



Trends, Challenges and Opportunities in Personal Lines Insurance *2016 and Beyond*

**Insurance Information Institute
February 4, 2016**

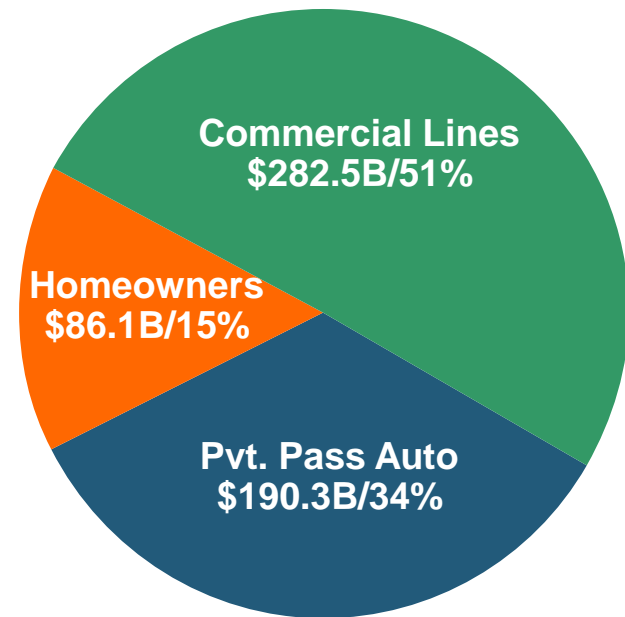
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Distribution of Direct Premiums Written by Segment/Line, 2014

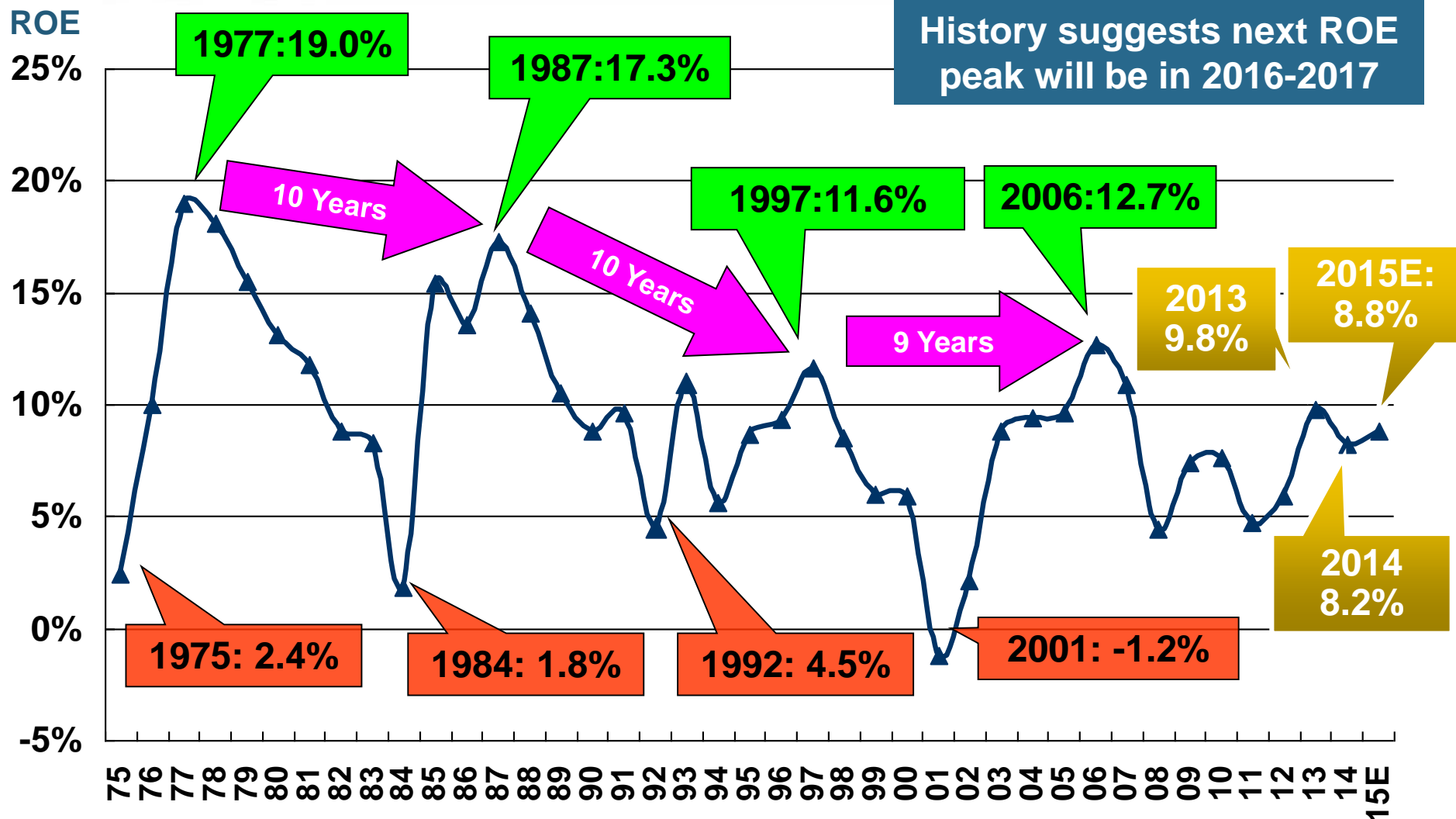
Distribution Facts

- 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



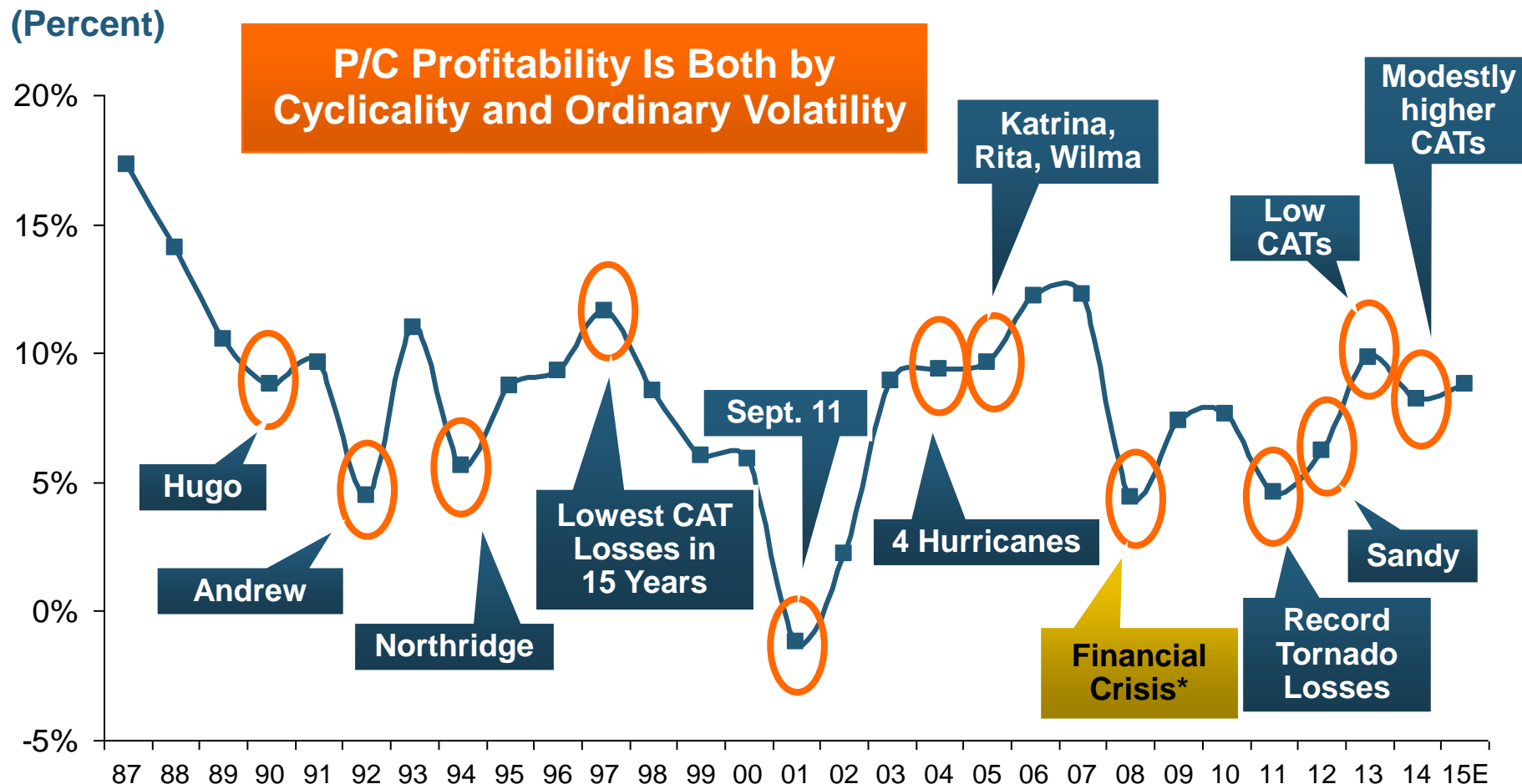
Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2015E



*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

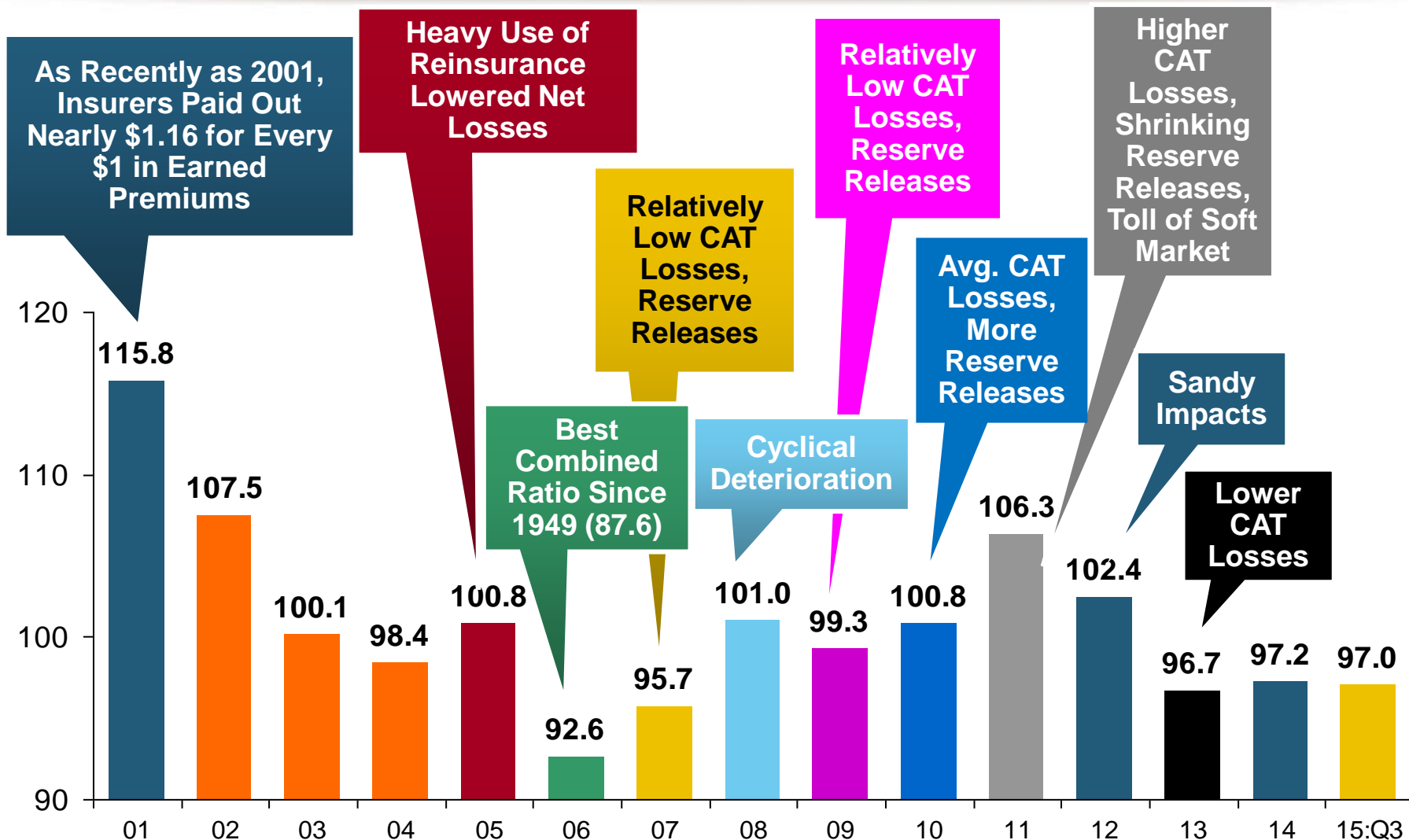
ROE: Property/Casualty Insurance by Major Event, 1987–2015E



* Excludes Mortgage & Financial Guarantee in 2008 – 2014.

