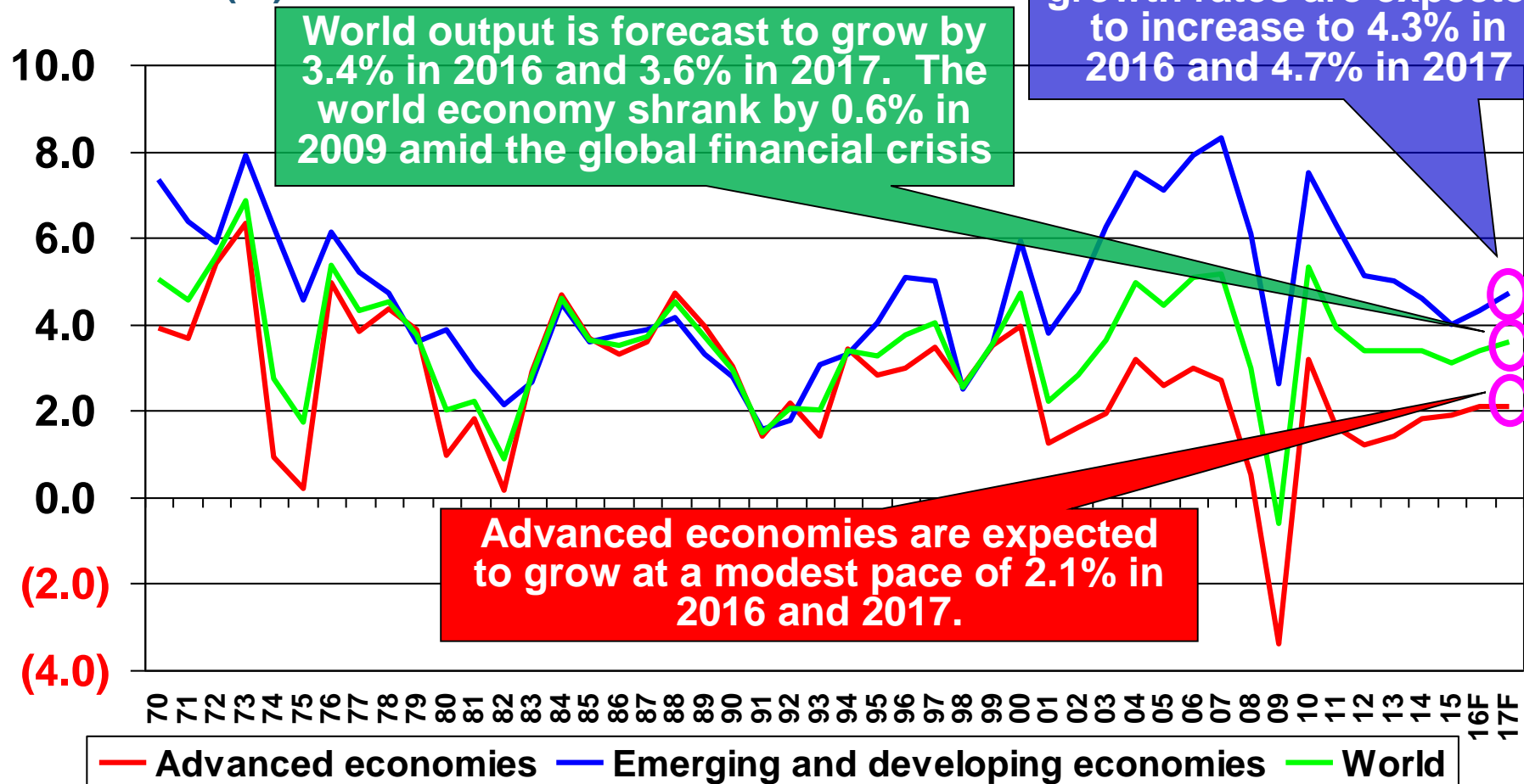
Global Insurance Market Comparisons

**US Will Generate More Premium Volume
than Any Other Country**

***Premium Growth in Emerging
Economies Will Slow Due to
Economic Weakness***

GDP Growth: Advanced & Emerging Economies vs. World, 1970-2016F

GDP Growth (%)

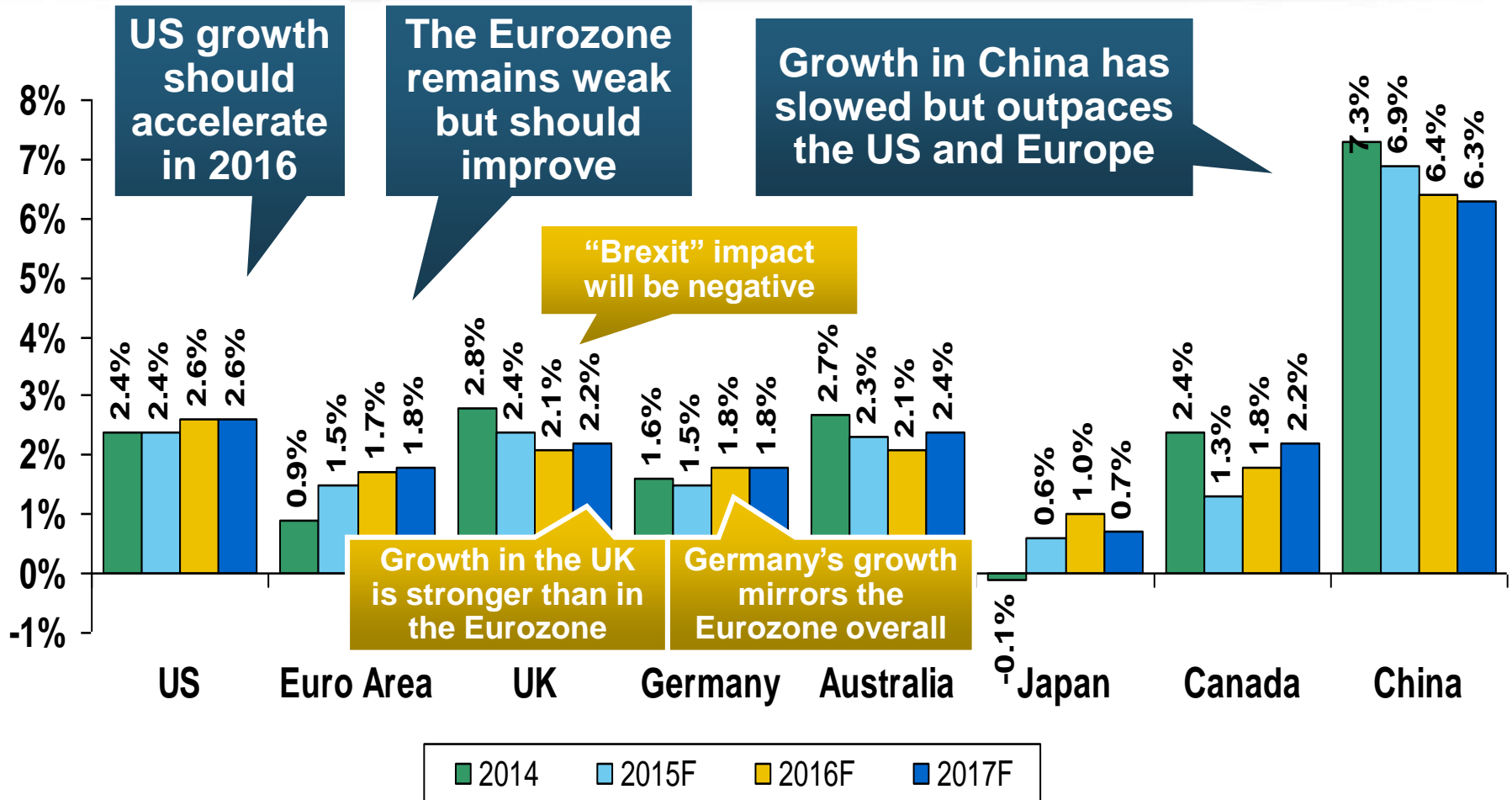


World output is forecast to grow by 3.4% in 2016 and 3.6% in 2017. The world economy shrank by 0.6% in 2009 amid the global financial crisis

Emerging economy growth rates are expected to increase to 4.3% in 2016 and 4.7% in 2017

Advanced economies are expected to grow at a modest pace of 2.1% in 2016 and 2017.

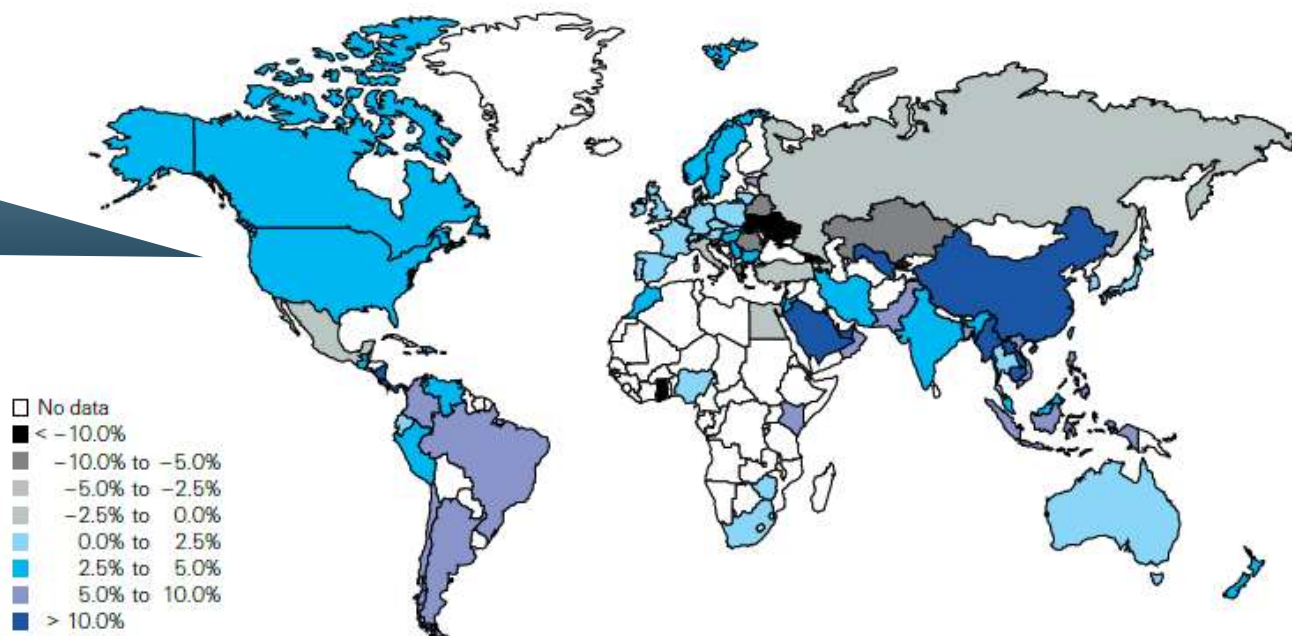
Real GDP Growth Forecasts: Major Economies: 2014 – 2017F



Growth Prospects Vary Widely by Region; US and the UK Lead the Advanced Economies; Germany Leads in the Euro Area; China Has Slowed

Non-Life Insurance: Global Real (Inflation Adjusted) Premium Growth, 2014

Real nonlife premium growth was stronger in the US in 2014 than in most of Europe

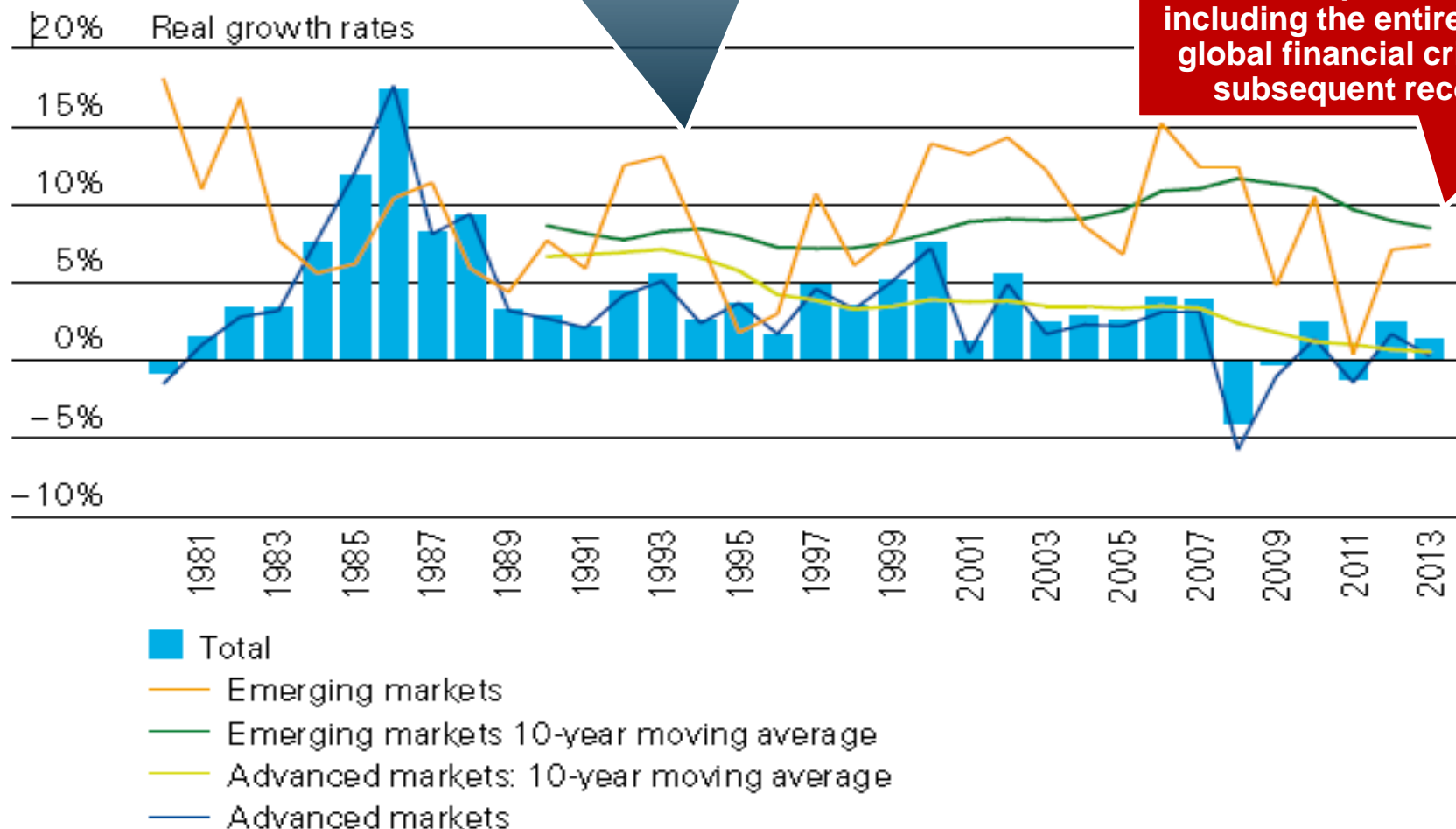


Market	Life	Non-Life	Total
Advanced	3.8	1.8	2.9
Emerging	6.9	8.0	7.4
World	4.3	2.9	3.7

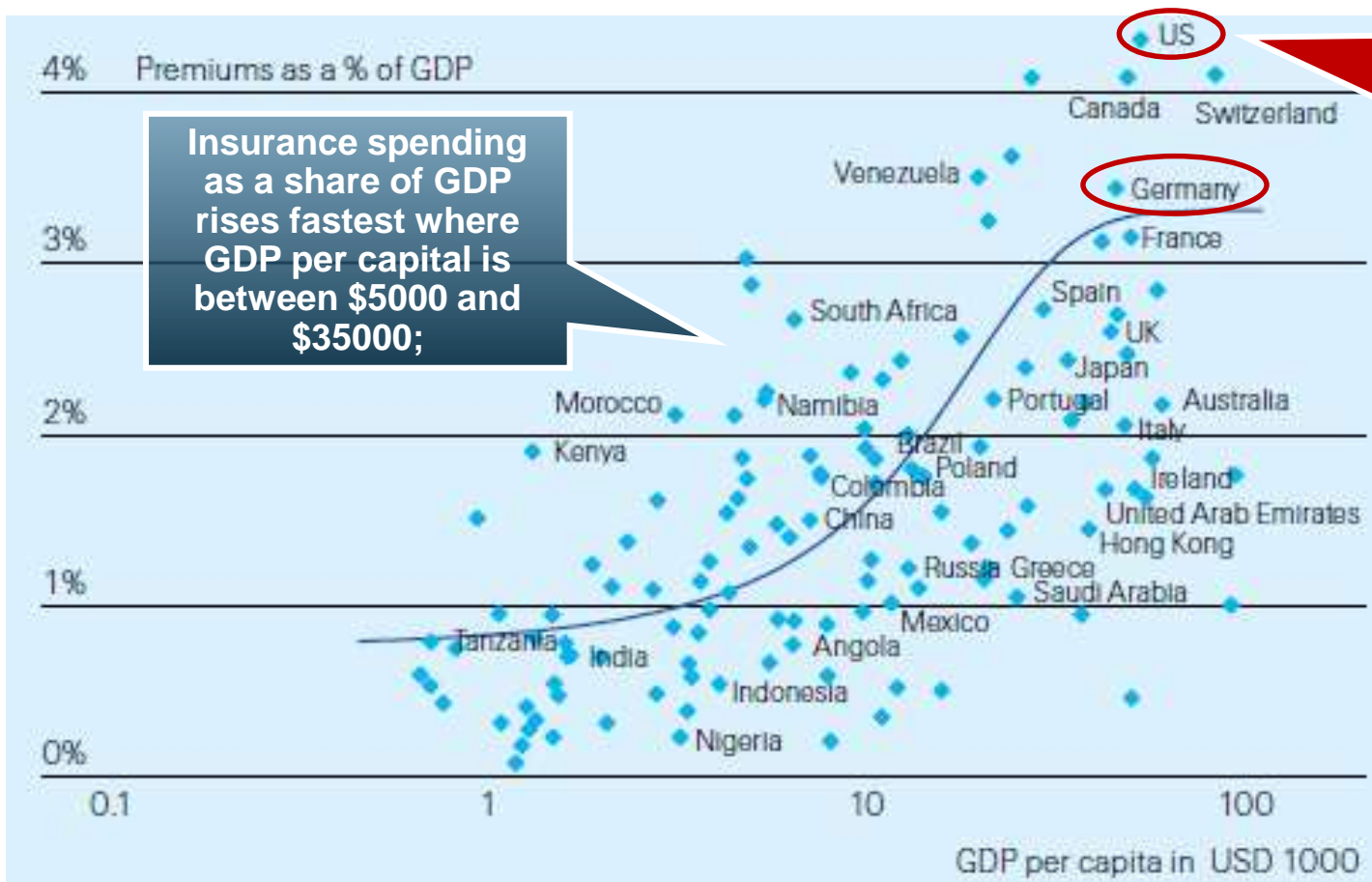
Global Real (Inflation Adjusted) Premium Growth: 1980-2013

Premium growth is very erratic in part to inflation volatility in emerging markets as well as a lack of consistent cyclicity

Emerging market growth has exceeded that of industrialized countries in 30 of the past 34 years, including the entirety of the global financial crisis and subsequent recovery



Relationship Between Nonlife Premiums as % of GDP and GDP per Capita, 2014*



Growth is much slower in higher income economies such as the US, Canada, Switzerland, Germany and France.