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

P/C Insurance Industry Combined Ratio, 2001–2015:Q3*



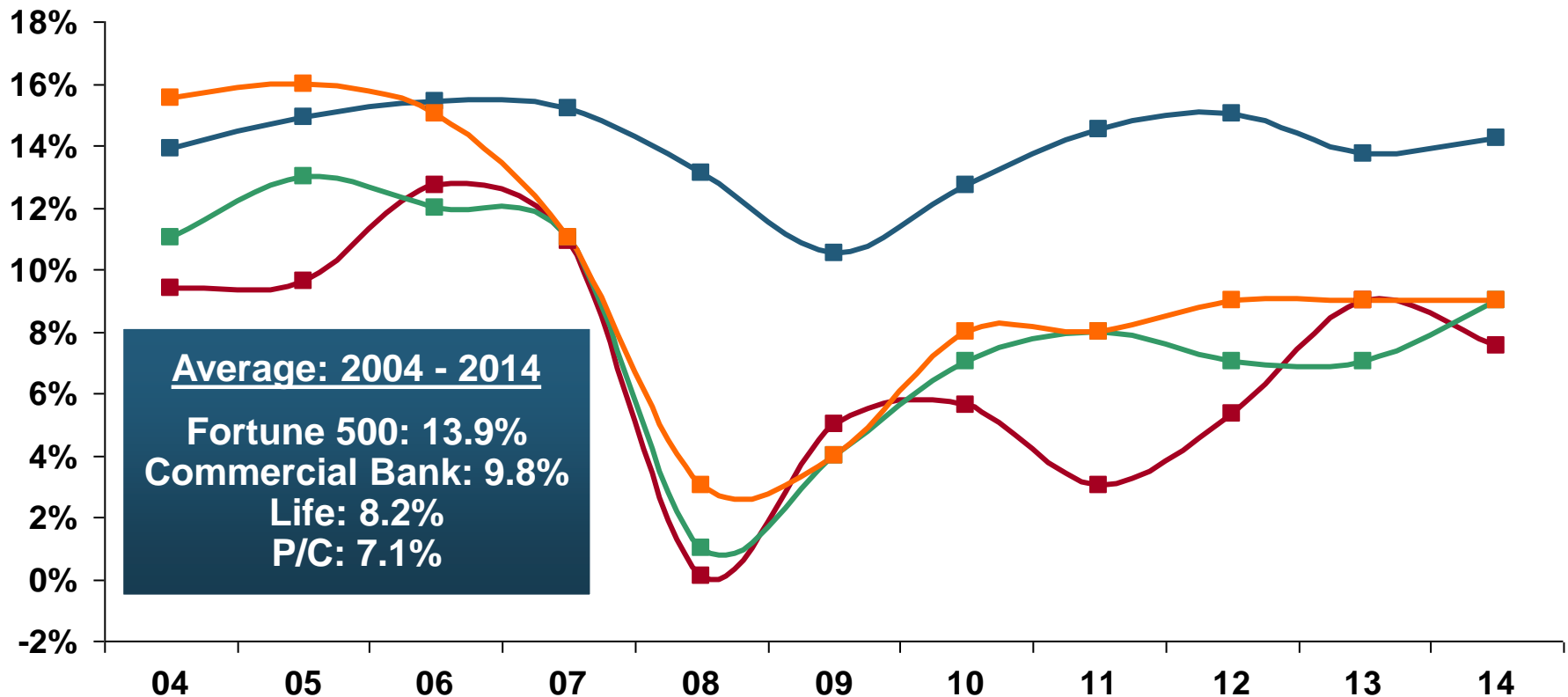
* Excludes Mortgage & Financial Guaranty insurers 2008--2014. Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0.

Sources: A.M. Best, ISO.

Return on Equity by Financial Services Sector vs. Fortune 500, 2004-2014*

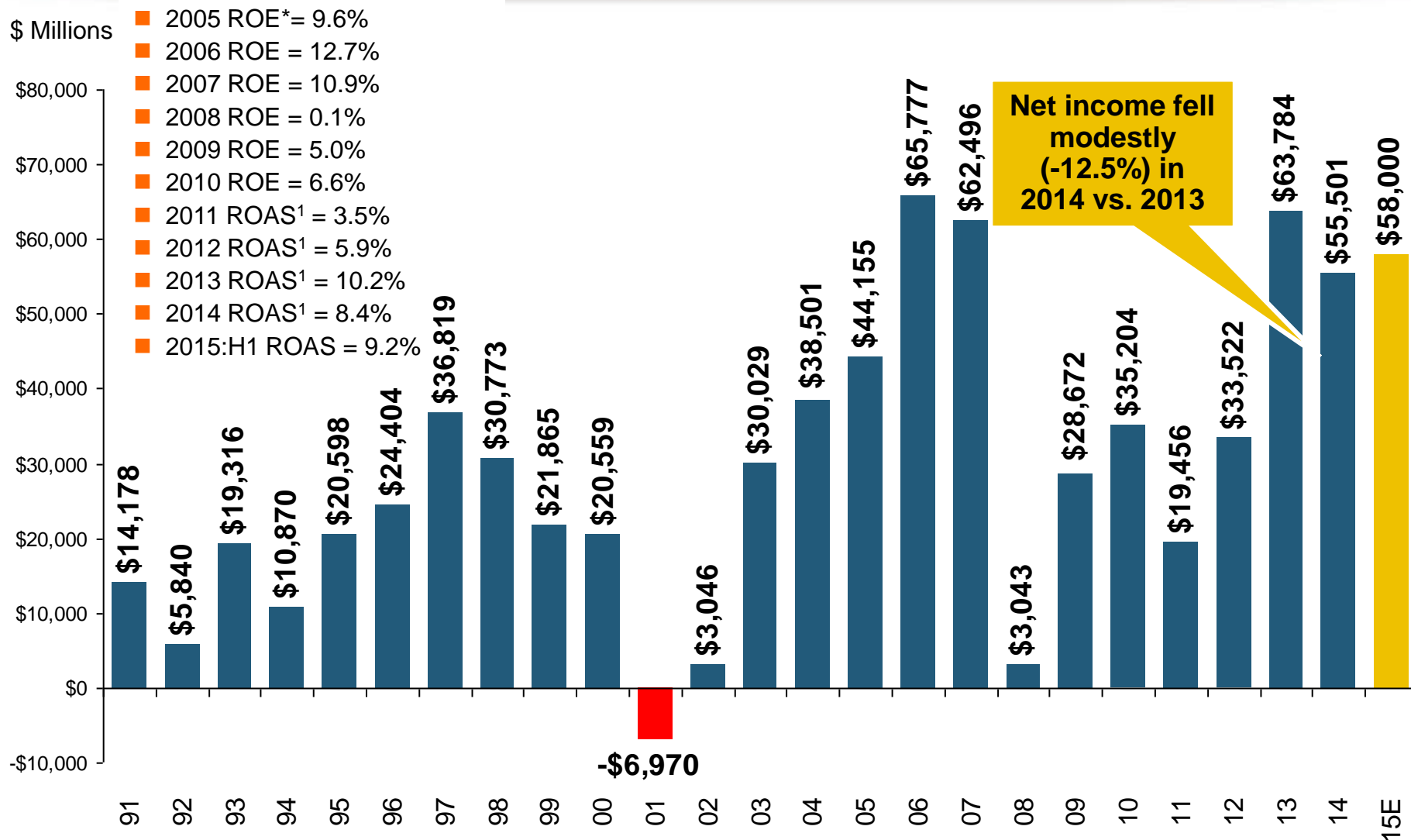
(Percent)

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



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

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.

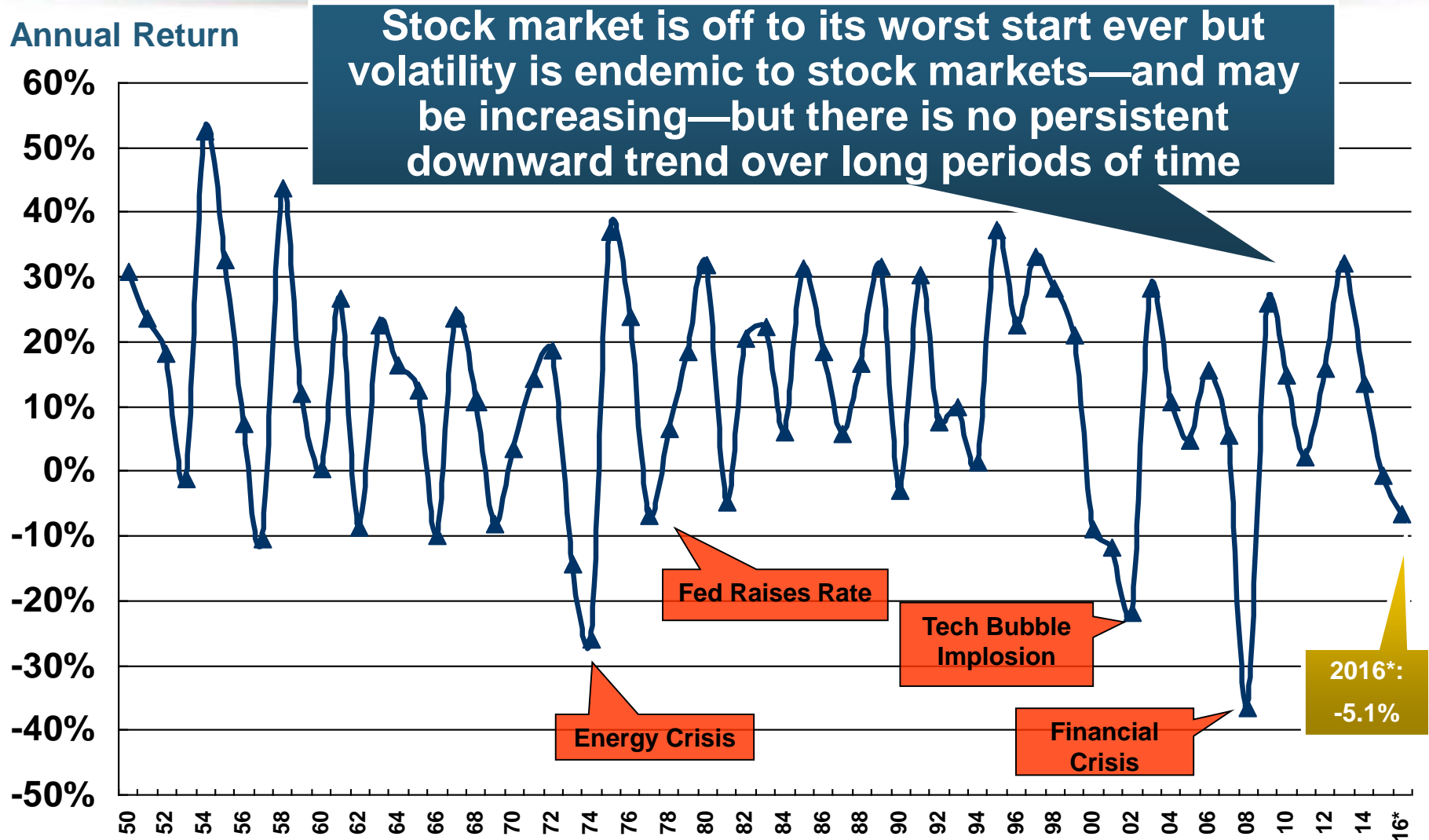
Sources: A.M. Best, ISO; Insurance Information Institute