Insurance spending as a share of GDP rises fastest where GDP per capita is between \$5000 and \$35000;

Note: The S-shaped curve depicted is estimated using regression analysis based on data from 140 countries.

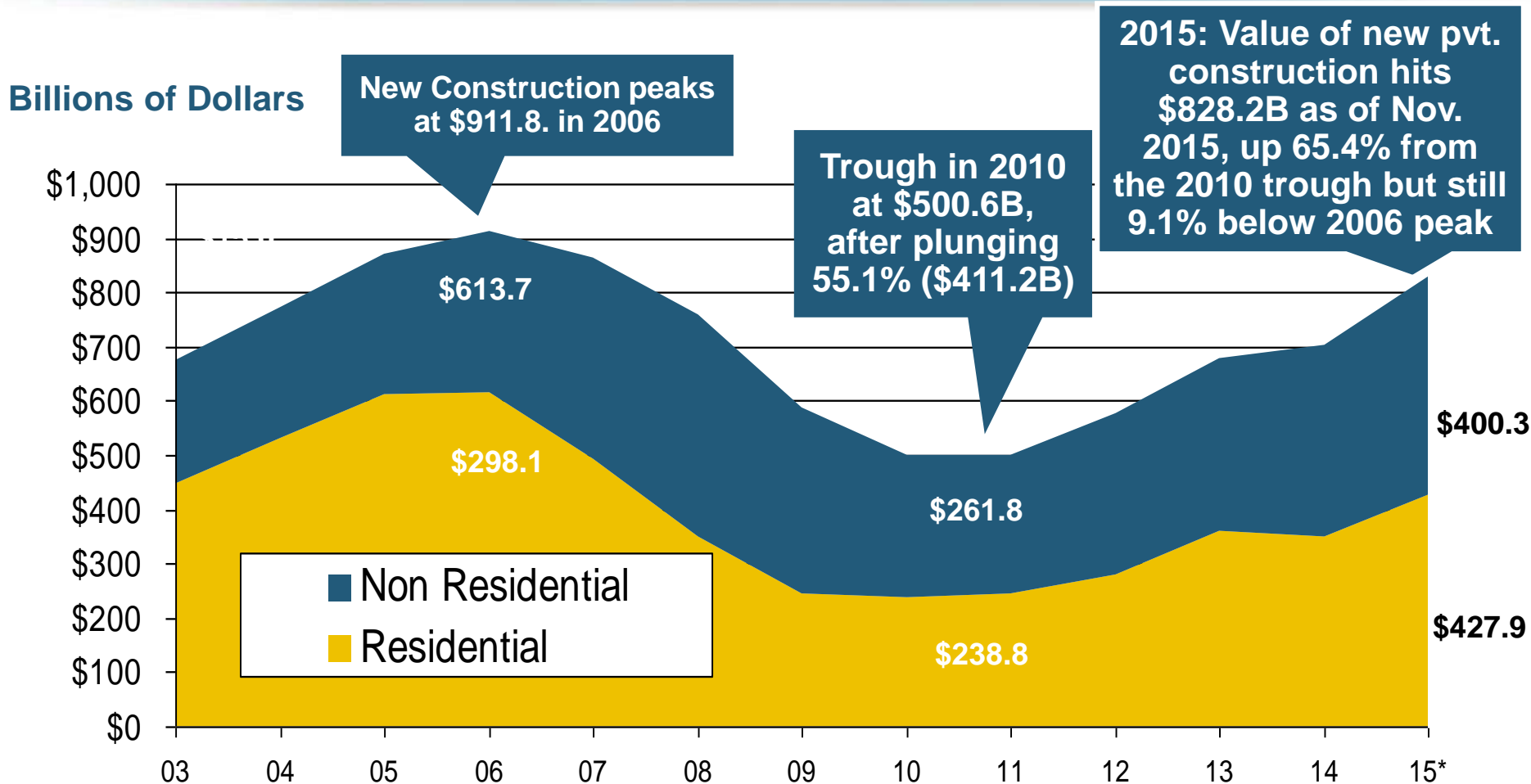
Source: Swiss Re, *sigma*, No. 4/2015.



CONSTRUCTION INDUSTRY OVERVIEW & OUTLOOK

**The Construction Sector Is
Critical to the Economy and
the P/C Insurance Industry**

Value of New Private Construction: Residential & Nonresidential, 2003-2015*



Private Construction Activity Is Moving in a Positive Direction though Remains Well Below Pre-Crisis Peak; Residential Dominates

*2015 figure is a seasonally adjusted annual rate as of November.

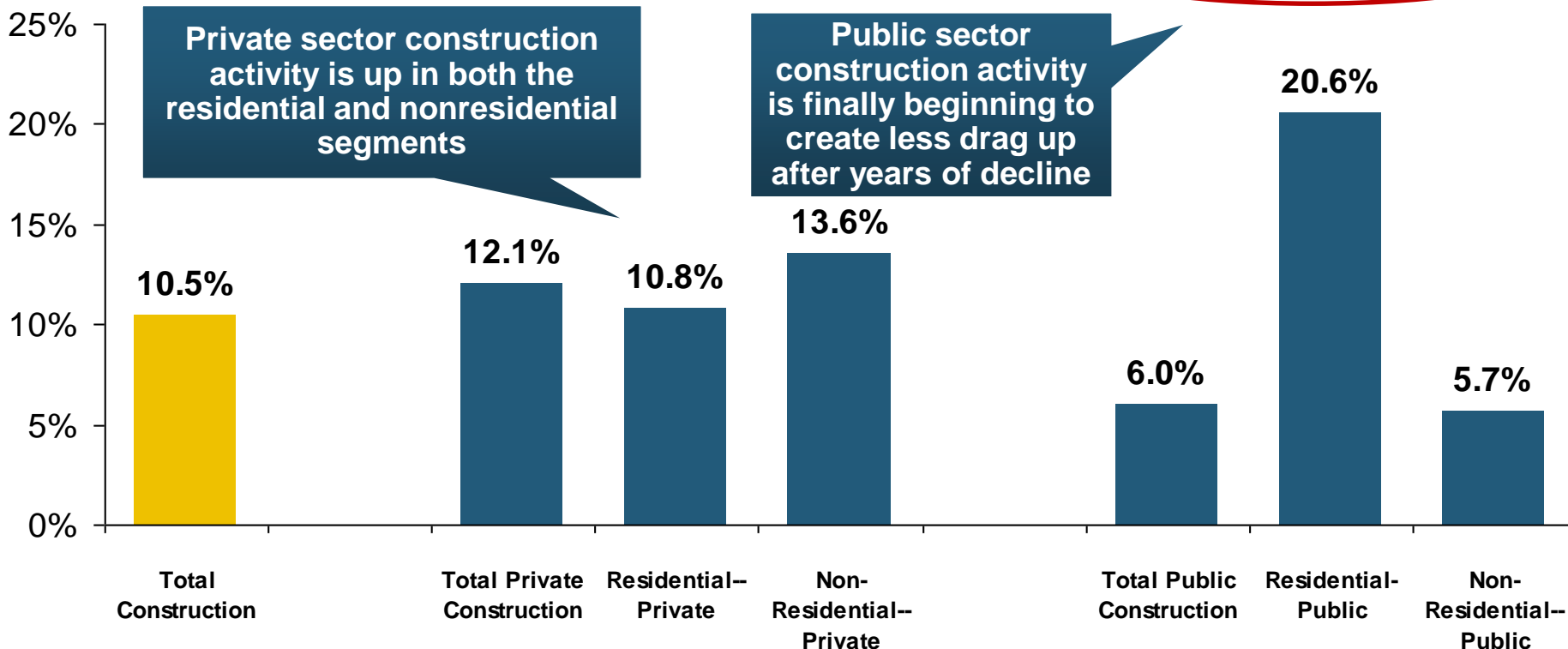
Sources: US Department of Commerce <http://www.census.gov/construction/c30/c30index.html> ; Insurance Information Institute.

Value of Construction Put in Place, 2015 vs. 2014*

Growth (%)

Private: +12.1%

Public: +6.0%



Overall Construction Activity is Up Again After Languishing in Early 2015; State/Local Sector Government Sector May Be Recovering as Budget Woes Ease in Some Jurisdictions

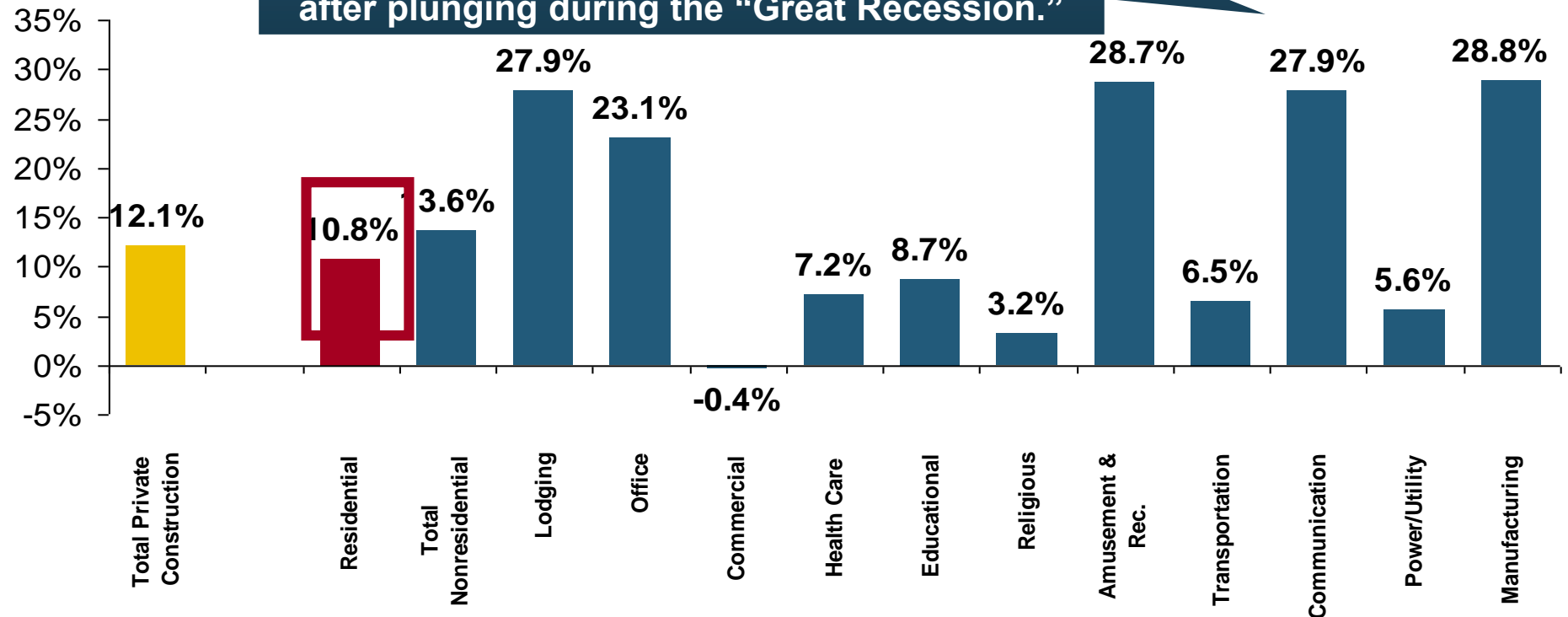
*seasonally adjusted data through November.

Source: U.S. Census Bureau, <http://www.census.gov/construction/c30/c30index.html> ; Insurance Information Institute.

Value of Private Construction Put in Place, by Segment, 2015 vs. 2014*

Growth (%)

Led by the Manufacturing, Lodging, Communications and Amusement & Recreations segments, Private nonresidential sector construction activity continues to rise after plunging during the “Great Recession.”



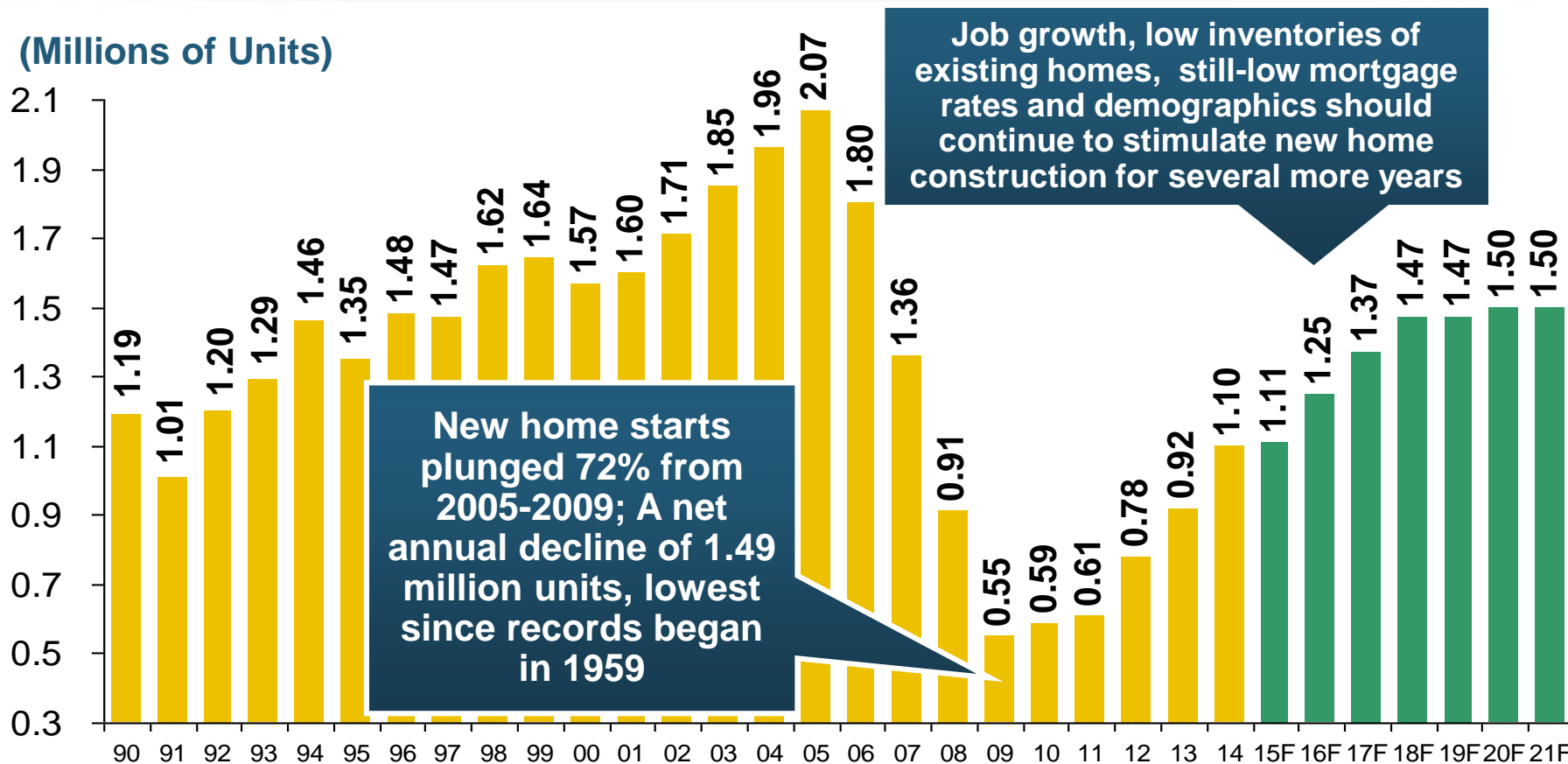
Private Construction Activity is Up in Most Segments in the Second Half of 2015; Expansion Should Continue

*seasonally adjusted through Nov. 2015.

Source: U.S. Census Bureau, <http://www.census.gov/construction/c30/c30index.html> ; Insurance Information Institute.