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*

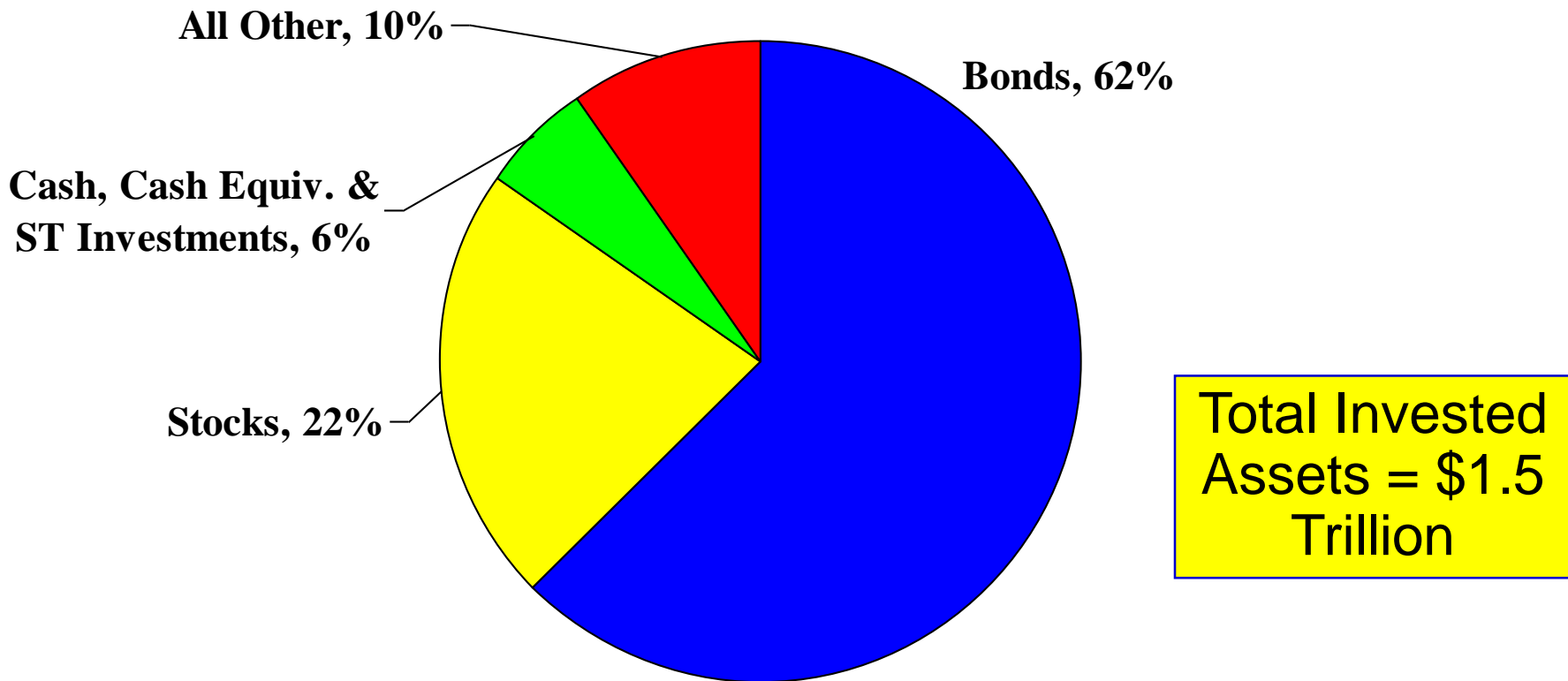


*Through Feb. 1, 2016.

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

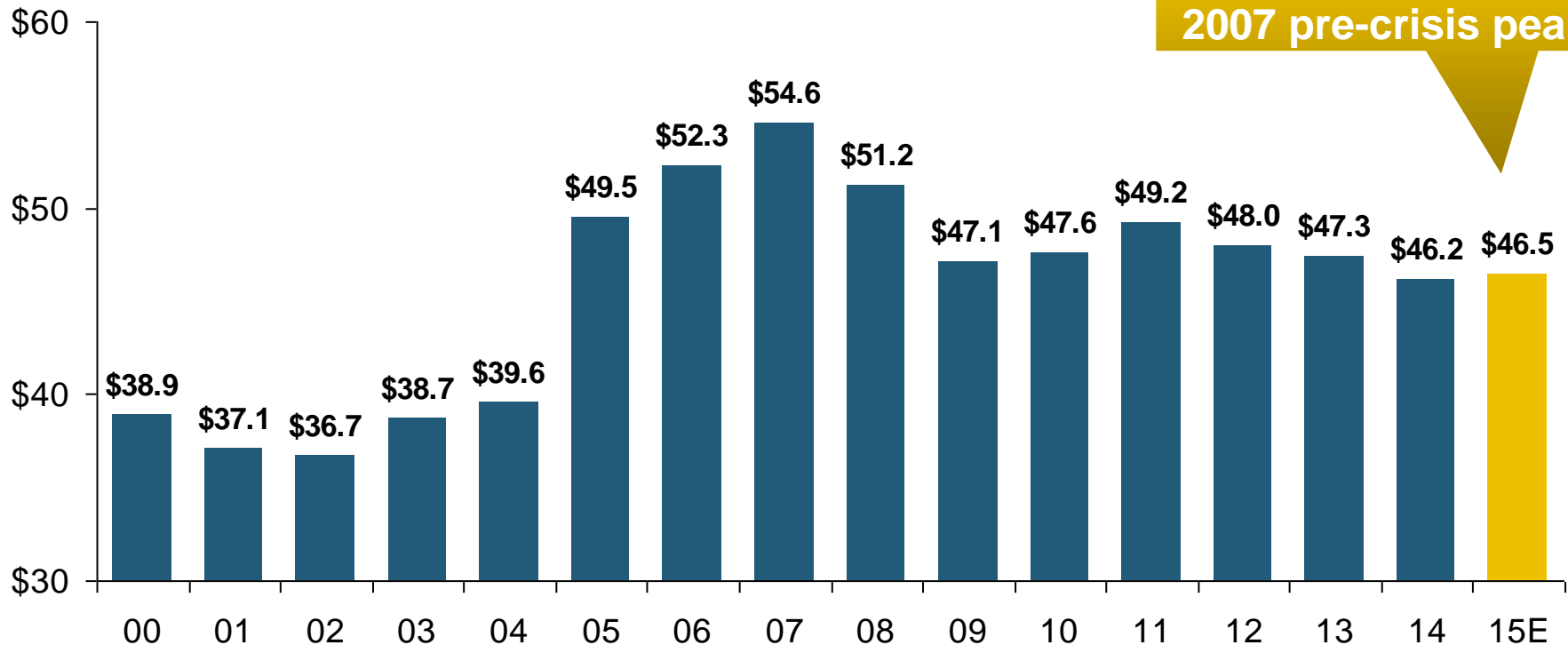
Distribution of Invested Assets: P/C Insurance Industry, 2013

\$ Billions



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

(\$ Billions)



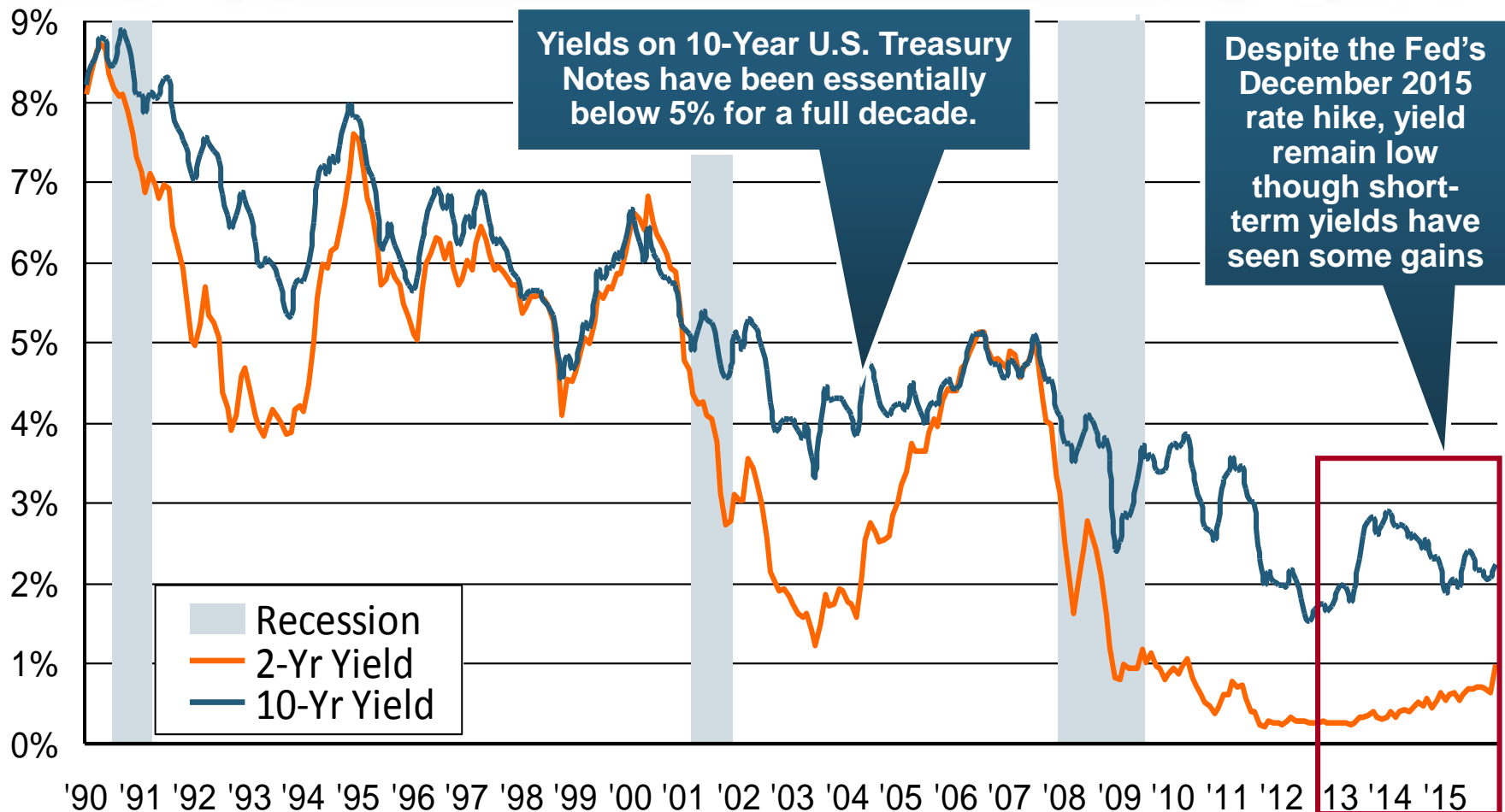
Investment earnings
are still below their
2007 pre-crisis peak