New Private Housing Starts, 1990-2021F

(Millions of Units)



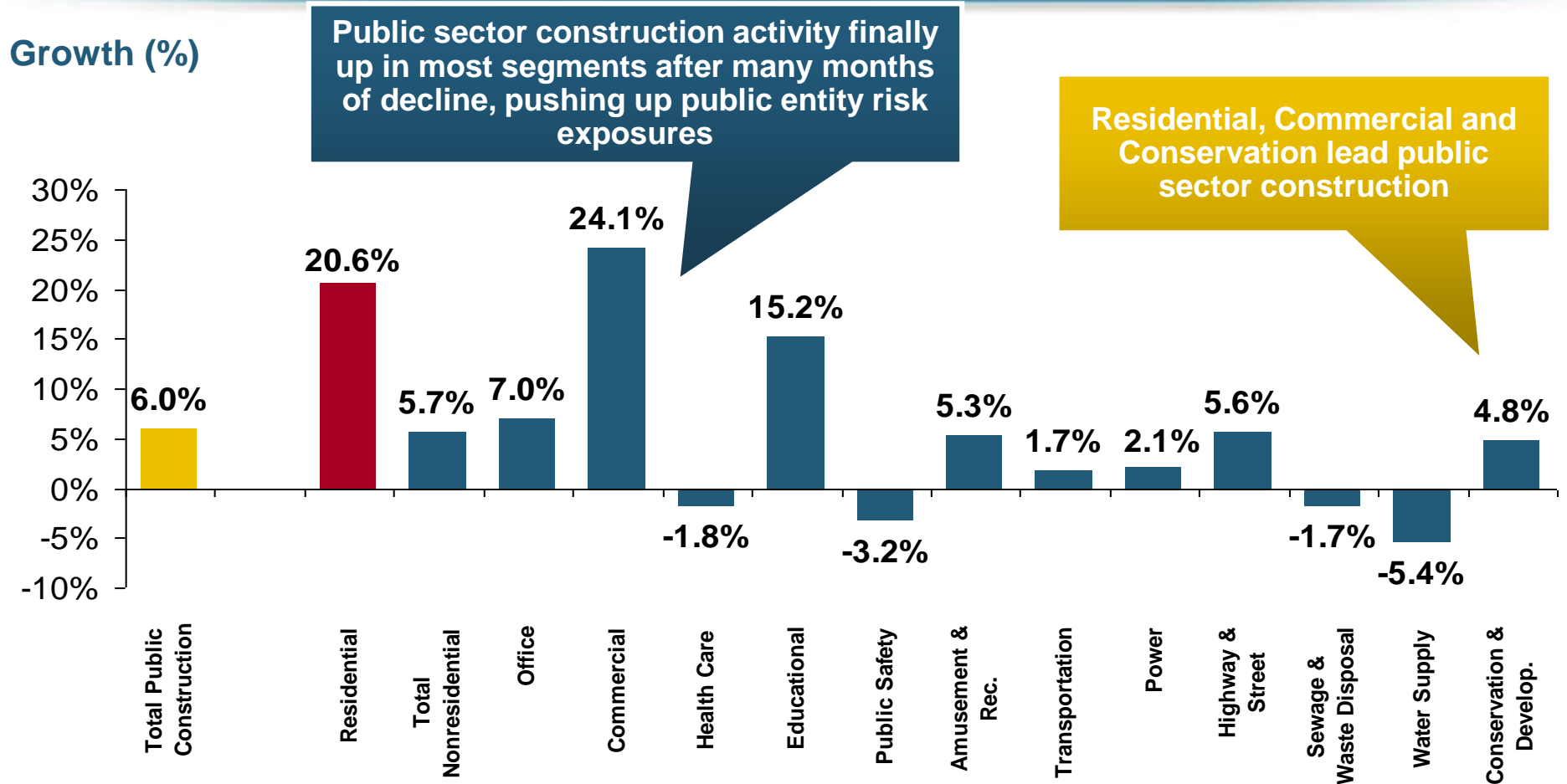
Job growth, low inventories of existing homes, still-low mortgage rates and demographics should continue to stimulate new home construction for several more years

New home starts plunged 72% from 2005-2009; A net annual decline of 1.49 million units, lowest since records began in 1959

Insurers Are Continue to See Meaningful Exposure Growth in the Wake of the “Great Recession” Associated with Home Construction: Construction Risk Exposure, Surety, Commercial Auto; Potent Driver of Workers Comp Exposure

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (2/16 for 2016-17; 10/15 for 2018-21F; Insurance Information Institute.

Value of Public Construction Put in Place, by Segment, Nov. 2015 vs. Nov. 2014*

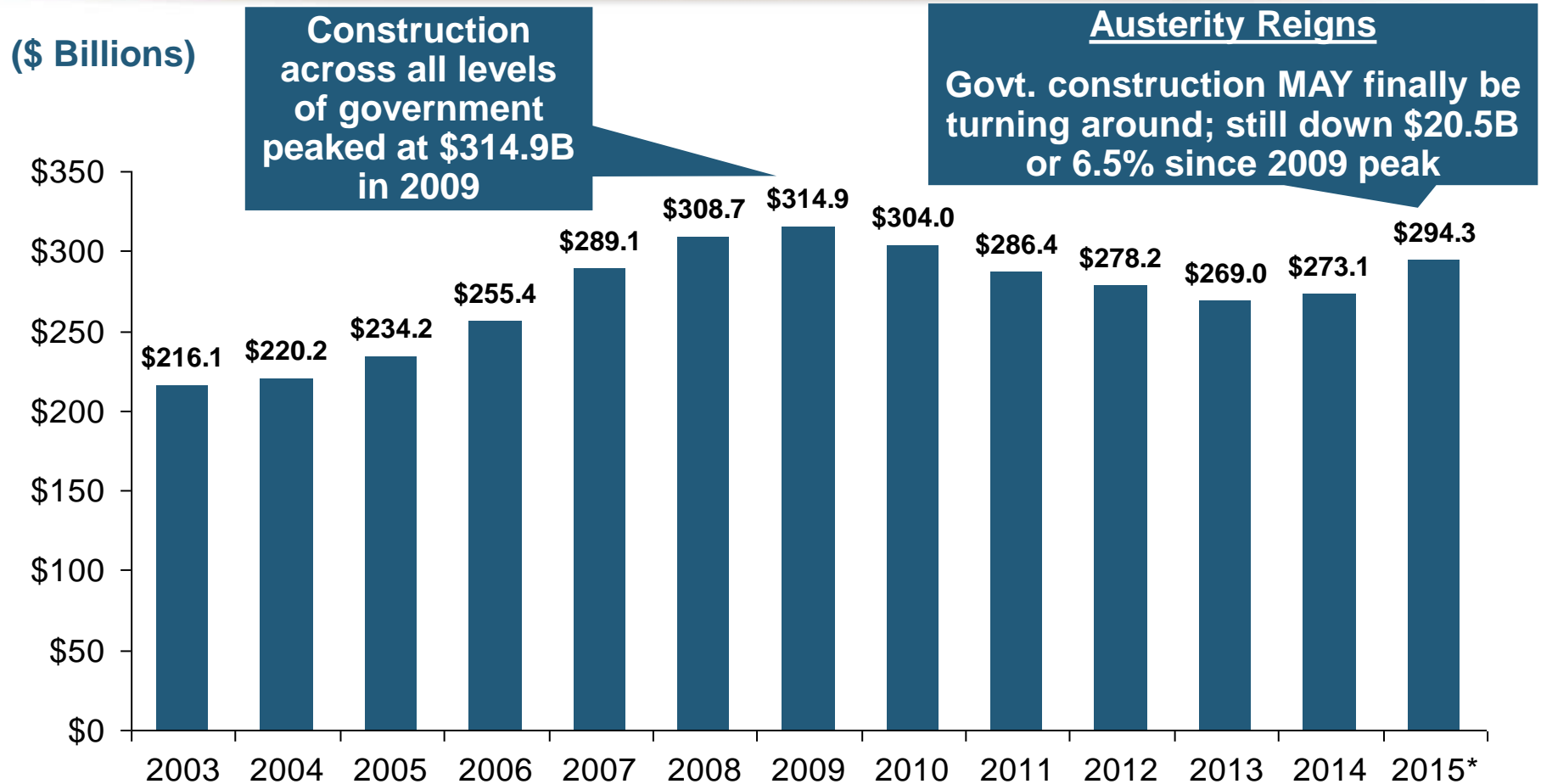


Public Construction Activity is Beginning to Recover from its Long Contraction which Will Drive Demand in Many Commercial Insurance Lines

*seasonally adjusted

Source: U.S. Census Bureau, <http://www.census.gov/construction/c30/c30index.html> ; Insurance Information Institute.

Value of New Federal, State and Local Government Construction: 2003-2015*



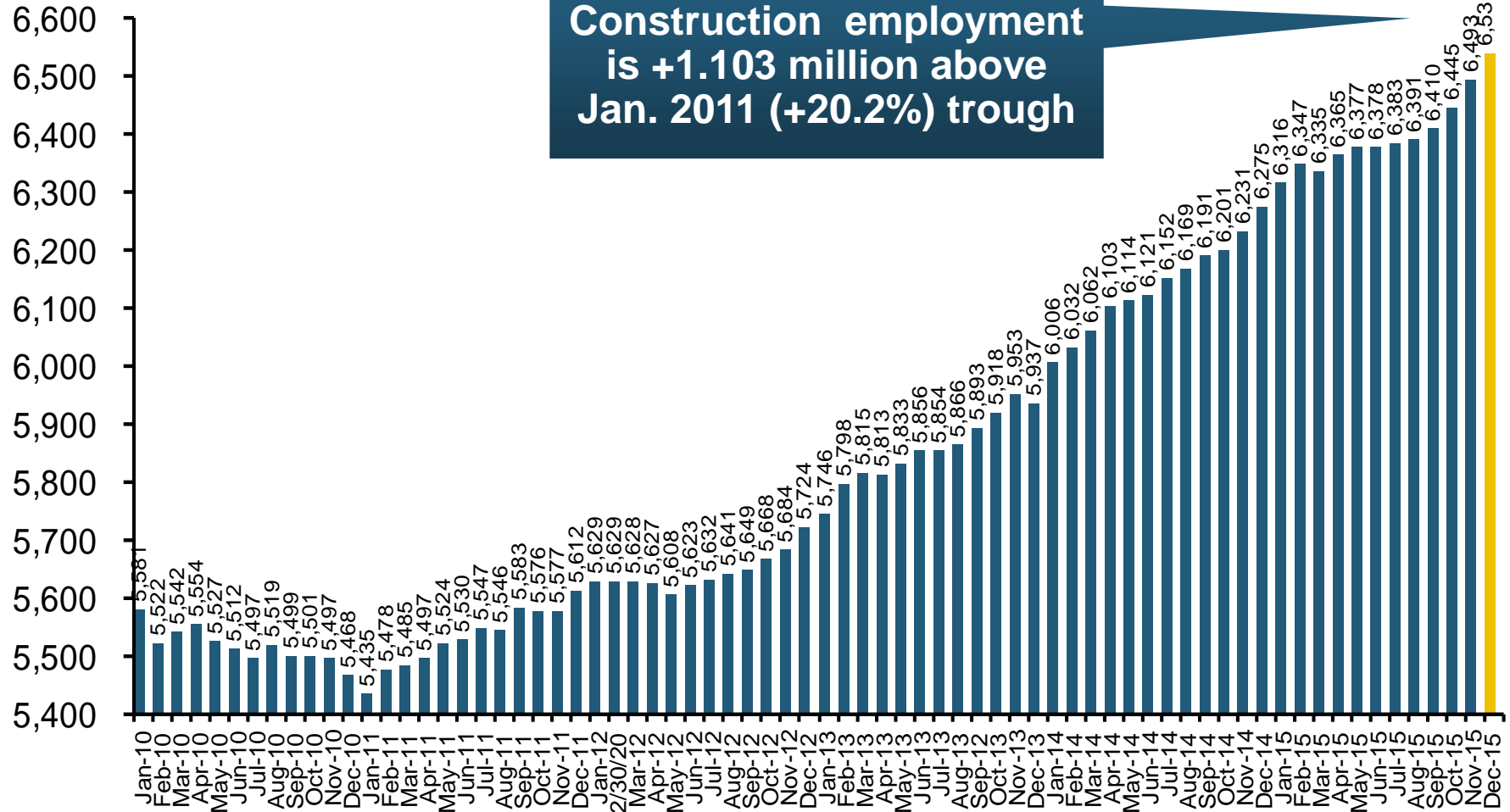
Government Construction Spending Peaked in 2009, Helped by Stimulus Spending, but Contracted As State/Local Governments Grappled with Deficits and Federal Sequestration; Only Now Recovering

*2015 figure is a seasonally adjusted annual rate as of November; http://www.census.gov/construction/c30/historical_data.html

Sources: US Department of Commerce; Insurance Information Institute.

Construction Employment, Jan. 2010—Dec. 2015*

(Thousands)

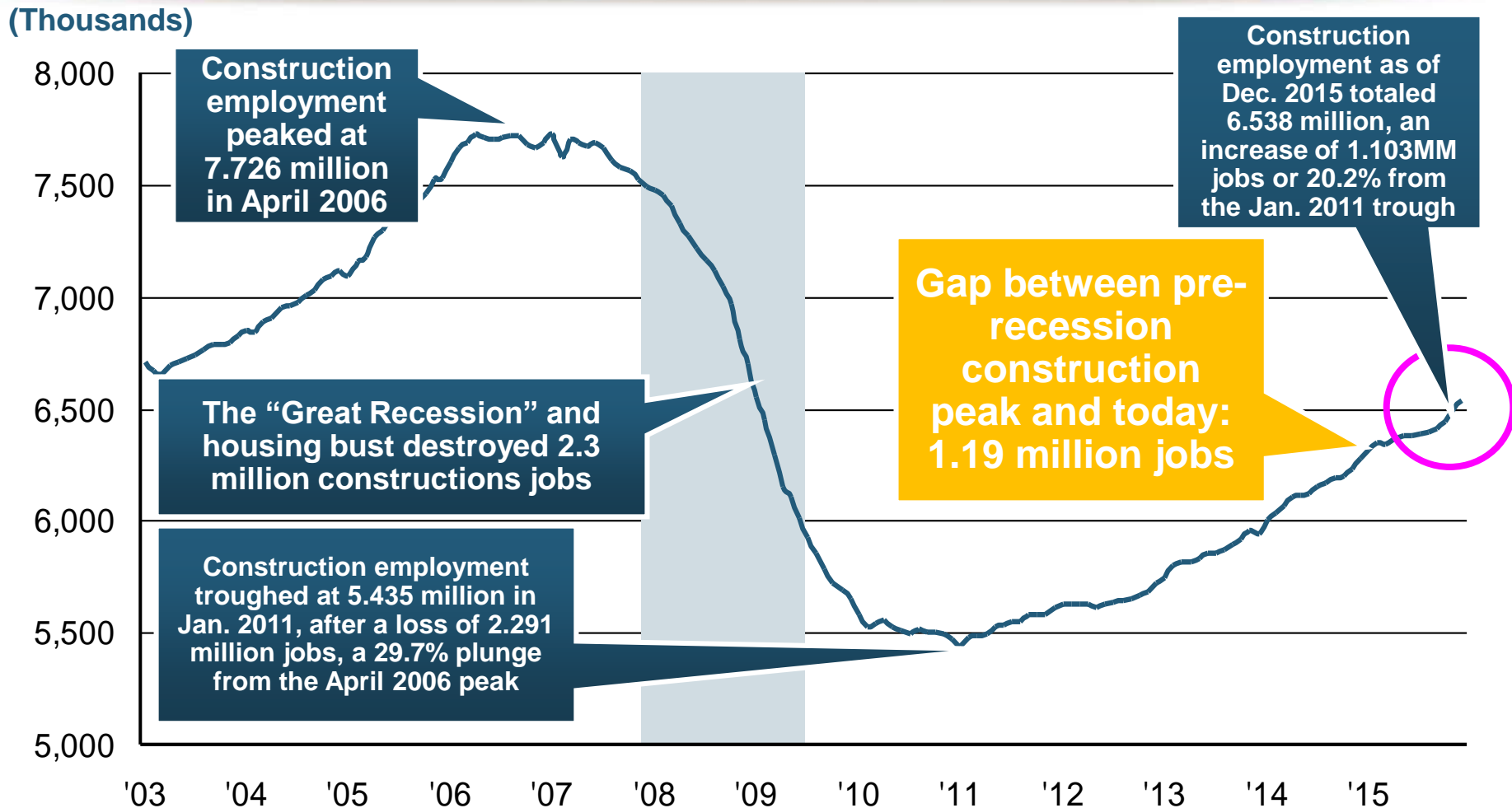


Construction and manufacturing employment constitute 1/3 of all WC payroll exposure.

*Seasonally adjusted.

Sources: US Bureau of Labor Statistics at <http://data.bls.gov>; Insurance Information Institute.