**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.

U.S. Treasury Security Yields: A Long Downward Trend, 1990–2015*



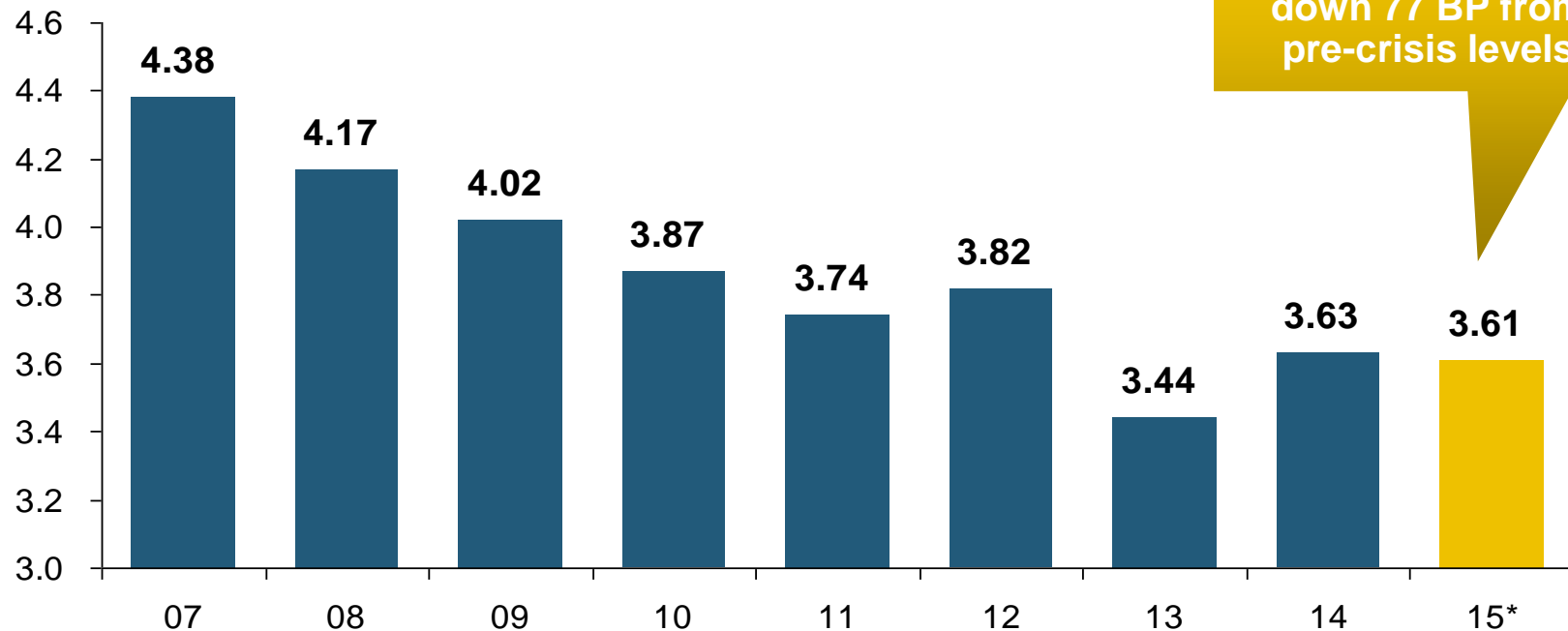
Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for years to come.

*Monthly, constant maturity, nominal rates, through December 2015.

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

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

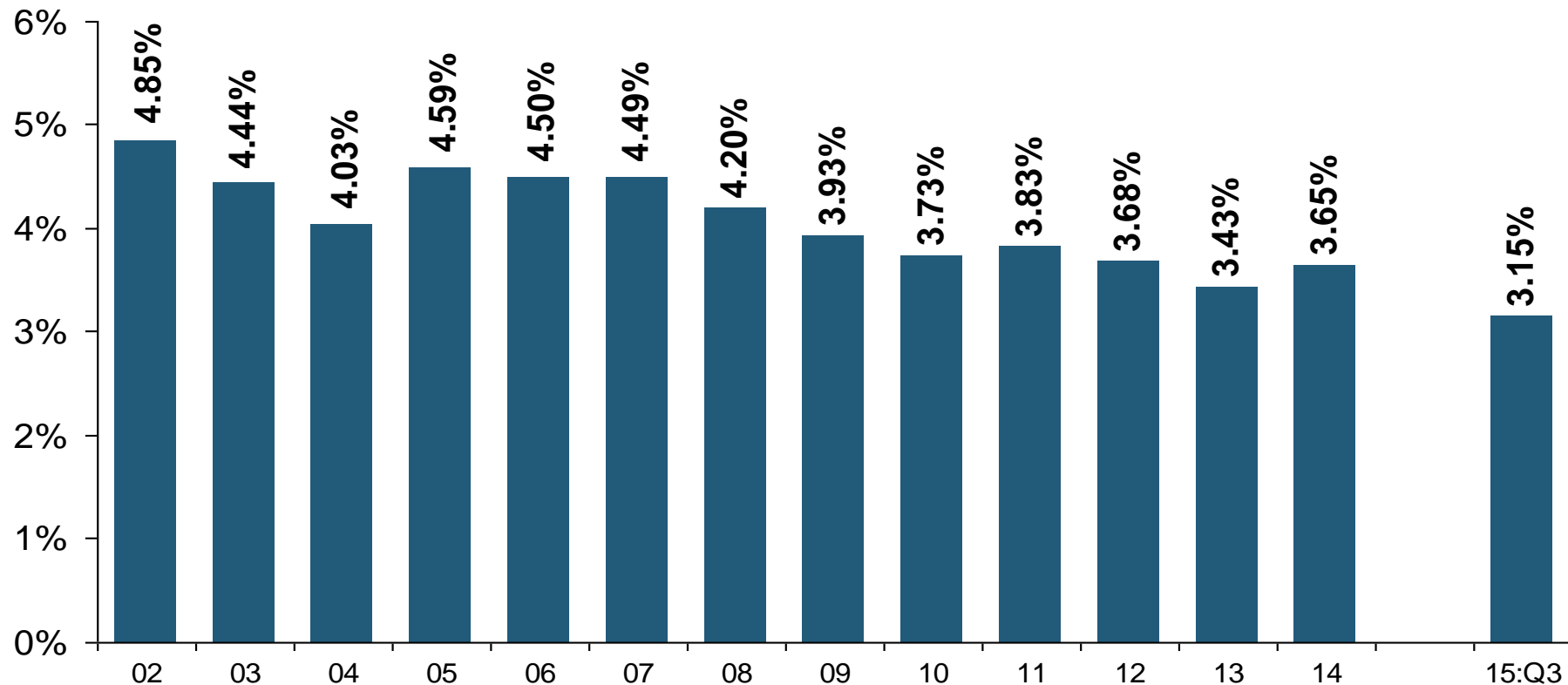
(Percent)



Book yield in 2015 is down 77 BP from pre-crisis levels

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



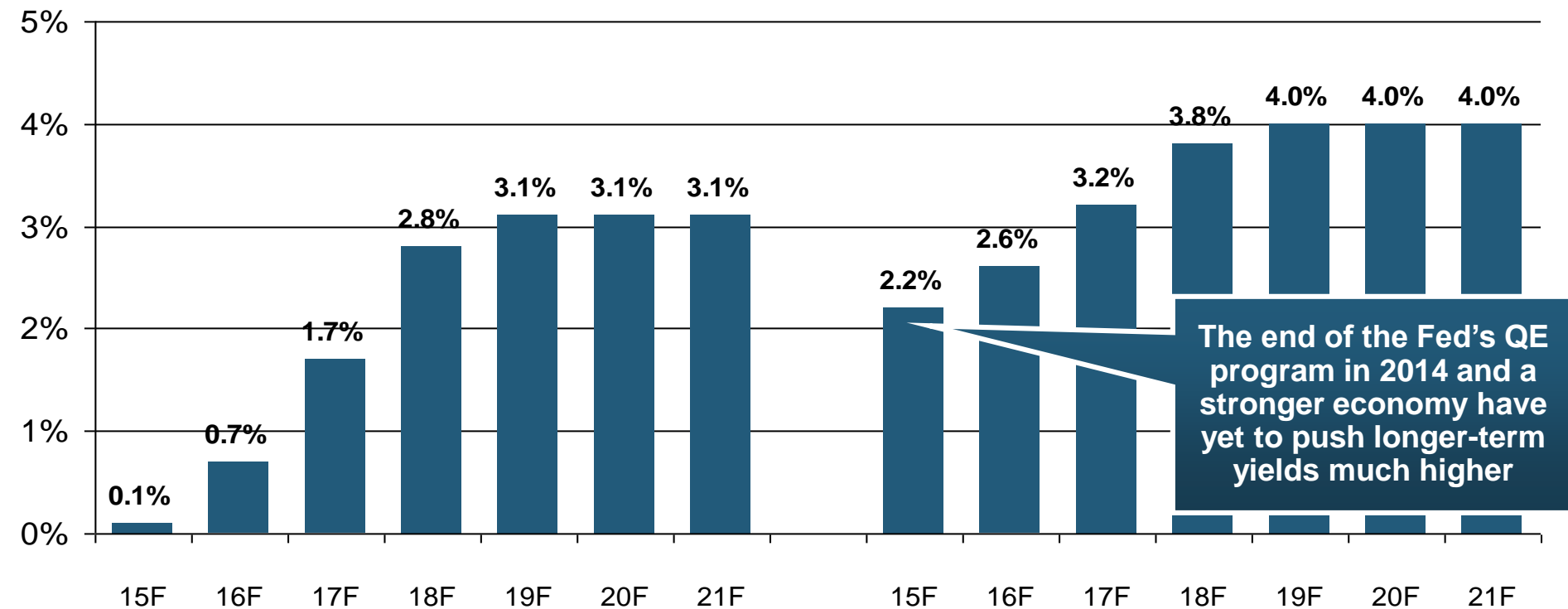
P/C carrier yields have been falling for over a decade, reflecting the long downtrend in prevailing interest rates. Even as prevailing rates rise in the next few years, portfolio yields are unlikely to rise quickly, since low yields of recent years are “baked in” to future returns.