Construction Employment, Jan. 2003–Dec. 2015

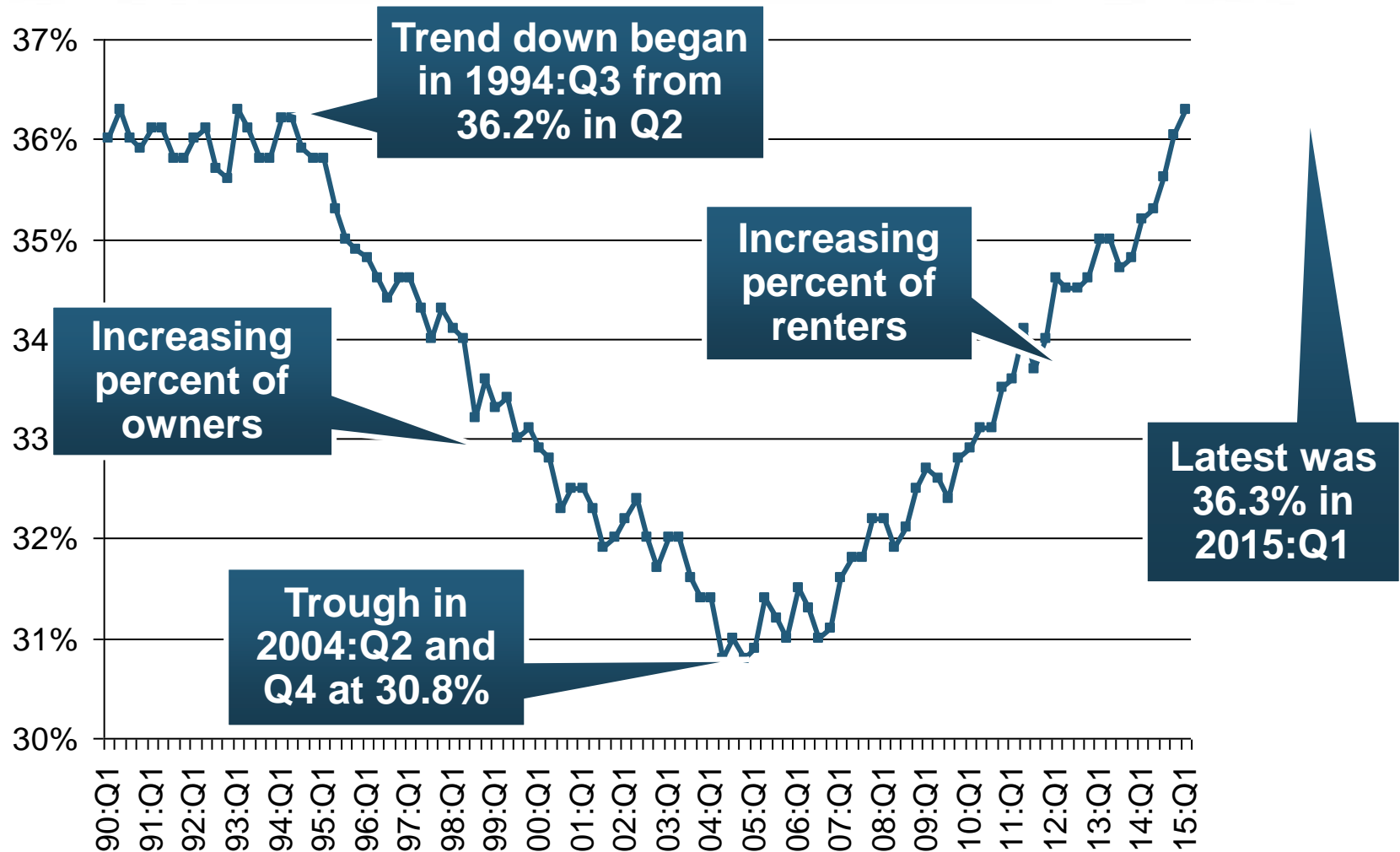


The Construction Sector Was a Growth Leader in 2014-15 as the Housing Market, Private Investment and Govt. Spending Recover. WC Insurers Will Benefit.

Note: Recession indicated by gray shaded column.

Sources: U.S. Bureau of Labor Statistics; Insurance Information Institute.

Rental-Occupied Housing Units as % of Total Occupied Units, Quarterly, 1990:Q1-2015:Q1



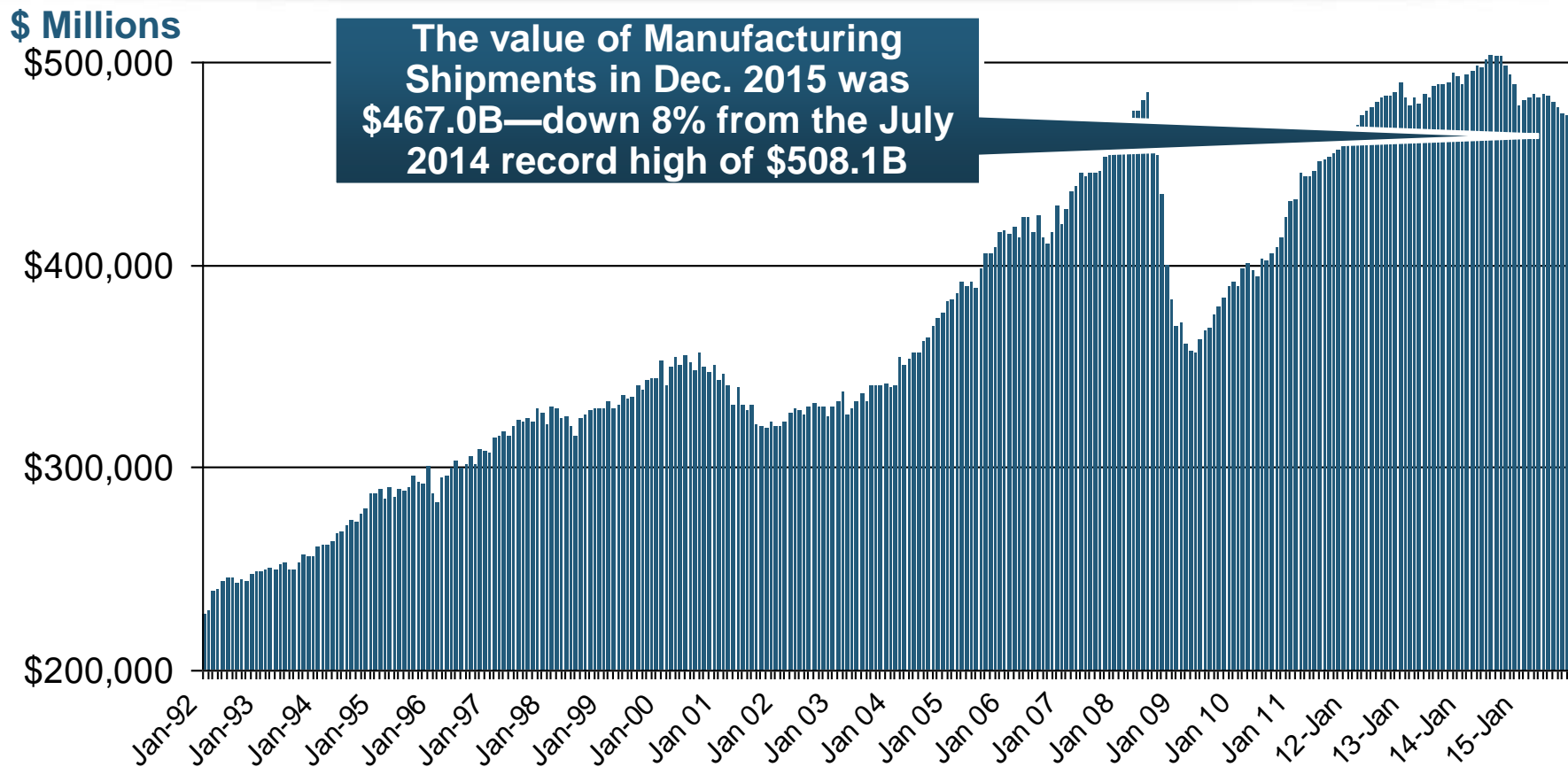
Since the Great Recession ended in June 2009, renters occupied 5.7 million more units (+15.6%).

Sources: US Census Bureau, *Residential Vacancies & Home Ownership in the First Quarter of 2015* (released April 28, 2015) and earlier issues; Insurance Information Institute. Next Census Bureau report to be released on July 28, 2015.

MANUFACTURING SECTOR OVERVIEW & OUTLOOK

**The U.S. Manufacturing Sector Is
Being Buffeted by a High Dollar,
Weak Export Markets and
Plunging Oil Prices**

Dollar Value* of Manufacturers' Shipments Monthly, Jan. 1992—December 2015



Monthly shipments in Nov. 2014 exceeded the pre-crisis (July 2008) peak but has declined in recent months. Weakness abroad, falling energy prices and a strong dollar are hurting the sector, especially exports. Manufacturing growth leads to gains in many commercial exposures: WC, Commercial Auto, Marine, Property, and various Liability Coverages.

* Seasonally adjusted; Data published Feb. 4, 2016.

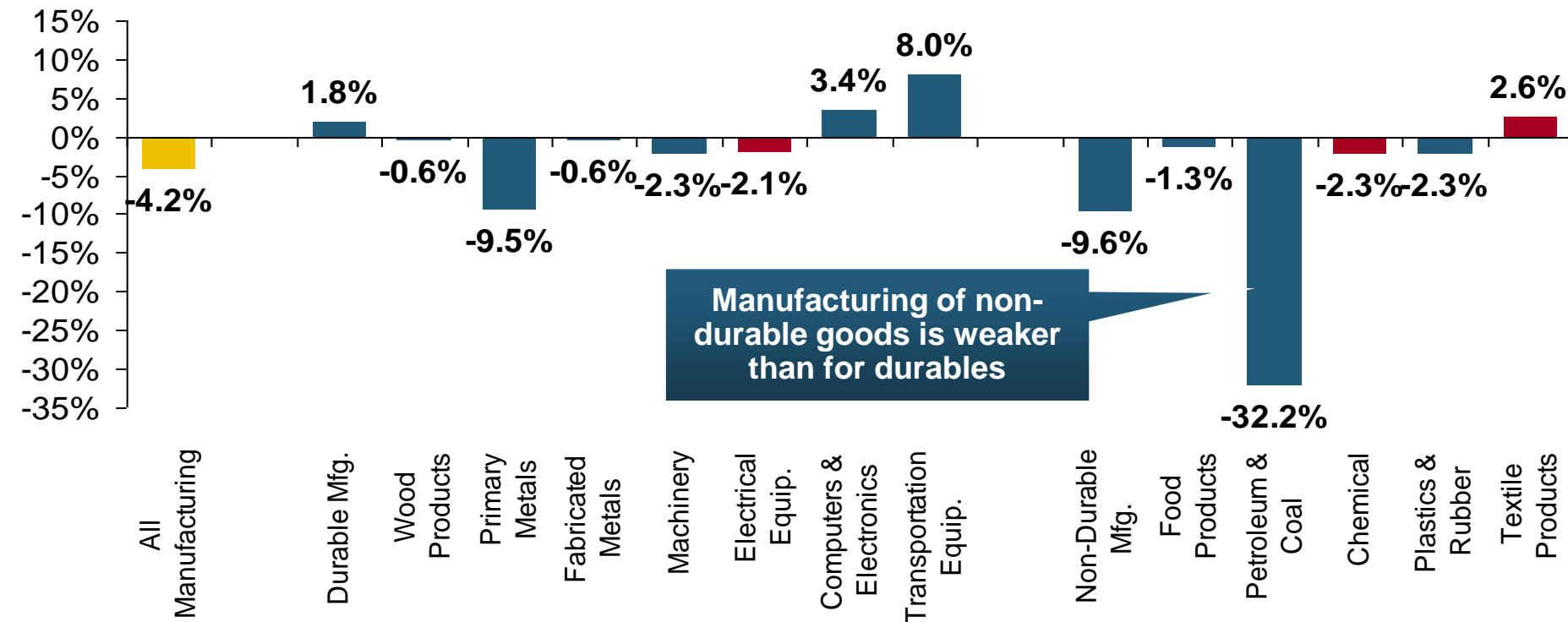
Source: U.S. Census Bureau, *Full Report on Manufacturers' Shipments, Inventories, and Orders*, <http://www.census.gov/manufacturing/m3/>

Manufacturing Growth for Selected Sectors, 2015 vs. 2014*

Growth (%)

Durables: +1.8%

Non-Durables: -9.6%

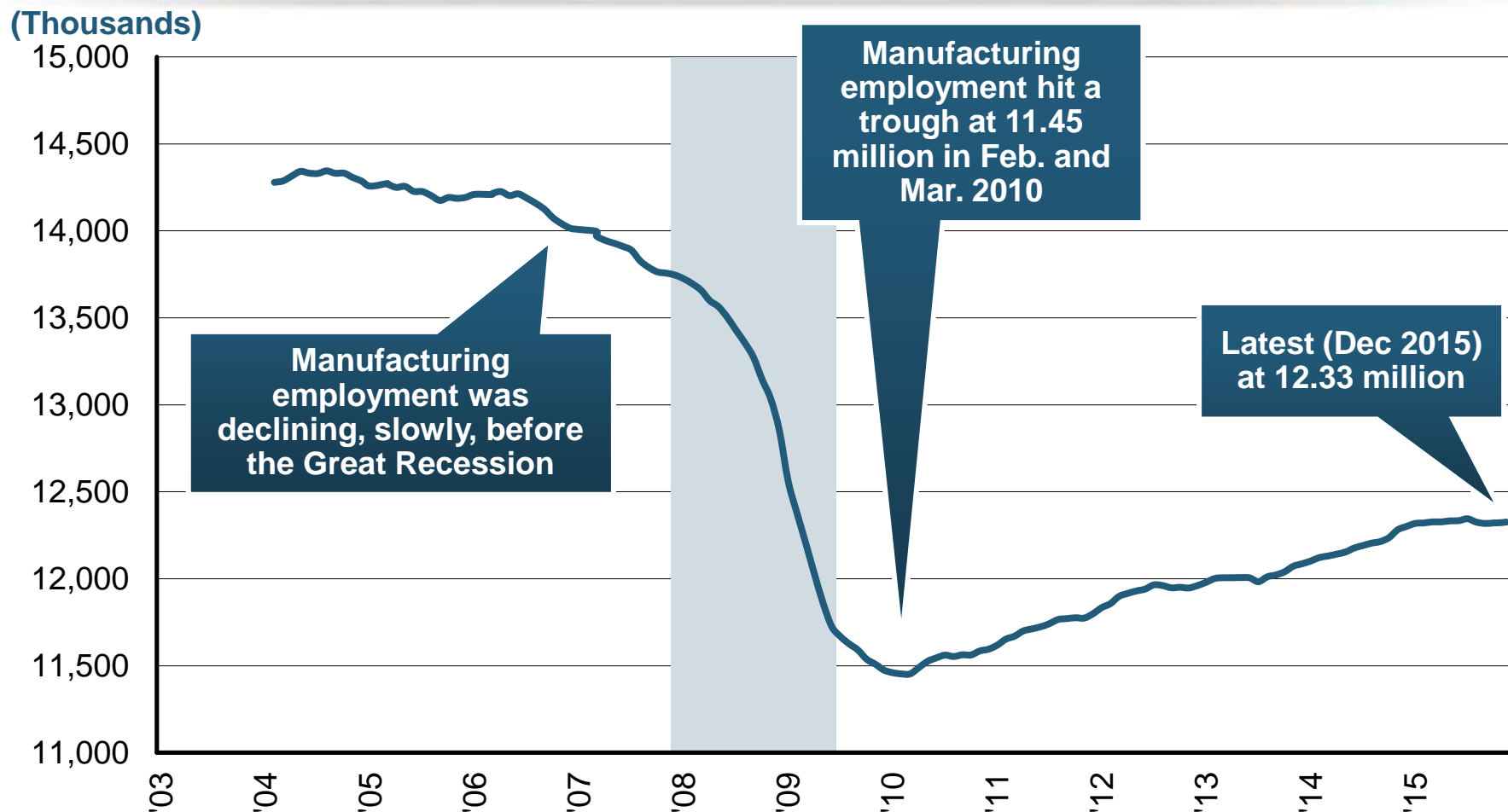


Manufacturing Is Contracting Across a Number of Sectors, Especially Petroleum. Adverse Exposure Impacts Are Likely for: WC, Commercial Property, Commercial Auto and Certain Liability Coverages

*Seasonally adjusted; Date are YTD comparing data through November 2015 to the same period in 2014.

Source: U.S. Census Bureau, *Full Report on Manufacturers' Shipments, Inventories, and Orders*, <http://www.census.gov/manufacturing/m3/>

Manufacturing Employment, Jan. 2003–December 2015

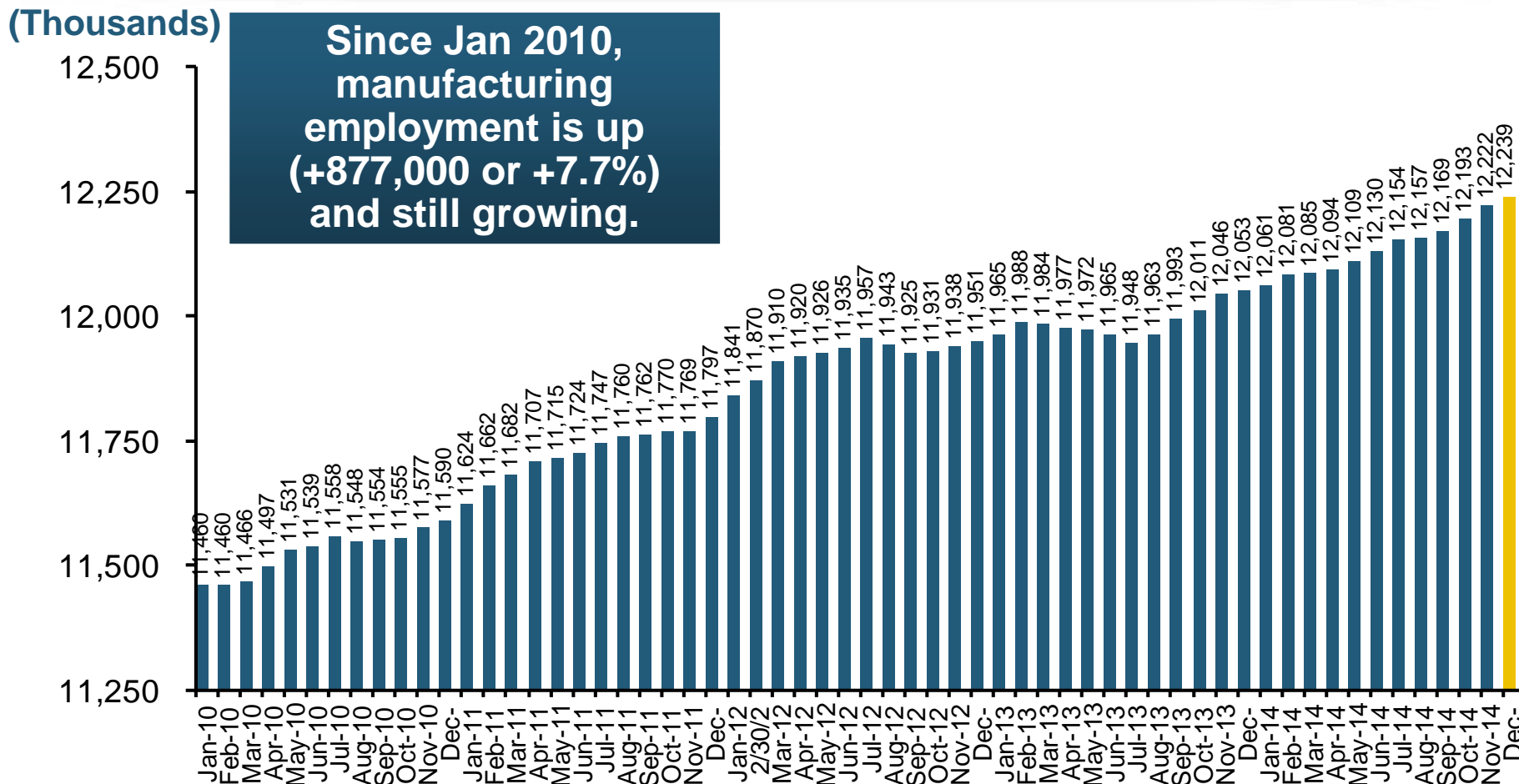


Manufacturing employment was growing slowly but steadily from 2010 through 2014 but has been flat in 2015. Automation, a slowing world economy, the strong dollar and other factors have held the growth rate down.