Interest Rate Forecasts: 2015 – 2021

Yield (%)

3-Month Treasury

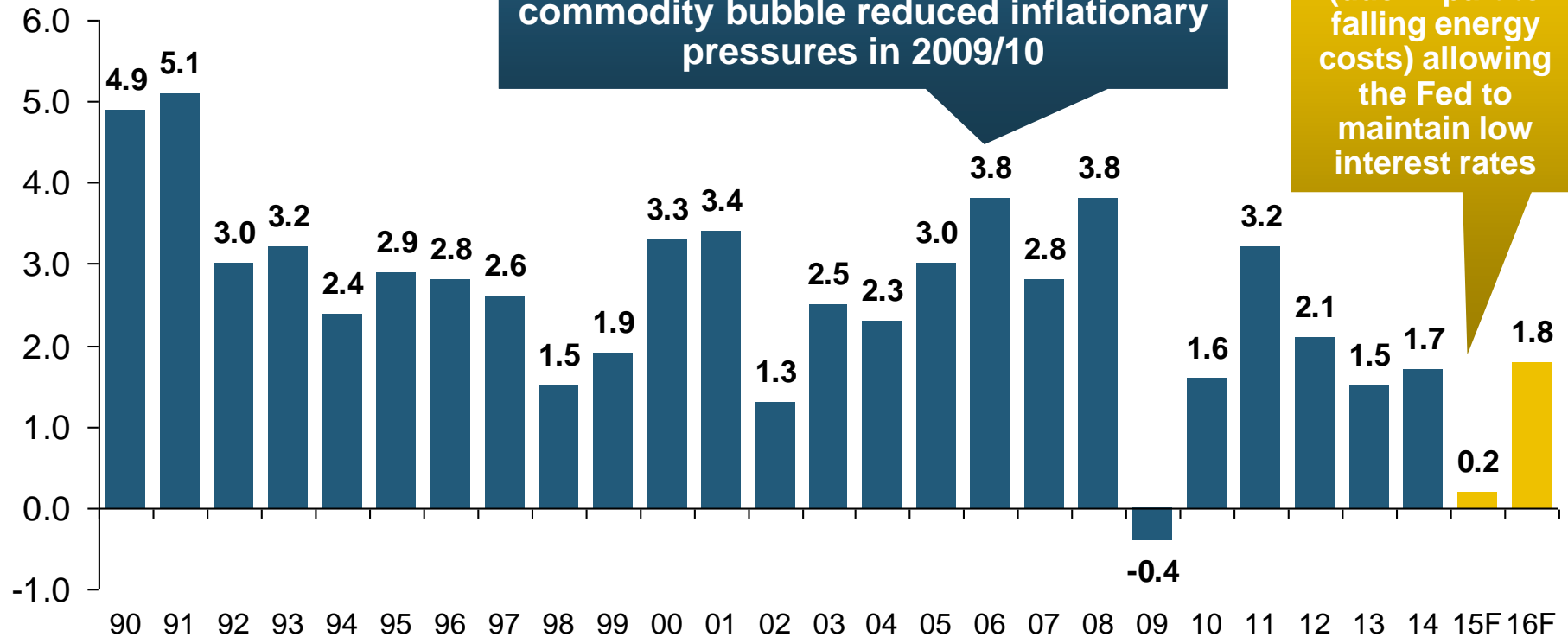
10-Year Treasury



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

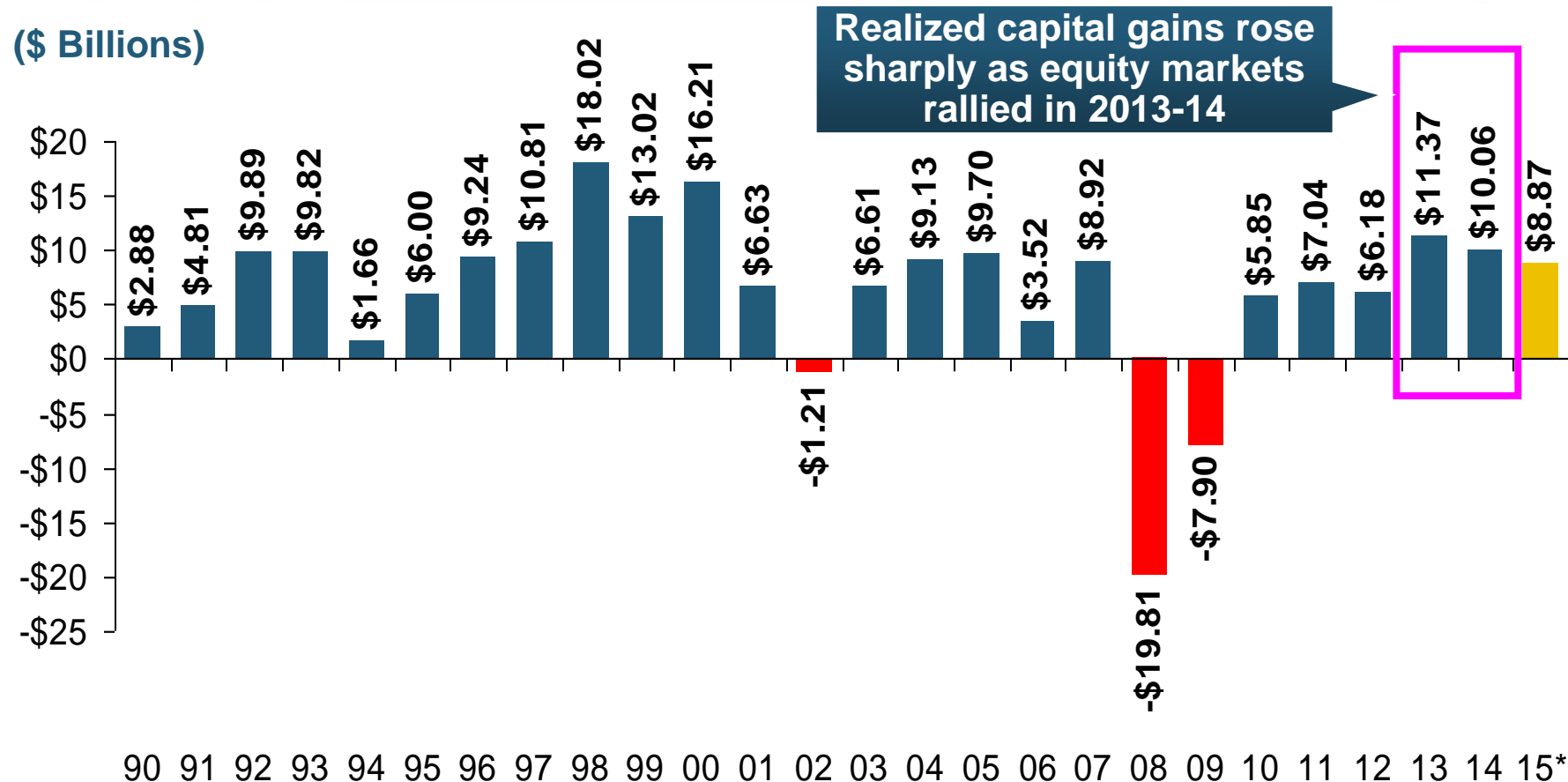
Annual Inflation Rates, (CPI-U, %), 1990–2016F

Annual Inflation Rates (%)



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*



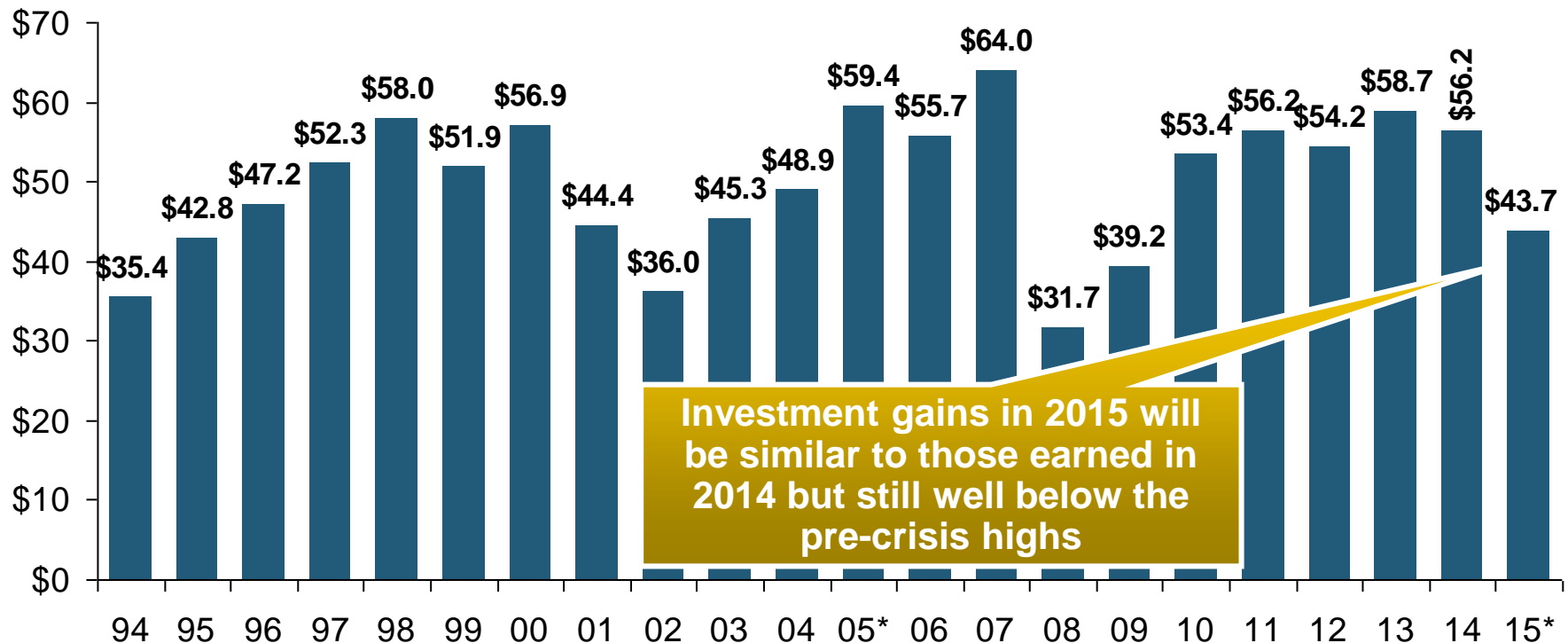
Insurers Posted Net Realized Capital Gains in 2010 - 2014 Following Two Years of Realized Losses During the Financial Crisis. Realized Capital Losses Were a Primary Cause of 2008/2009's Large Drop in Profits and ROE.

*Through Q3 2015.

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

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

(\$ Billions)



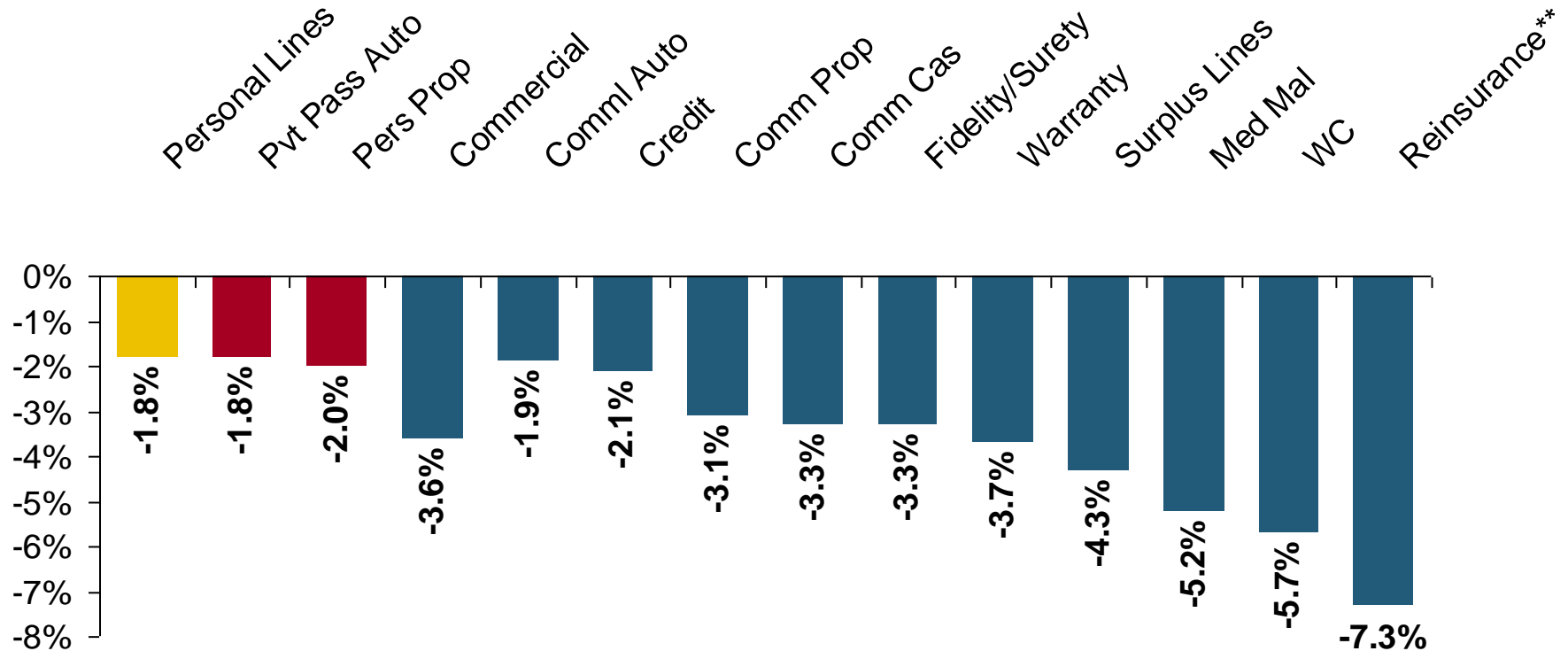
Total Investment Gains Were Down Slightly in 2014 as Low Interest Rates Pressured Investment Income but Realized Capital Gains Remained Robust

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

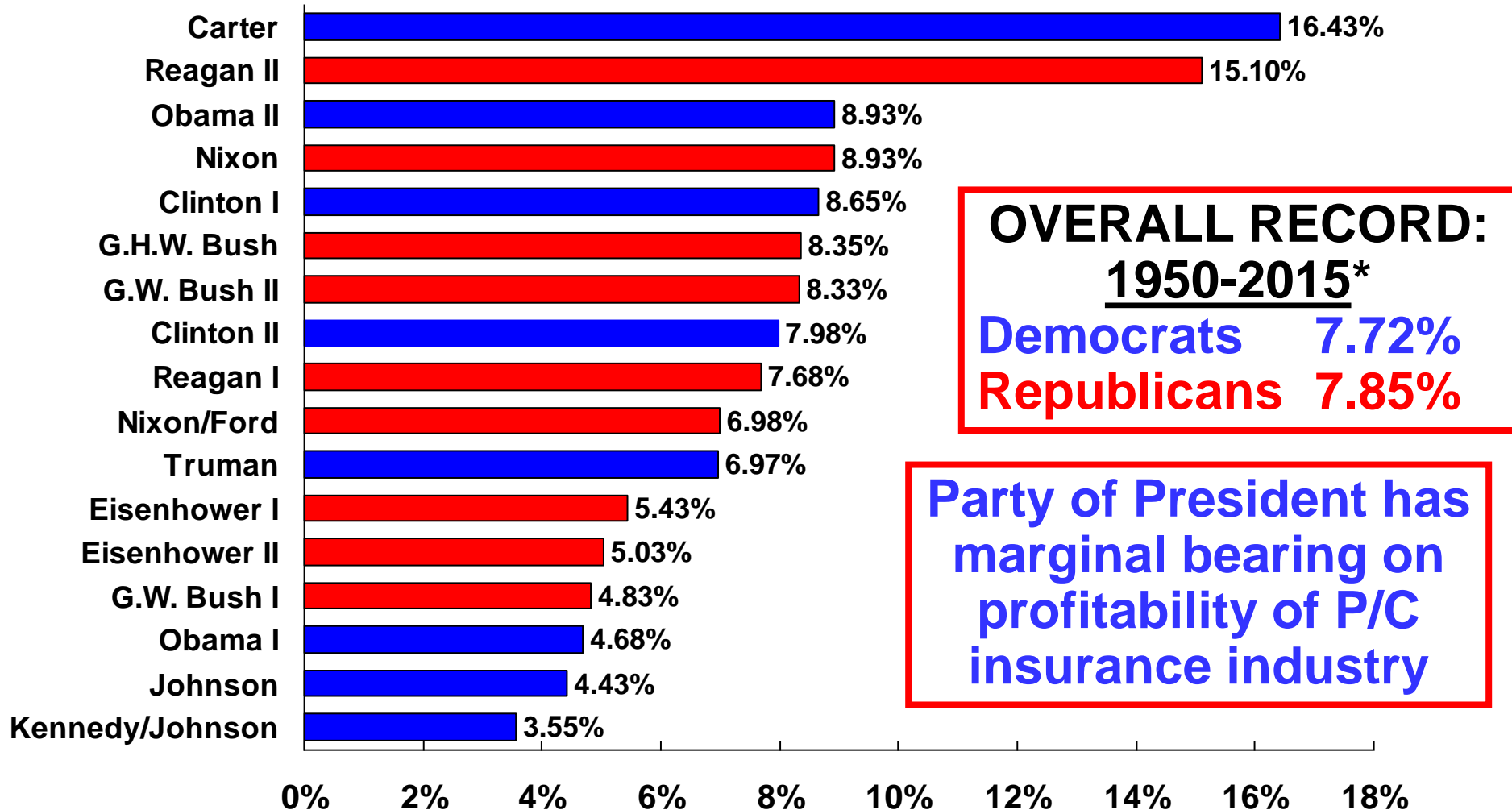
**US domestic reinsurance only

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

Profitability & Politics

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

P/C Insurance Industry ROE by Presidential Administration, 1950-2014*



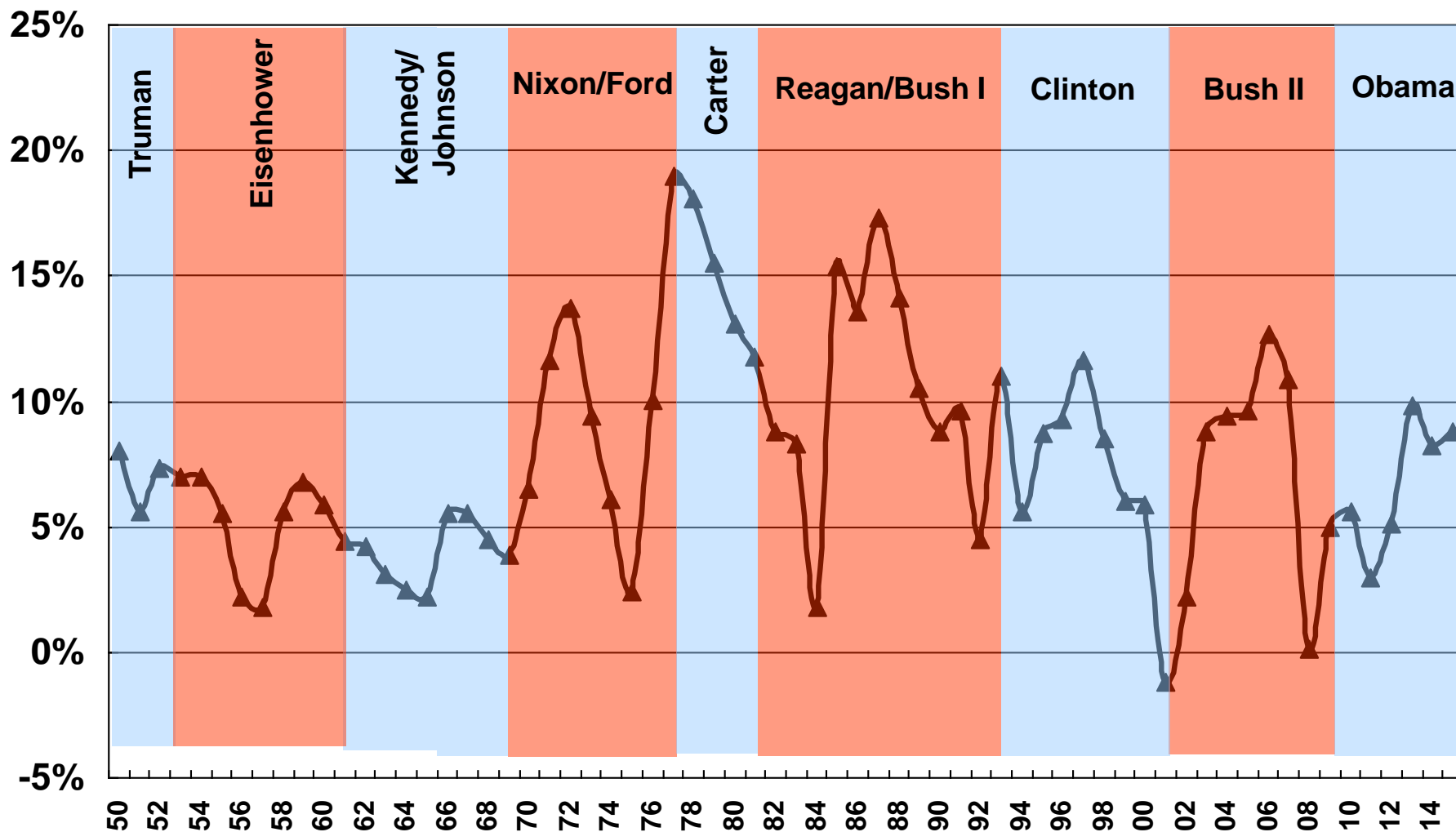
*Truman administration ROE of 6.97% based on 3 years only, 1950-52;.

Source: Insurance Information Institute

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

BLUE = Democratic President

RED = Republican President



*2015 data is through Q3.