Note: Recession indicated by gray shaded column. Data are seasonally adjusted.

Sources: US Bureau of Labor Statistics; Insurance Information Institute.

Manufacturing Employment, Jan. 2010—December 2014*



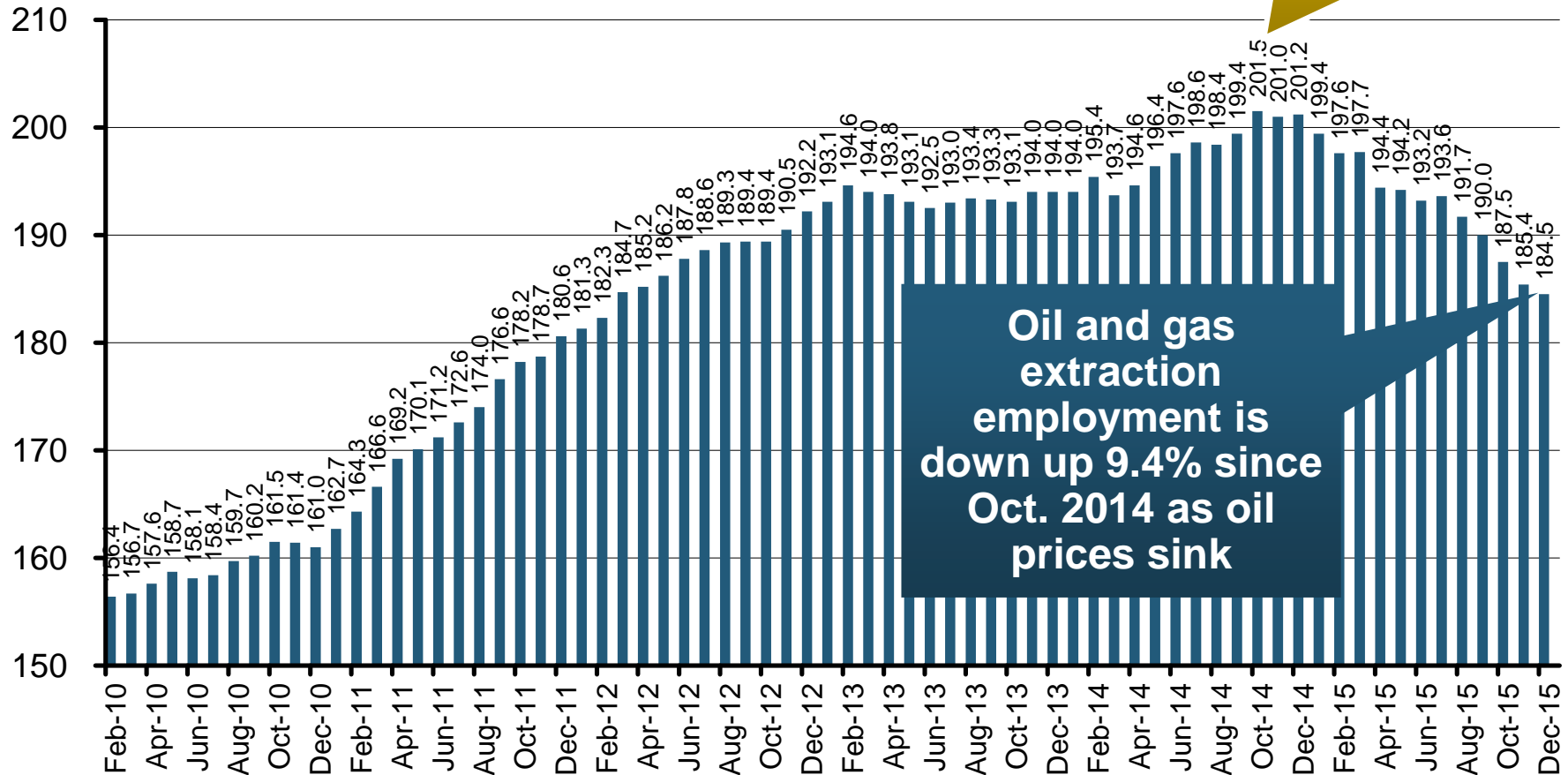
Manufacturing employment is a surprising source of strength in the economy. Employment in the sector is at a multi-year high.

*Seasonally adjusted.

Sources: US Bureau of Labor Statistics at <http://data.bls.gov>; Insurance Information Institute.

Employment in Oil & Gas Extraction, Jan. 2010—Dec. 2015*

(000)

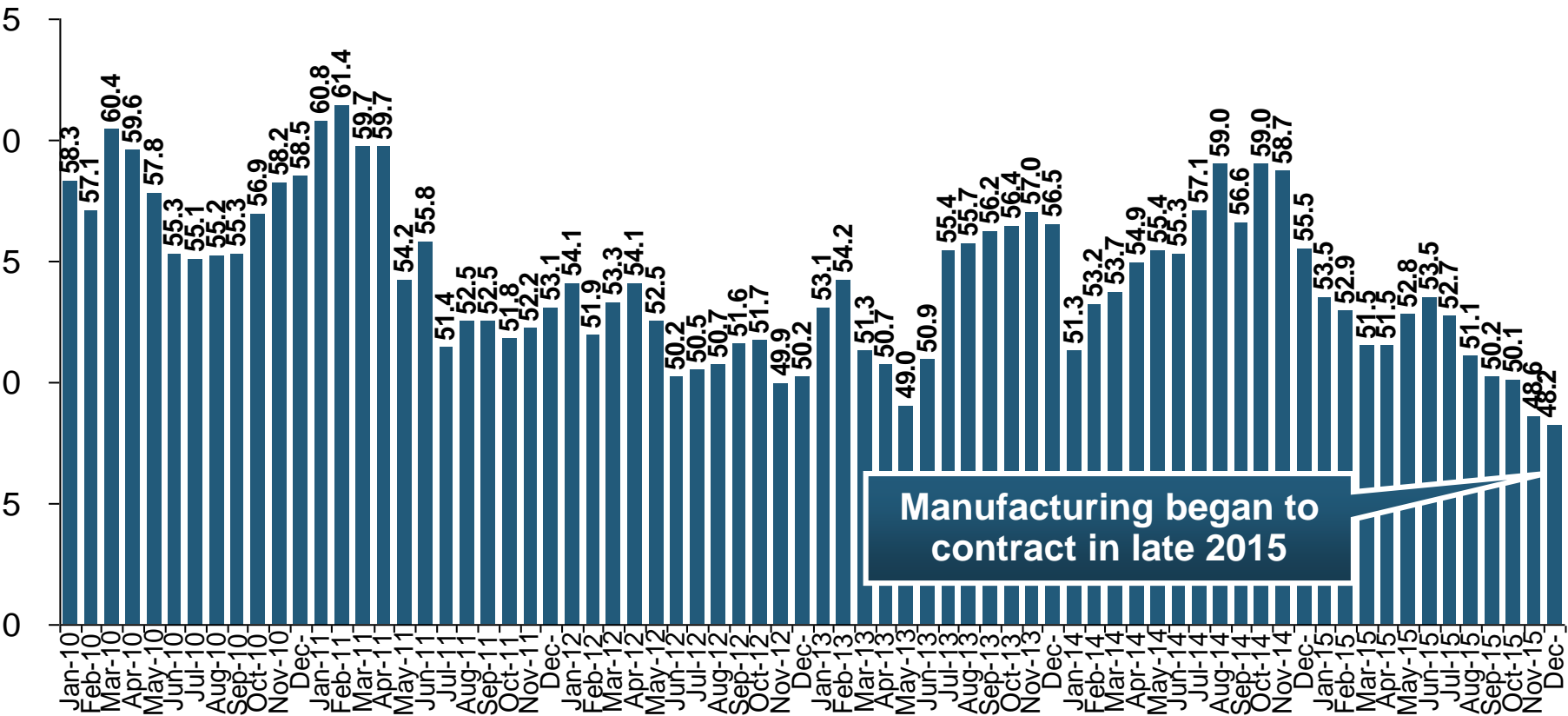


*Seasonally adjusted

Sources: US Bureau of Labor Statistics at <http://data.bls.gov>; Insurance Information Institute.

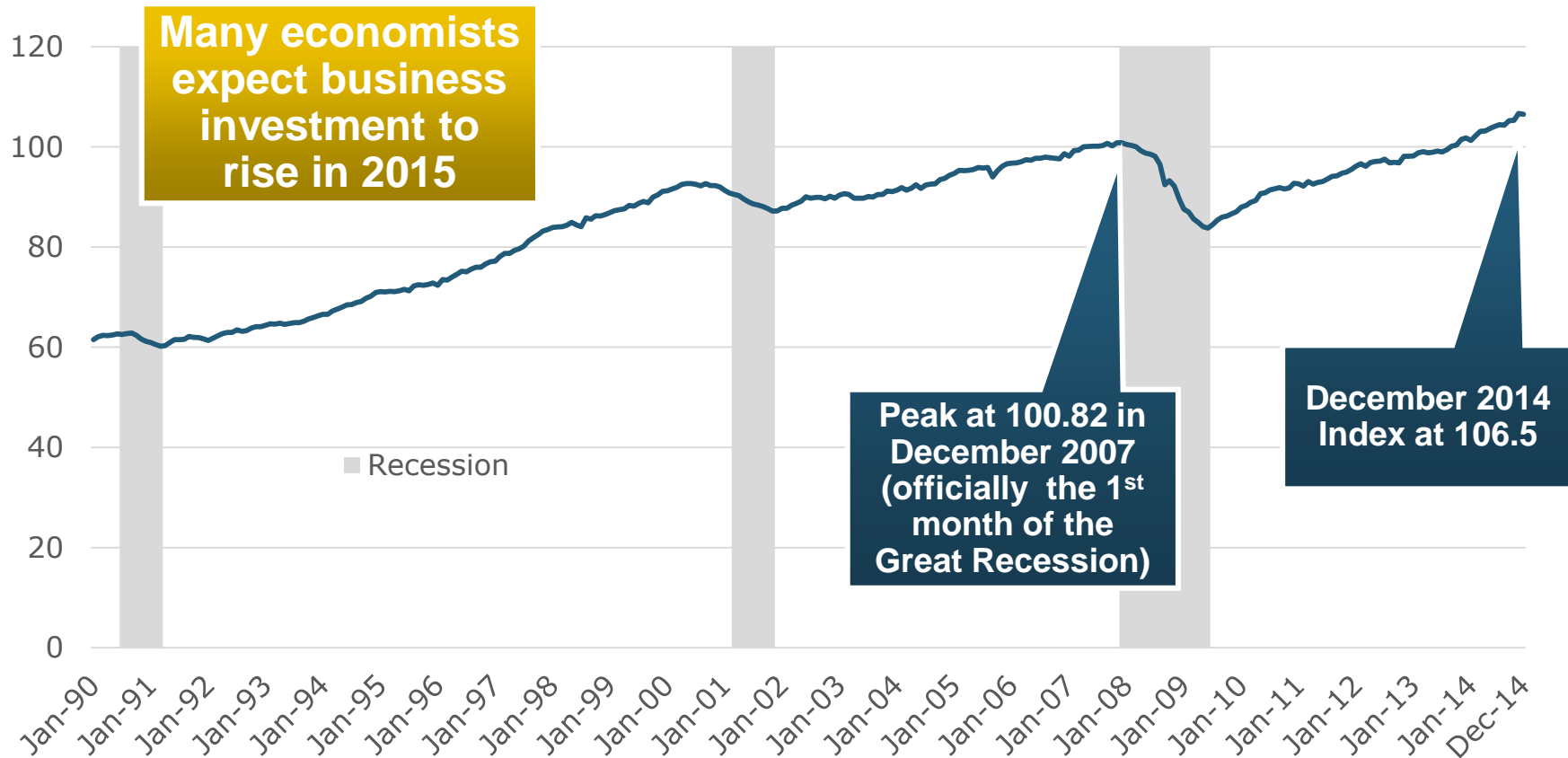
ISM Manufacturing Index (Values > 50 Indicate Expansion)

January 2010 through December 2015



The manufacturing sector expanded for 68 of the 72 months from Jan. 2010 through Dec. 2015. Manufacturing sector now appears to be in contraction due to weakness abroad, strong dollar and collapse in oil prices

Index of Total Industrial Production:* A Near Peak as of December 2014



Insurance exposures for industrial production will continue growing in 2015, and commercial insurance premium volume with them. Y-o-Y growth to December 2014 was 4.6%. Both production and premium volume growth for 2015 should exceed this.

*Monthly, seasonally adjusted, through December 2014 (which is preliminary). Index based on year 2007 = 100

Sources: Federal Reserve Board at http://www.federalreserve.gov/releases/g17/ipdisk/ip_sa.txt.
National Bureau of Economic Research (recession dates); Insurance Information Institute.

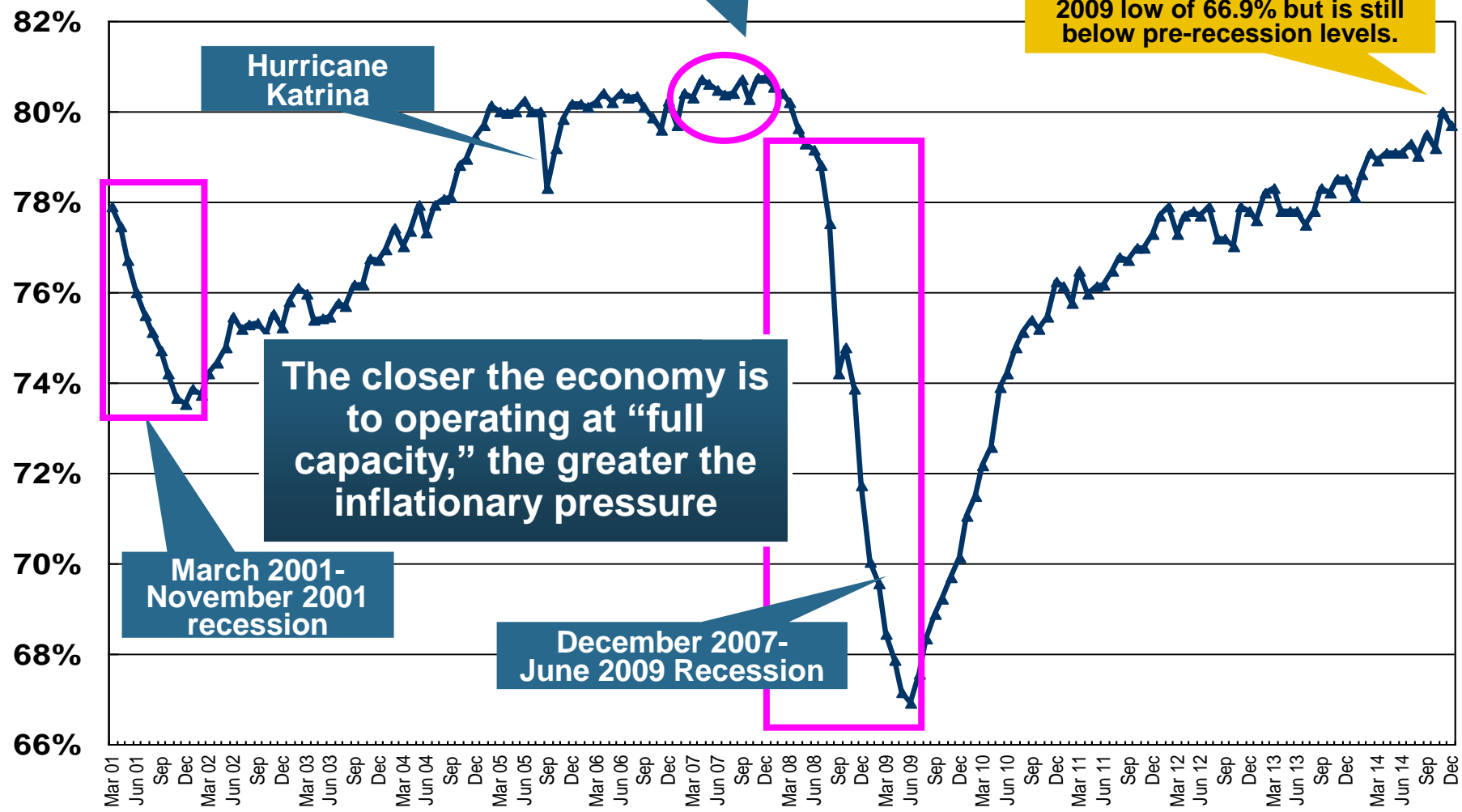
Recovery in Capacity Utilization is a Positive Sign for Commercial Exposures

March 2001 through Dec. 2014

“Full Capacity”

The US operated at 79.7% of industrial capacity in Dec. 2014, well above the June 2009 low of 66.9% but is still below pre-recession levels.

Percent of Industrial Capacity



Source: Federal Reserve Board statistical releases at <http://www.federalreserve.gov/releases/g17/Current/default.htm>.

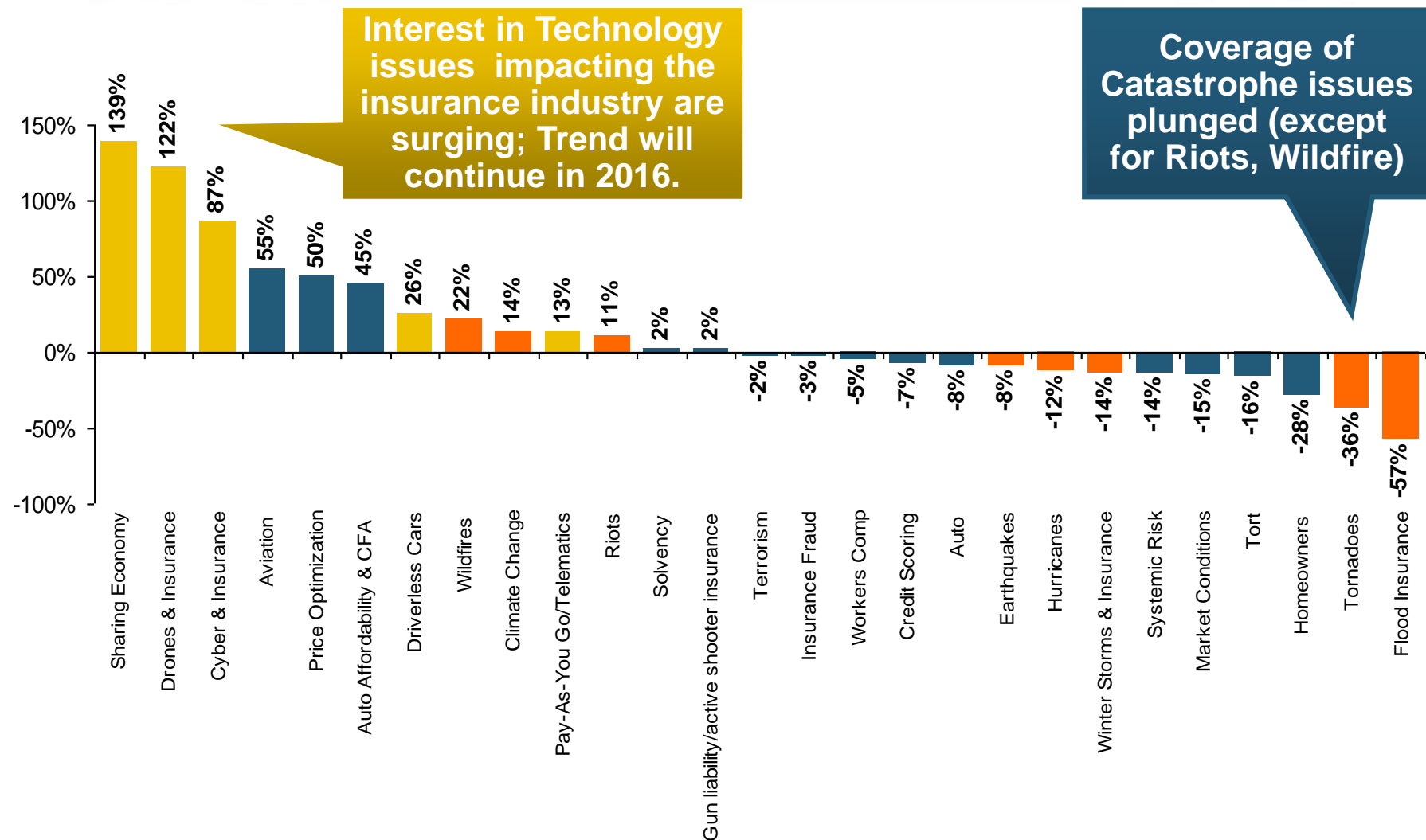


Top Insurance Issues:
What's Hot, What's Not

**Technology Spiked,
Catastrophes Crashed**

I.I.I. Media Index, P/C, 2014 vs 2015*

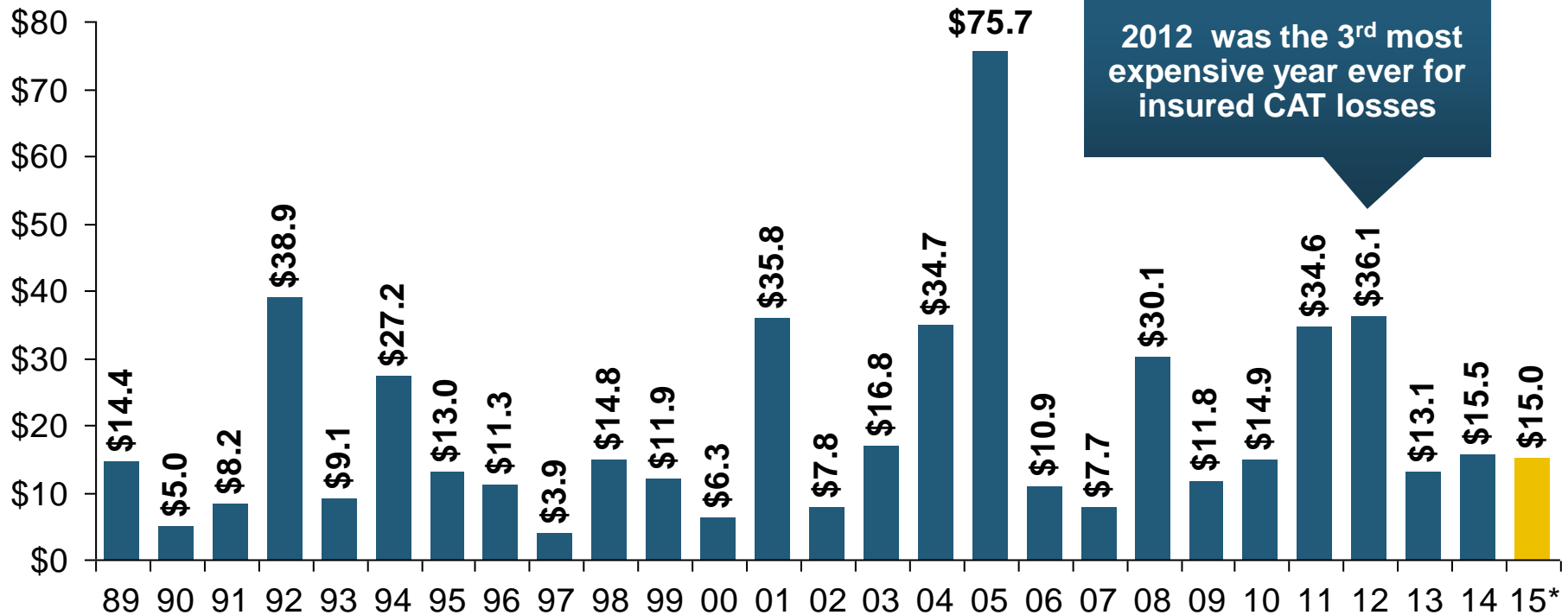
Percent increase/decrease from previous year



*Based on a search of Lexis/Nexis (January 1-December 15)

U.S. Insured Catastrophe Losses

(\$ Billions, \$ 2015)



2012 was the 3rd most expensive year ever for insured CAT losses

2013/14 Were Welcome Respite from 2011/12, among the Costliest Years for Insured Disaster Losses in US History. Longer-term Trend is for more—not fewer—Costly Events

\$15B in insured CAT losses though 12/31/15 (est.)

*Estimate through 12/31/15 in 2015 dollars.

Note: 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01 (\$25.9B 2011 dollars). Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B (\$15.6B in 2011 dollars.)

Sources: Property Claims Service/ISO; Insurance Information Institute.

TECHNOLOGY, DISRUPTORS AND INSURANCE

**Applications of Technology in P/C
Insurance Have Gripped the Media as
Have Industry Solutions**

Interest in Technology Issues and Insurance Is Surging: Presents Opportunity

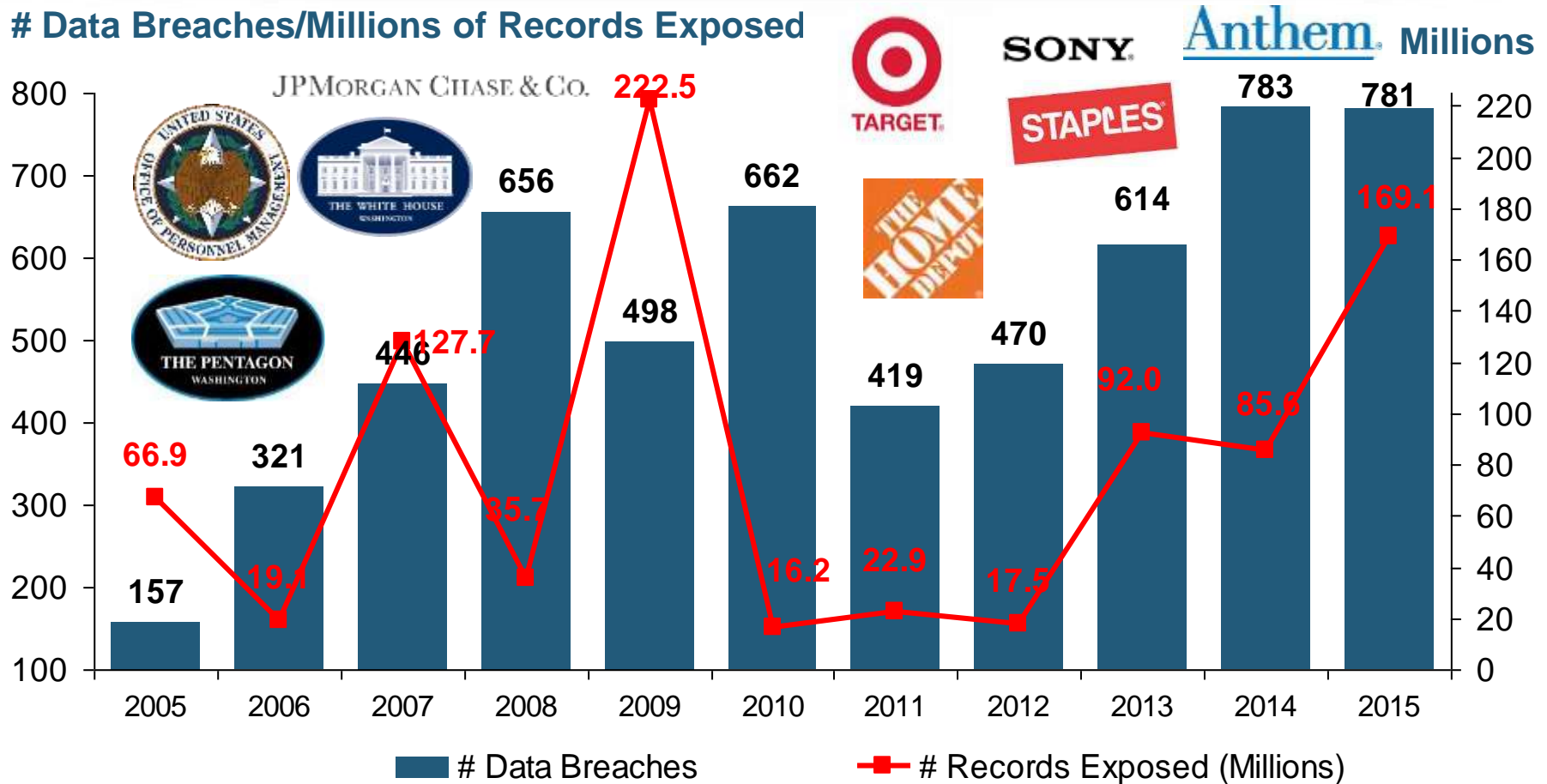
- Insurers are at the intersection of many of the most important technological innovations of the early 21st century
 - ◆ Problem→Solution→Opportunity
- Industry is too often depicted as a technology laggard
- I.I.I. is highlighting the industry as being on the technological cutting edge—an innovative, nimble industry with solutions for managing countless new risks of the current era:
 - ◆ Sharing economy Cyber Auto Technology
 - ◆ Supply Chain Climate Risk Drones
 - ◆ Wearable devices The “Internet of Things”
- Positions industry well with customers, investors, current and prospective workers/Millennials, regulators/legislators and (tech) media

CYBER RISK AND INSURANCE

**Cyber Risk is a Rapidly Emerging
Exposure for Businesses Large and
Small in Every Industry**

Data Breaches 2005-2015, by Number of Breaches and Records Exposed

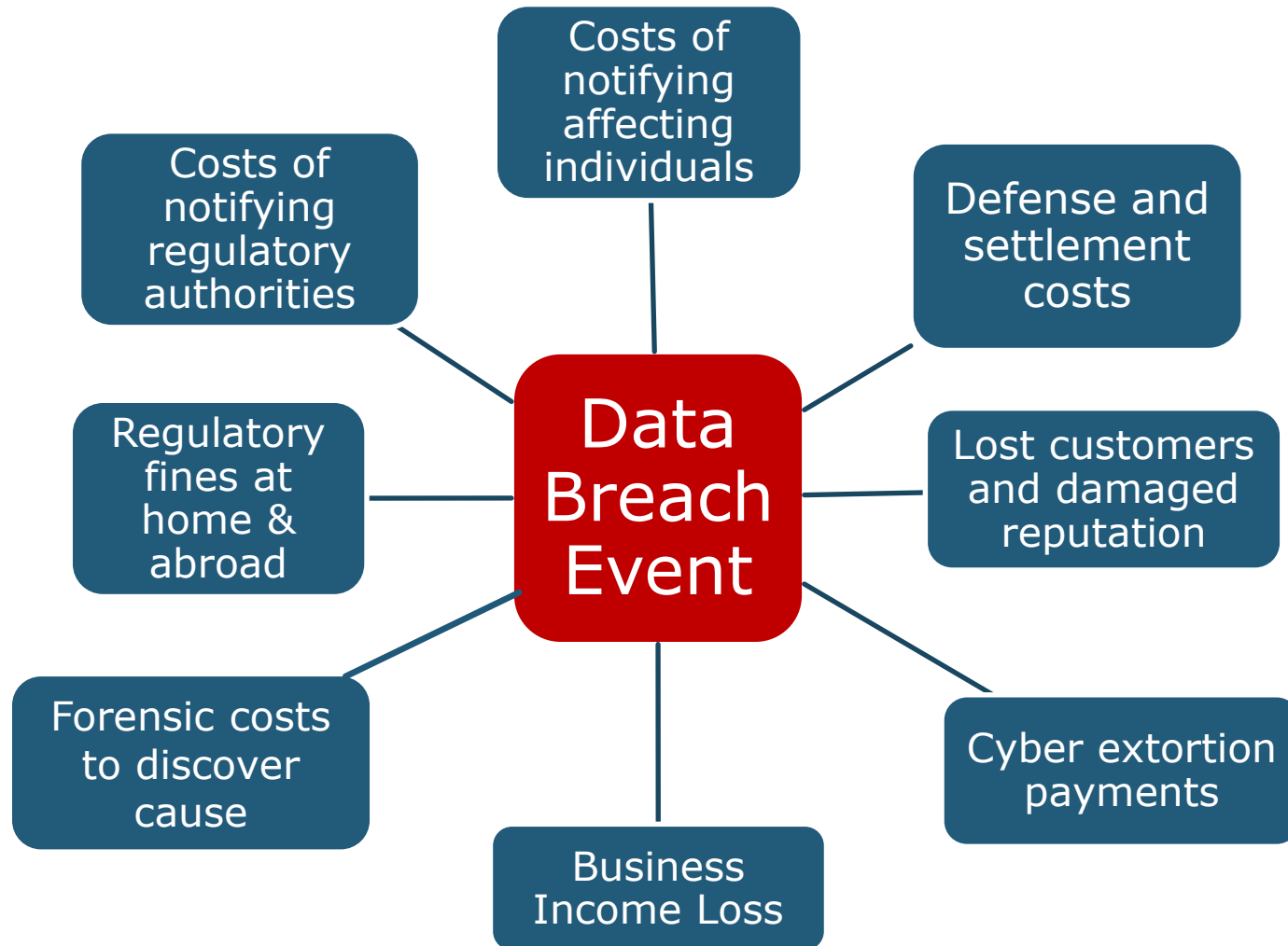
Data Breaches/Millions of Records Exposed



The 781 reported data breaches in 2015 was virtually unchanged from the record 783 reported in 2014. The number of exposed records soared to 169.1 million, and increase of 97.5%.