Source: Insurance Information Institute

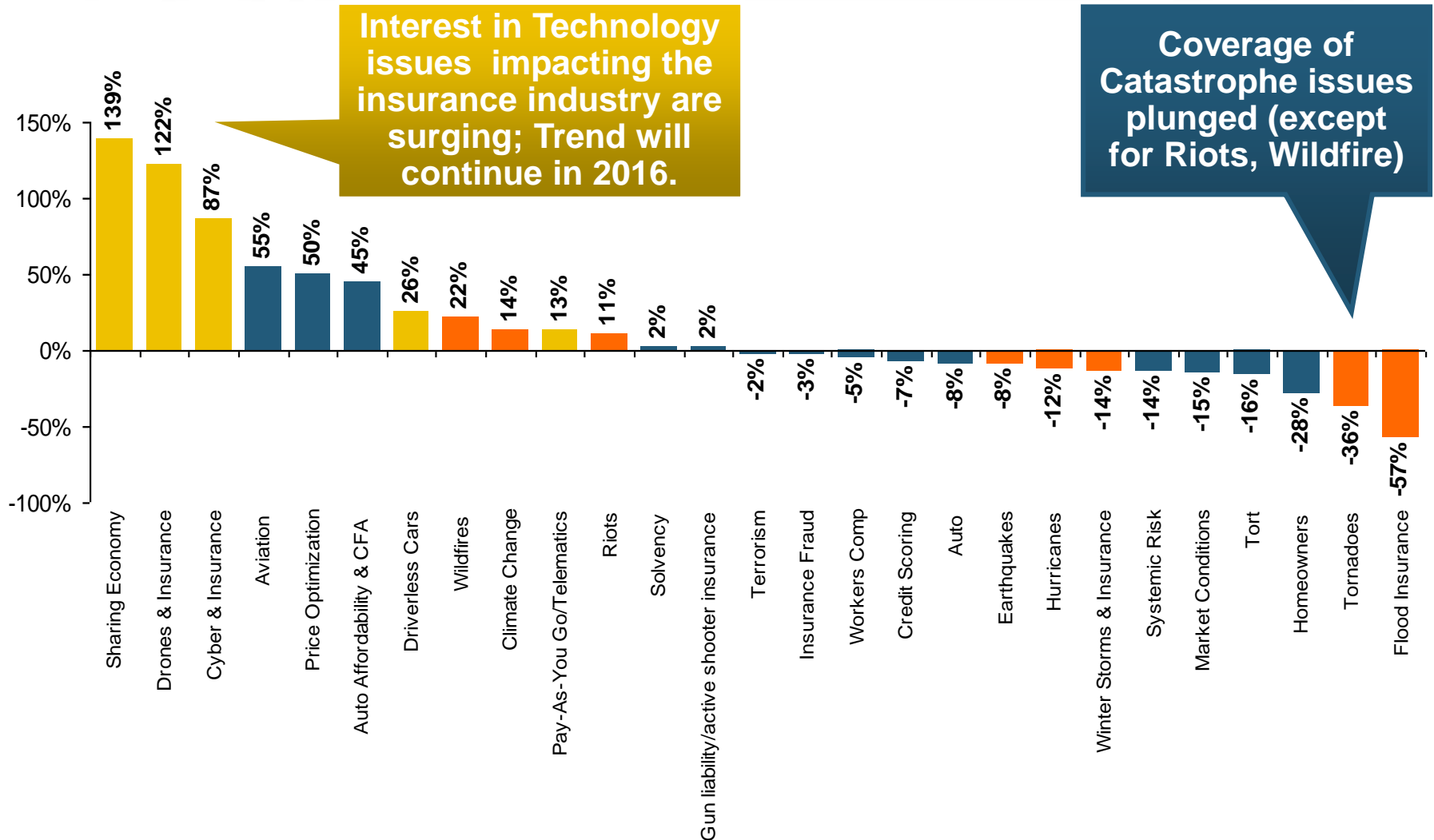
Top Insurance Issues:
What's Hot, What's Not

**Technology Spiked, Catastrophes
Crashed**

***Attacks on Pricing Methodologies
& Underwriting Criteria Increased***

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)



Auto & Home Insurance: State of the Personal Lines Market

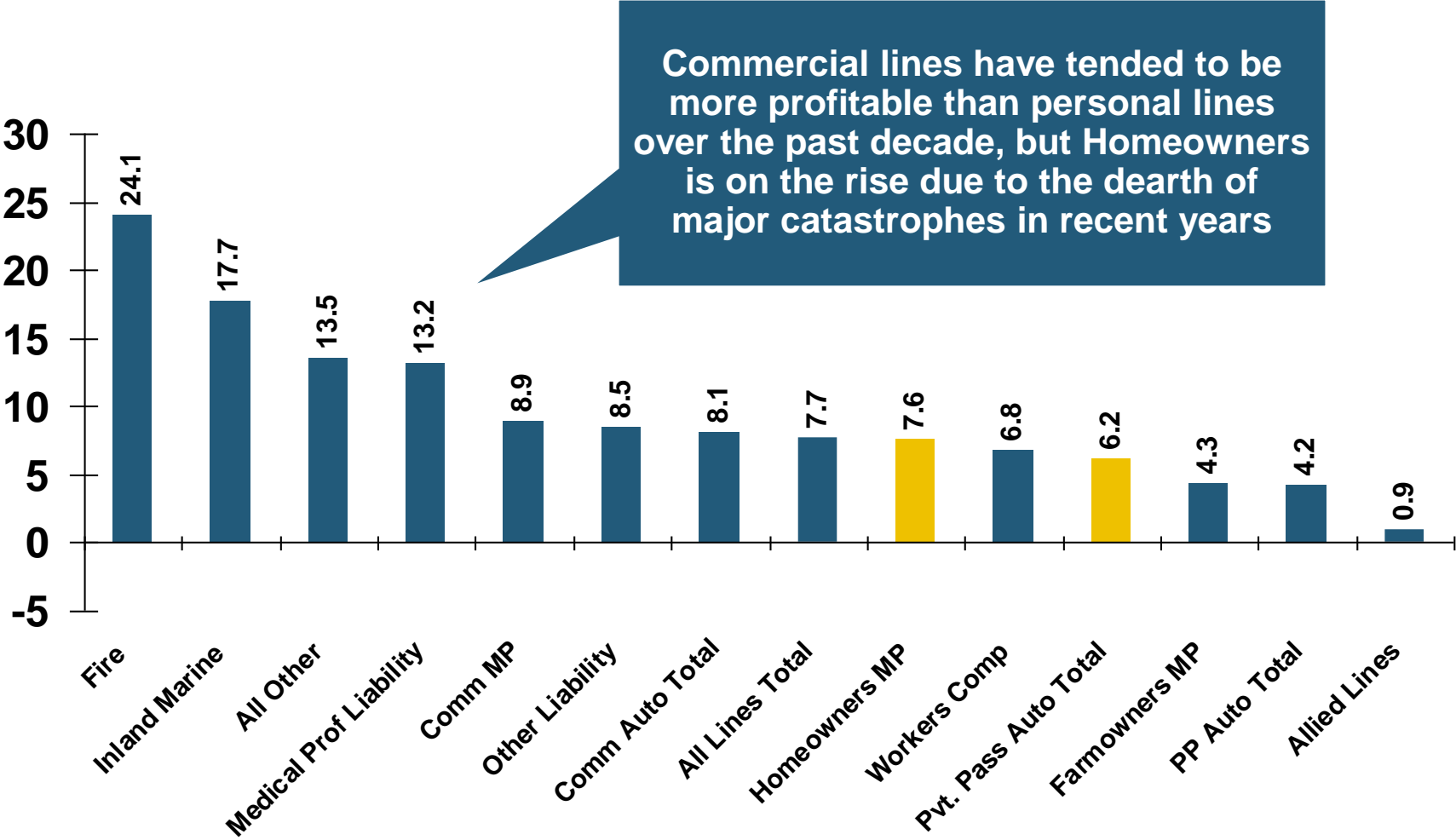
**Results Have Been Fairly Strong
and Stable in Recent Years**

***Dearth of Major CATs, Pricing
Discipline Has Helped***

Personal Lines Profitability

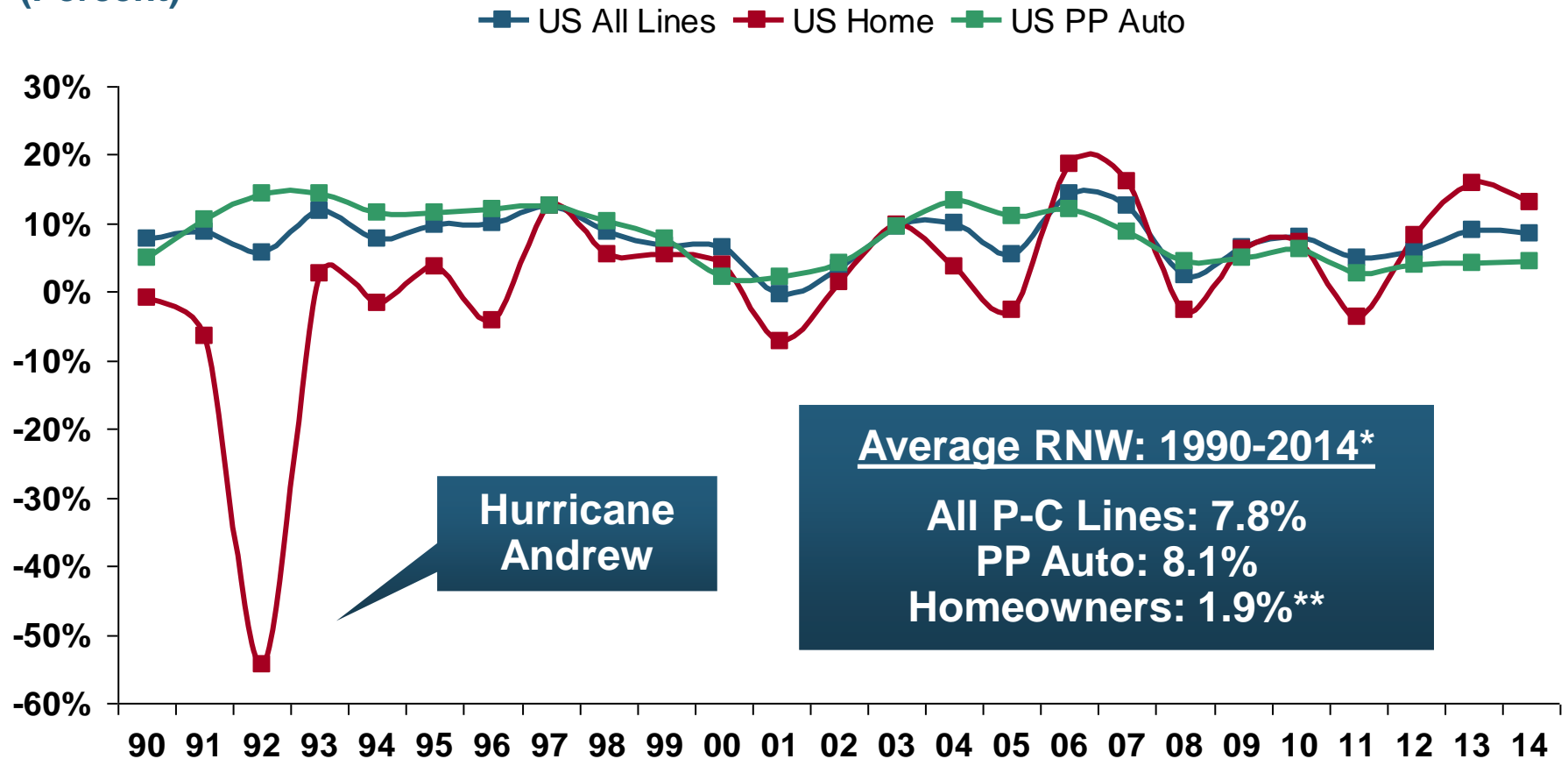
***Profitability of Auto and
Homeowners Lines Varies
Tremendously Over Time and
Across States***

Return on Net Worth (RNW) All Lines: 2005-2014 Average



Return on Net Worth: All P-C Lines vs. Homeowners & Pvt. Pass. Auto, 1990-2014*

(Percent)



Pvt.Pass. Auto Has Consistently Outperformed the P-C Industry as a Whole. Homeowners Volatility is Associated Primarily With Coastal Exposure Issues

*Latest available.

**If 1992, the year of Hurricane Andrew is excluded, the resulting homeowners RNW is 4.3%.

Sources: NAIC; Insurance Information Institute.