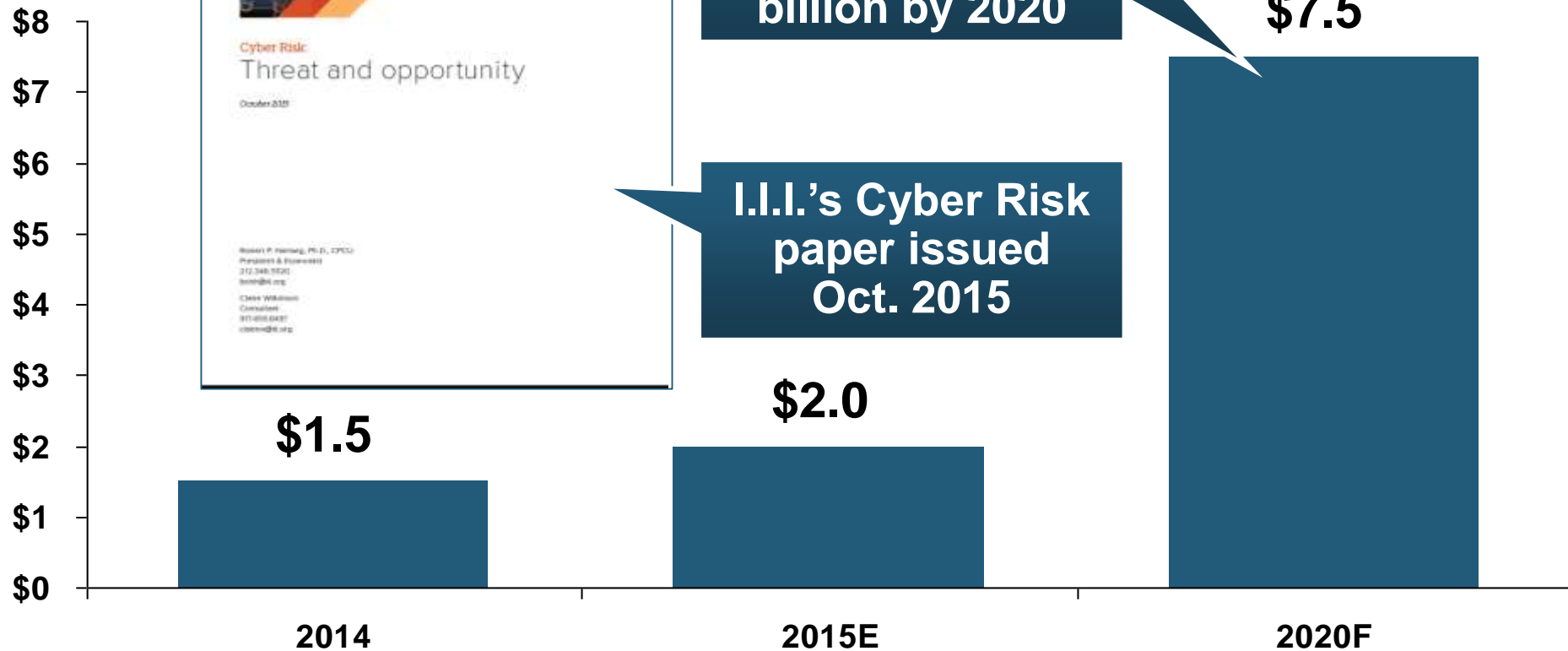
Source: Identity Theft Resource Center (updated as of Jan. 6, 2016); <http://www.idtheftcenter.org/images/breach/ITRCBreachReport2015.pdf>

Data/Privacy Breach: Many Potential Costs Can Be Insured



Estimated Cyber Insurance Premiums Written, 2014 – 2020F

\$ Billions





THE SHARING (ON-DEMAND) ECONOMY

**Area of Extreme Interest—And Insurers
Are Providing Solutions for this
Dynamic Economic Segment**

Sharing/On-Demand/Peer-to-Peer Economy Impacts Many Lines of Insurance

- The “On-Demand” Economy is or will impact many segments of the economy important to P/C insurers
 - ◆ Auto (personal and commercial)
 - ◆ Homeowners/Renters
 - ◆ Many Liability Coverages
 - ◆ Professional Liability
 - ◆ Workers Comp
- Many insurance questions have arisen
- Insurance solutions are increasingly available to fill the many insurance gaps that arise



U B E R



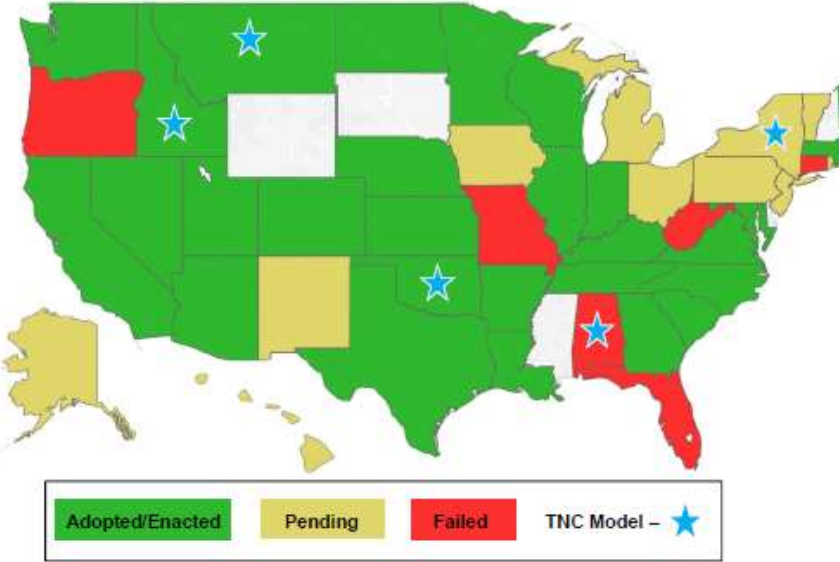
Labor on Demand: Huge Implications for the US Economy, Workers & Insurers

Will YOUR job be reduced to an app?

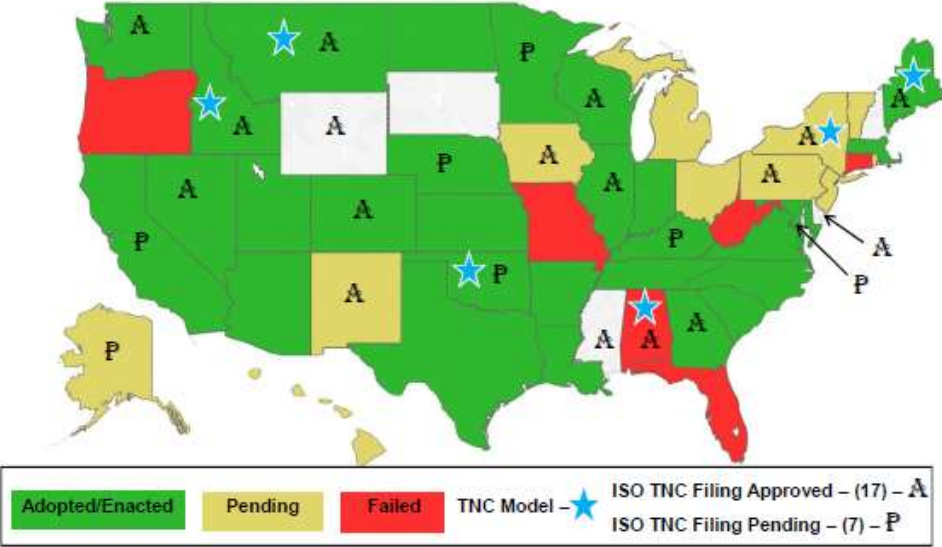


Ridesharing Regulation/Legislation and Status of ISO Filings as of 9/30/15

Status Ride Sharing Legislation/Regulation



Status of ISO Filings



Source: ISO.



AUTO TECHNOLOGY & THE FUTURE OF AUTO INSURANCE

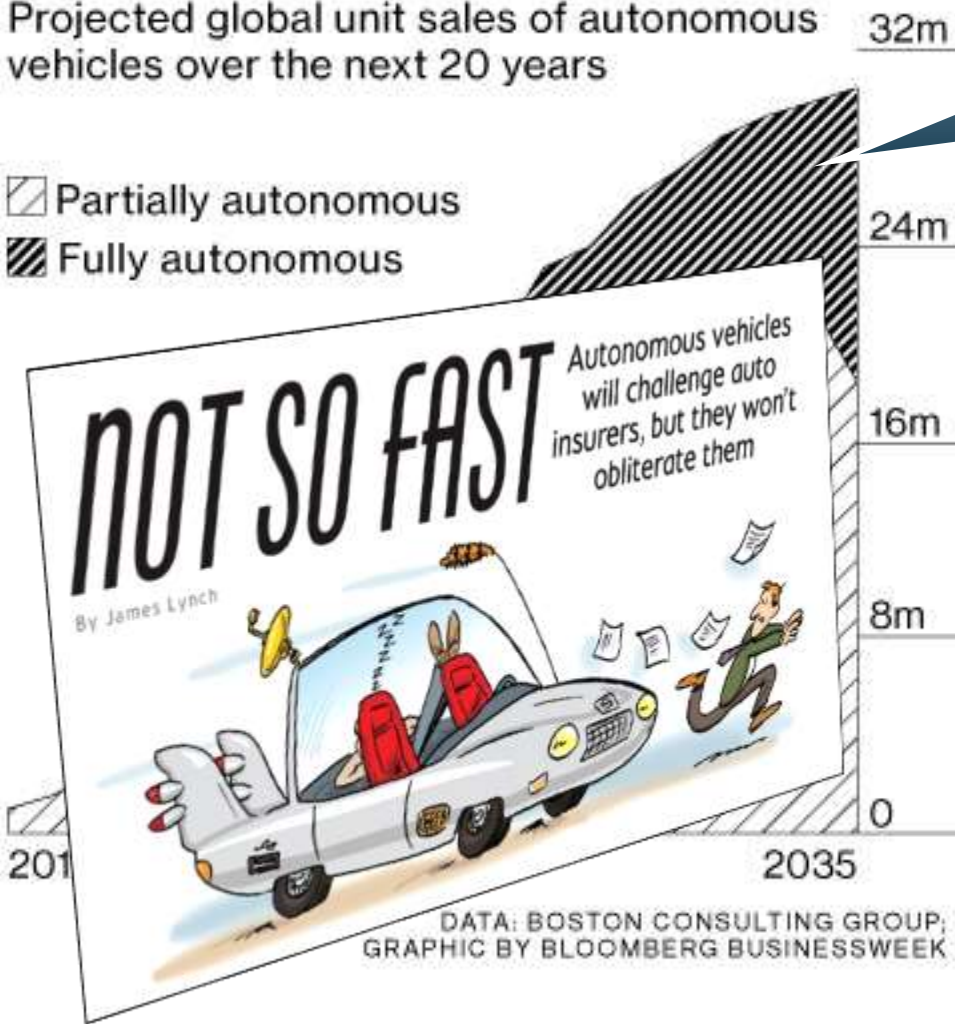
Technology Promises Safer Cars and Highways, *BUT* Some Analysts, Media and Many in Silicon Valley Are Predicting Doom for Auto Insurers

Media is Obsessed with Driverless Vehicles: Often Predicting the Demise of Auto Insurance

Hands-Free

Projected global unit sales of autonomous vehicles over the next 20 years

- ▨ Partially autonomous
- ▩ Fully autonomous



By 2035, it is estimated that 25% of new vehicle sales could be fully autonomous models

Questions

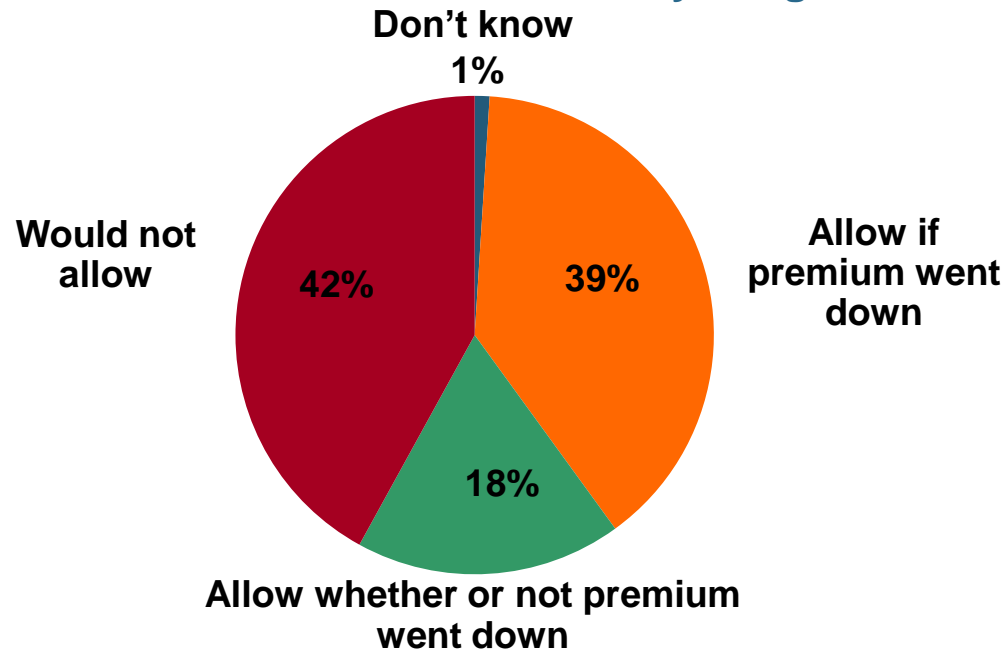
- Are auto insurers monitoring these trends?
- How are they reacting?
- Will Google take over the industry? (cars/sales)
- Will the number of auto insurers shrink?
- How will liability shift?

DATA: BOSTON CONSULTING GROUP; GRAPHIC BY BLOOMBERG BUSINESSWEEK

Source: Boston Consulting Group; Insurance Information Institute.

I.I.I. Poll: Telematics

Q. I'm going to ask you a question about your opinion of insurance companies collecting information about how and when you drive in order to set your auto insurance premium. Please tell me which statement you agree with. Would you...¹



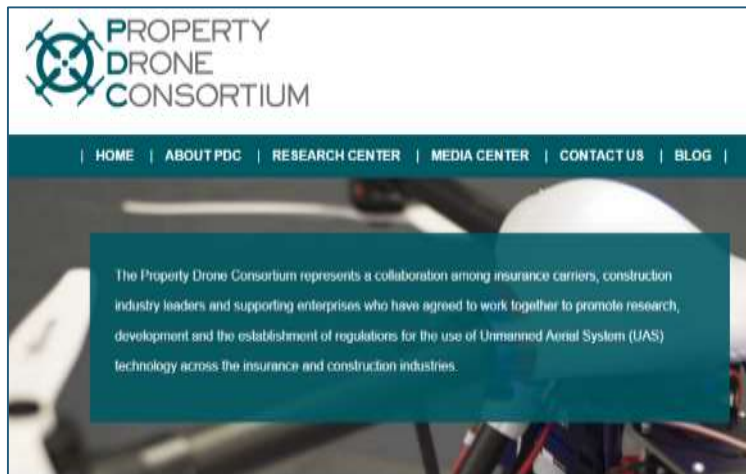
More Than Half of Auto Policyholders Would Allow Their Insurer to Collect Their Driving Information In Order to Set Premiums.

¹Asked of those who auto insurance.

Send in the Drones: Potential Rapid Adoption in Industry; Media Loves It



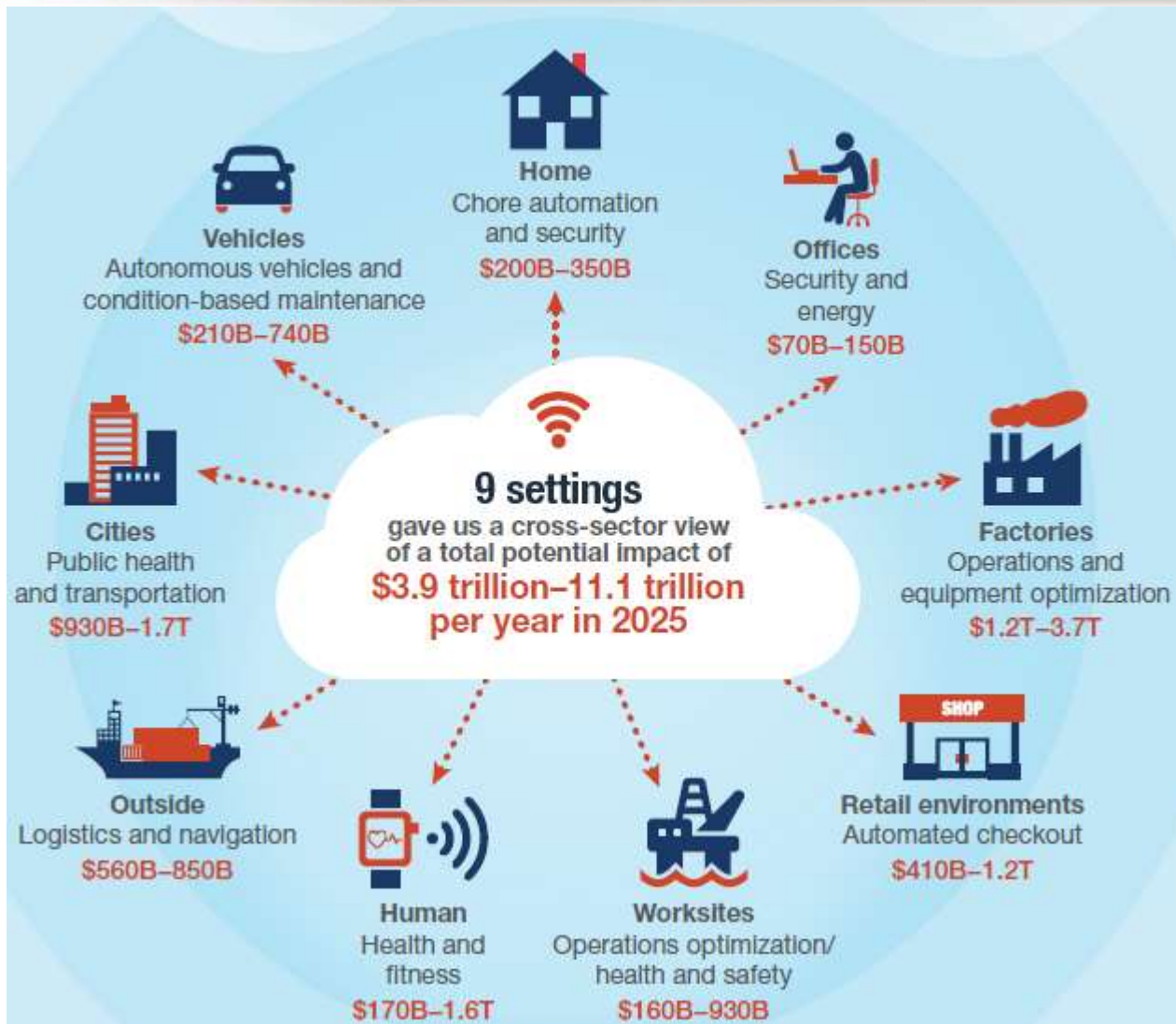
- Drones or Unmanned Aerial Vehicle (UAV) technology is seeing rapid adoption rate in many industries, including insurance
- FAA granting Section 333 exemptions for commercial use and testing of UAS
- At least 5 insurers have received permission to test
- Wide variety of applications: claims, pre-event property inspections...
- Insurers partnering with construction industry to guide R&D and regulation of UAV use via *Property Drone Consortium*: www.propertydrone.org



THE ‘INTERNET OF THINGS’

Capturing Economic Value Amid a Shifting Insurer Value Chain

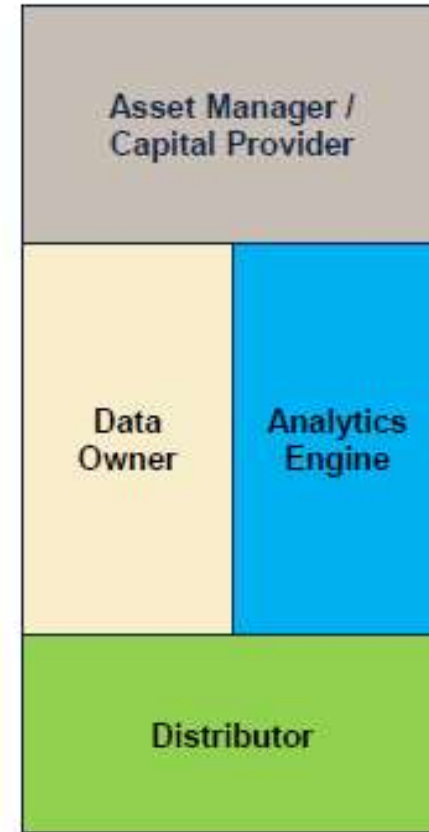
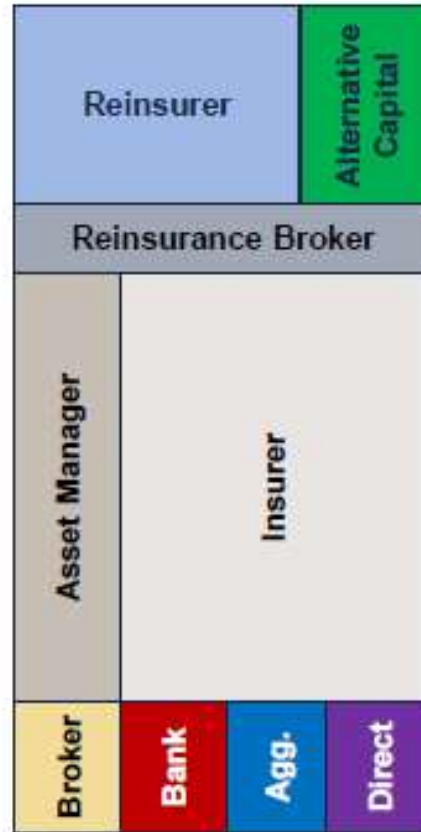
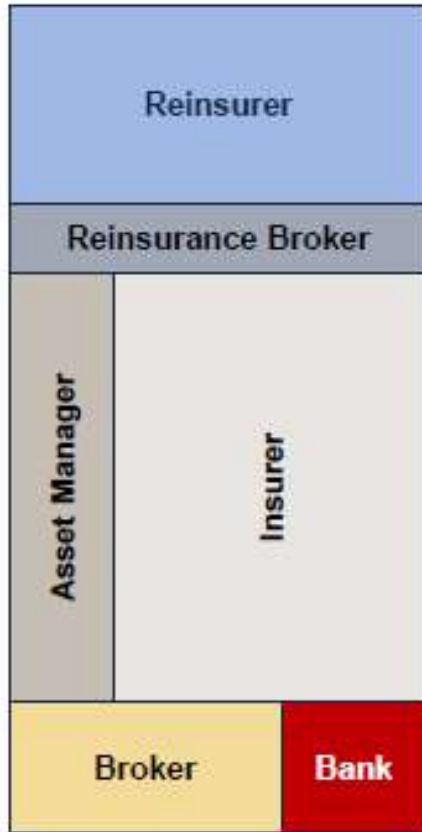
The Internet of Things and the Insurance Industry



Sources: McKinsey Global Institute, *The Internet of Things: Mapping the Value Beyond the Hype*, June 2015; Insurance Information Institute.

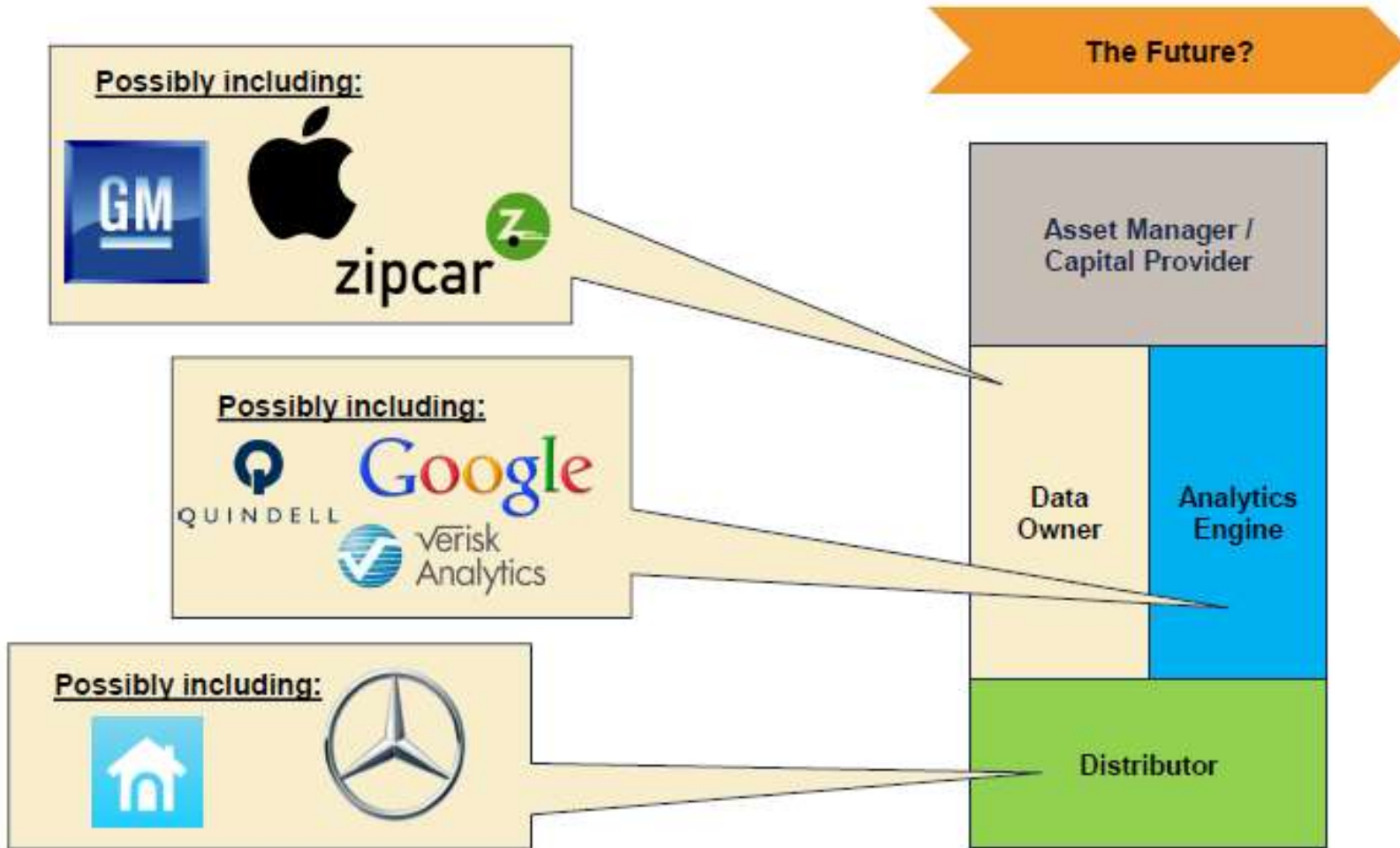
- The “Internet of Things” will create trillions in economic value throughout the global economy by 2025
- What opportunities, challenges will this create for insurers?
- What are the impact on the insurance industry “value chain”?

The Internet of Things and the Insurance Industry Value Chain



The Insurance Industry Value Chain Is Changing for Many Reasons

The Internet of Things and the Insurance Industry Value Chain



**Who owns the data? Where does it flow? Who does the analytics?
Who is the capital provider?**



A NEST Case Study

Nest: A Leader in the “Internet of Things”

Collision Course or Cooperation with the Insurance Industry?



Telematics for Your Home: The Internet of Things

- The home is the next frontier for telematics
- Rapidly becoming a crowded space
- How and with whom will insurers partner?
- Can control increasing array of household systems remotely



- ◆ Heat, A/C
- ◆ Fire, CO detection
- ◆ Security Systems
- ◆ Cameras/Monitors
- ◆ Appliances
- ◆ Lighting

- Technology is adaptive

- ◆ *Uses sensors and algorithms to learn about you*



Partnerships with Insurers: Selling Safety and Savings Simultaneously

Stay safe.
Save money.

Your insurance company knows Nest Protect helps keep you safe. They know it saves lives.

So we've partnered with leading insurance companies to help you get a Nest Protect at no cost. Your insurance provider could also lower your premiums up to 5% because Nest Protect is special - it can connect to Wi-Fi and tell them it's working.

It's their business to know what keeps families safe. And they believe in Nest Protect.

Find out when a Nest insurance partner is coming to your area.



nest



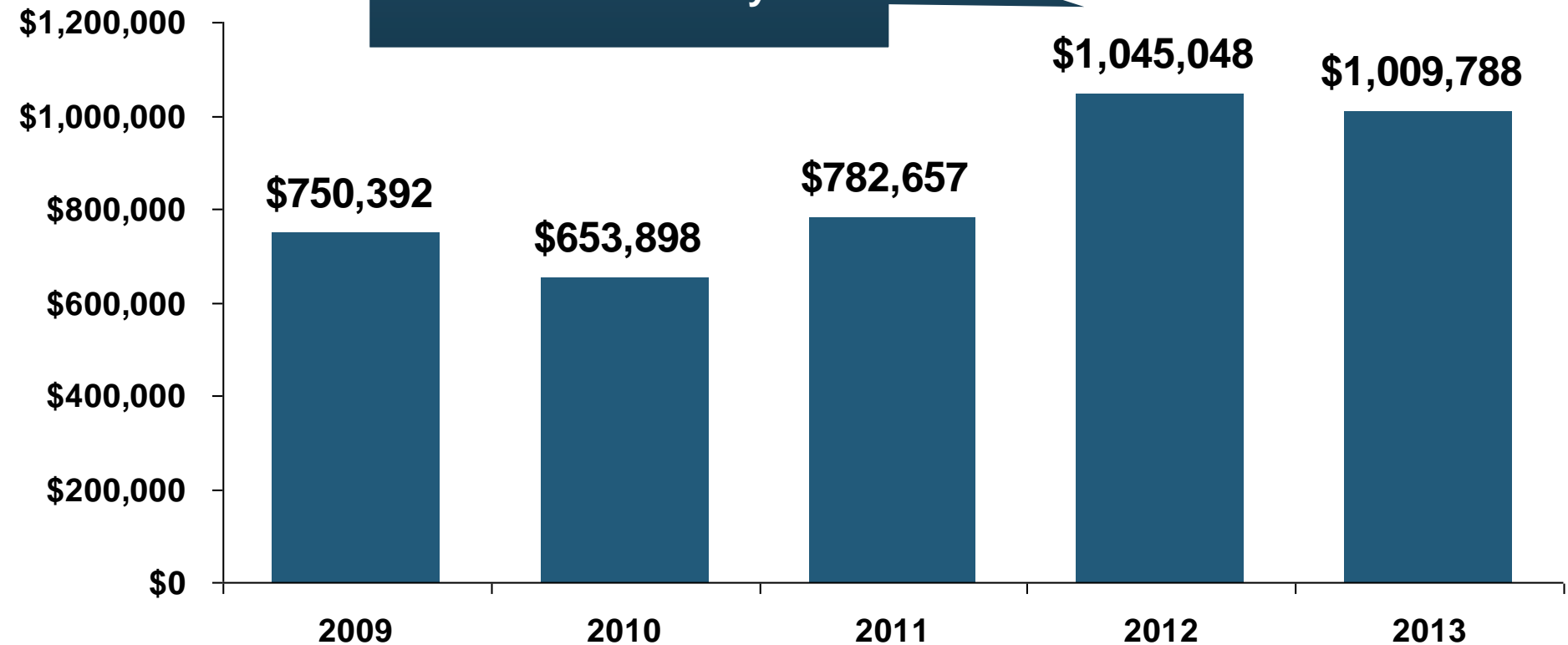
Nest is actively seeking to partner with insurers. As of Jan. 10, 2016, Nest listed 2 insurance partners offering discounts in a number of states

Shifting Legal Liability & Tort Environment

Will the Tort Pendulum Swing Against Insurers?

Average Personal Injury Jury Award, 2009 – 2013

Average awards in Personal Injury cases have increased by more than 1/3 in recent years



Source: *Current Award Trends in Personal Injury*, 54th Edition; Insurance Information Institute.

Business Leaders Ranking of Liability Systems in 2015

Best States

1. Delaware
2. Vermont
3. Nebraska
4. Iowa
5. New Hampshire
6. Idaho
7. North Carolina
8. Wyoming
9. South Dakota
10. Utah

New in 2015

- Vermont
- New Hampshire
- North Carolina
- South Dakota

Drop-offs

- Minnesota
- Kansas
- Virginia
- North Dakota

Worst States

41. Arkansas
42. Missouri
43. Mississippi
44. Florida
45. New Mexico
46. Alabama
47. California
48. Illinois
49. Louisiana
50. West Virginia

Newly Notorious

- Arkansas
- Missouri

Rising Above

- Oklahoma
- Montana

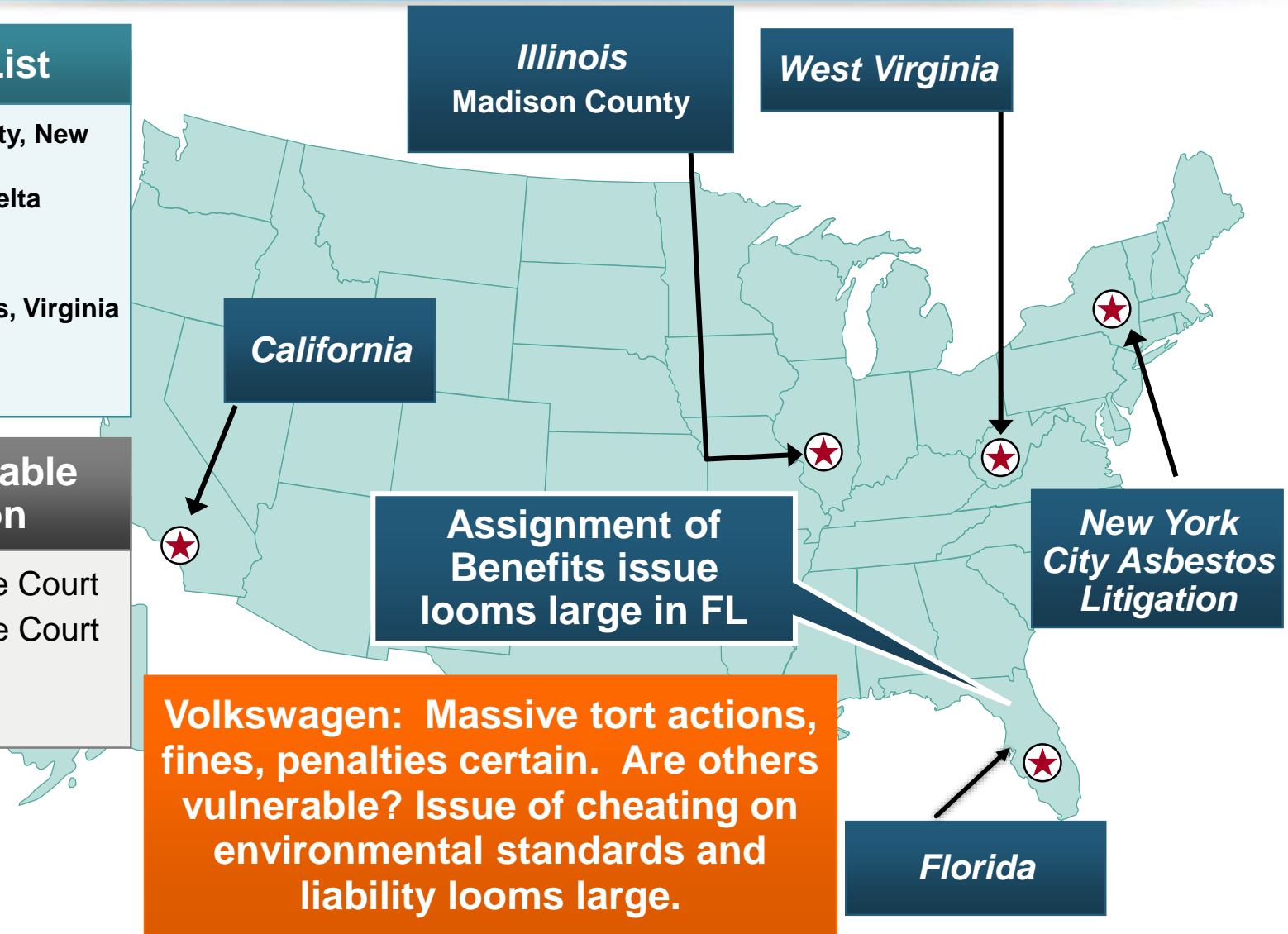
The Nation's Judicial "Hellholes": 2014/2015

Watch List

- Atlantic County, New Jersey
- Mississippi Delta
- Montana
- Nevada
- Newport News, Virginia
- Philadelphia, Pennsylvania

Dishonorable Mention

- AL Supreme Court
- PA Supreme Court



Insurance Information Institute Online:

www.iii.org

*Thank you for your time
and your attention!*

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