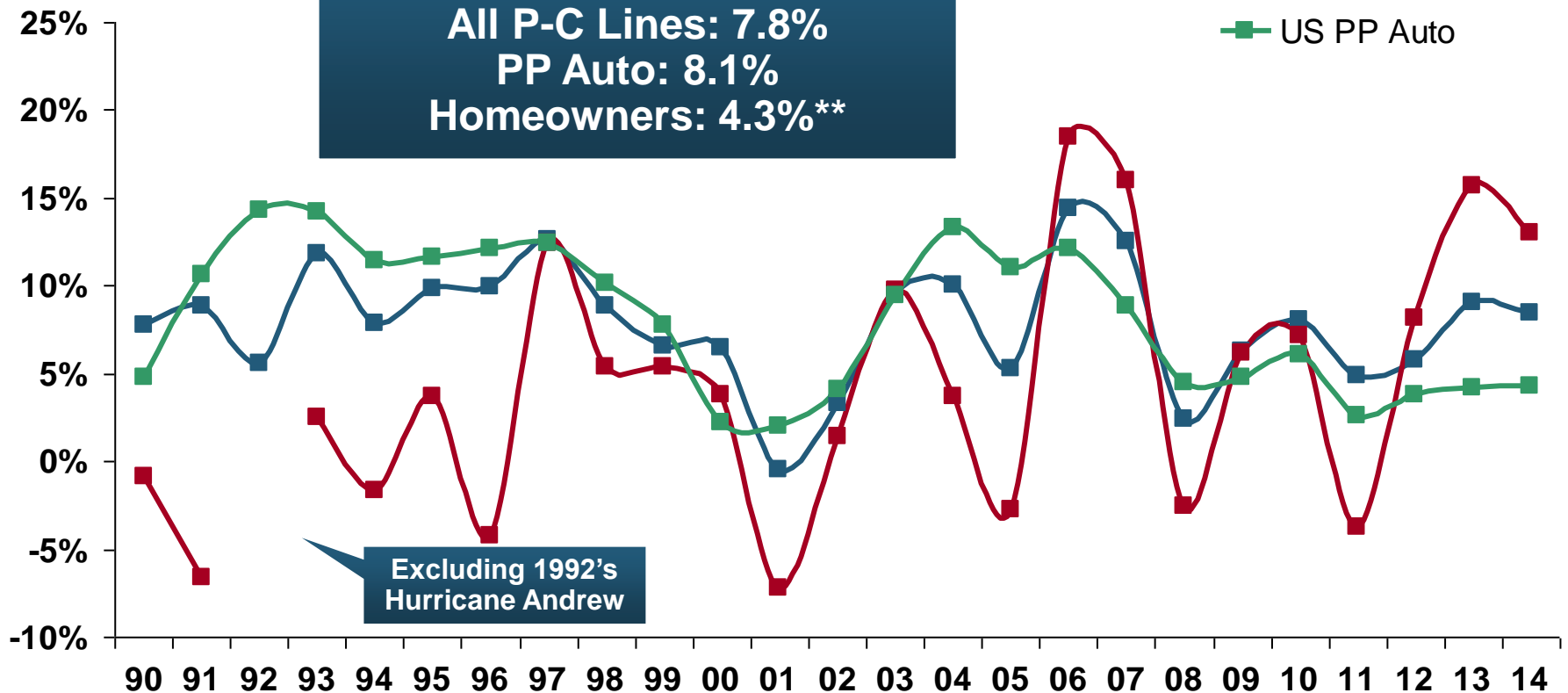
Return on Net Worth: All P-C Lines vs. Homeowners & Pvt. Pass. Auto, 1990-2014*

(Percent)

Average RNW: 1990-2013*

All P-C Lines: 7.8%
PP Auto: 8.1%
Homeowners: 4.3%**

■ US All Lines
■ US Home
■ US PP Auto



Pvt.Pass. Auto Has Consistently Outperformed the P-C Industry as a Whole. Homeowners Volatility is Associated Primarily With Coastal Exposure Issues

*Latest available.

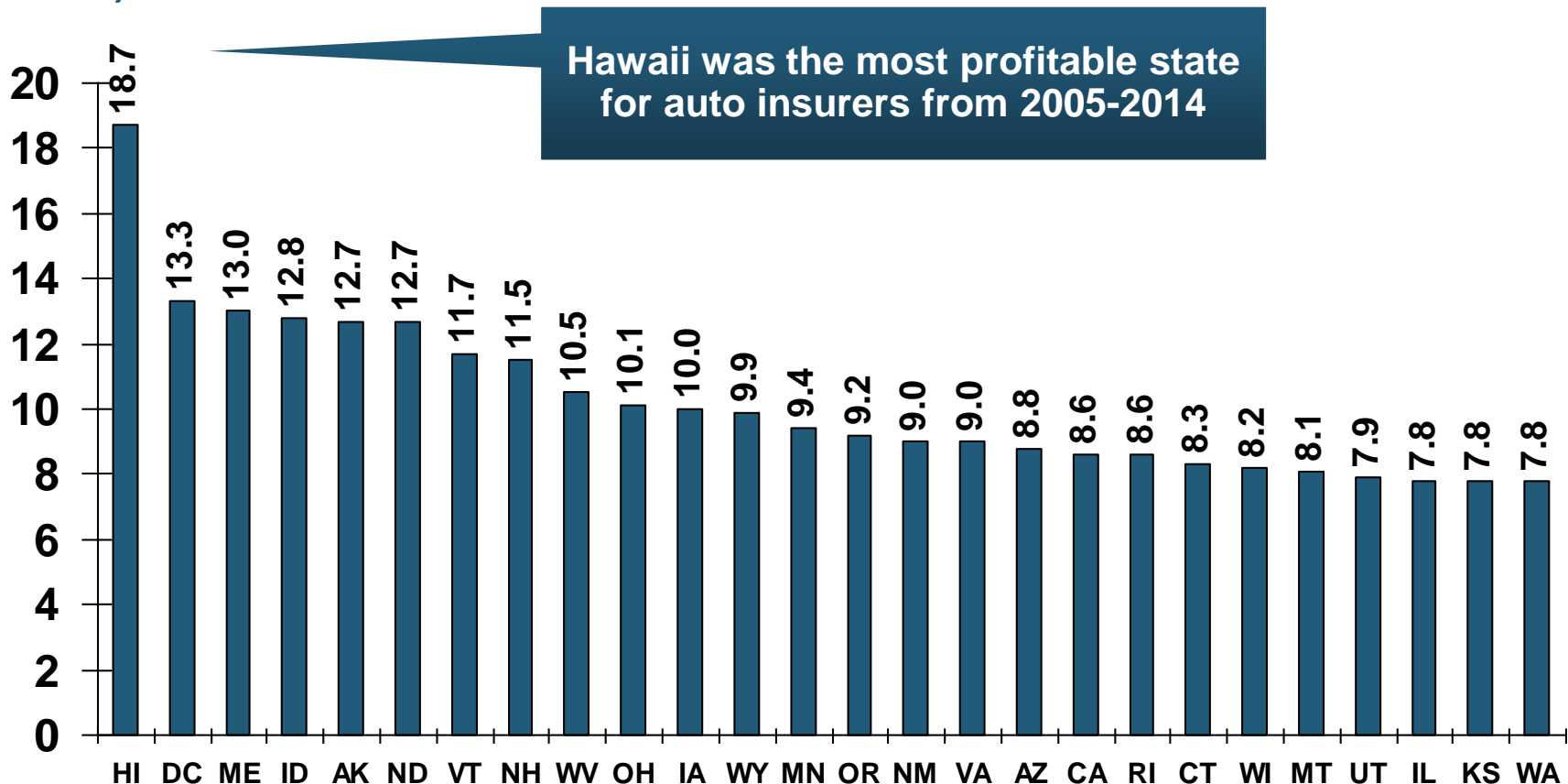
**Excludes 1992, the year of Hurricane Andrew. If 1992 is included the resulting homeowners RNW is 1.9%

Sources: NAIC; Insurance Information Institute.

RNW Pvt. Passenger Auto, 2005-2014

Average: Highest 25 States

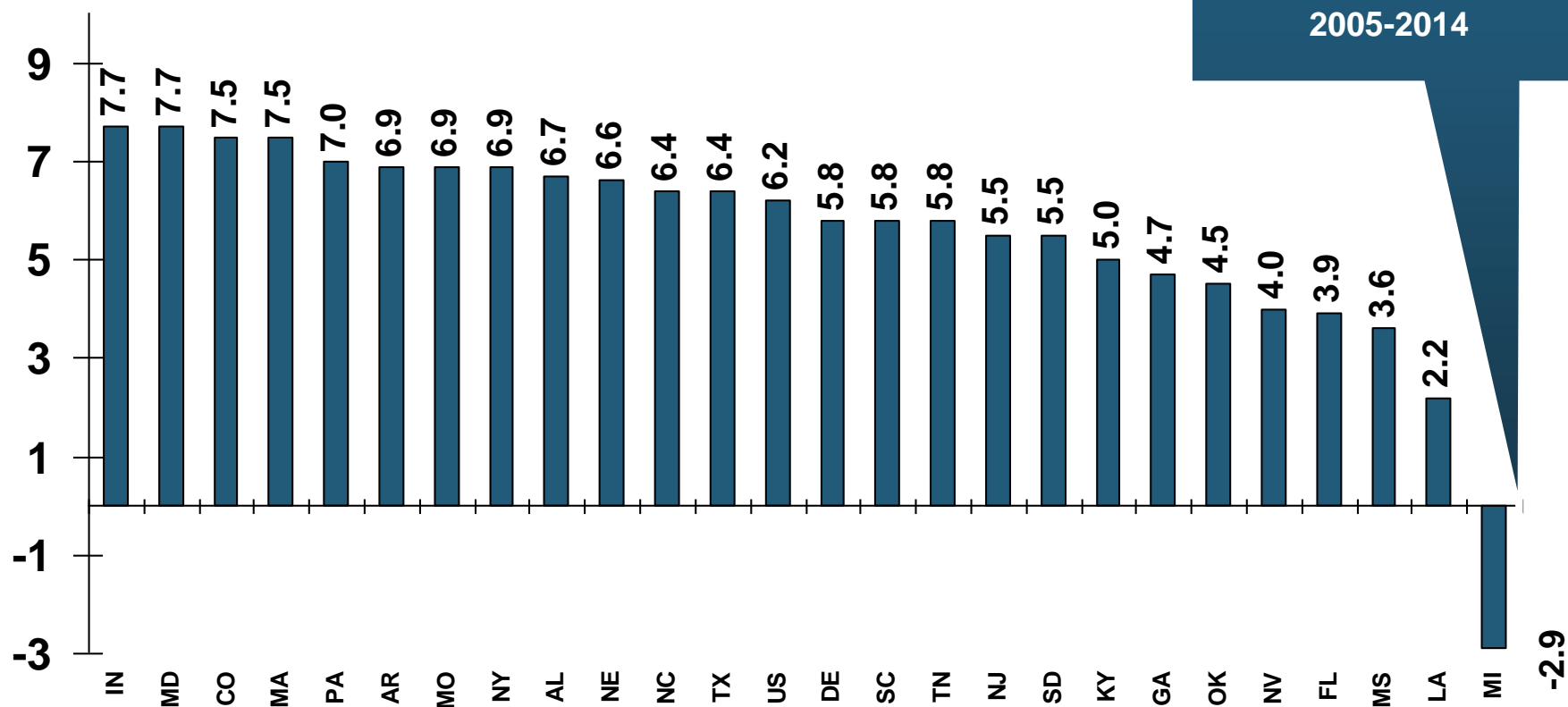
(Percent)



Sources: NAIC; Insurance Information Institute

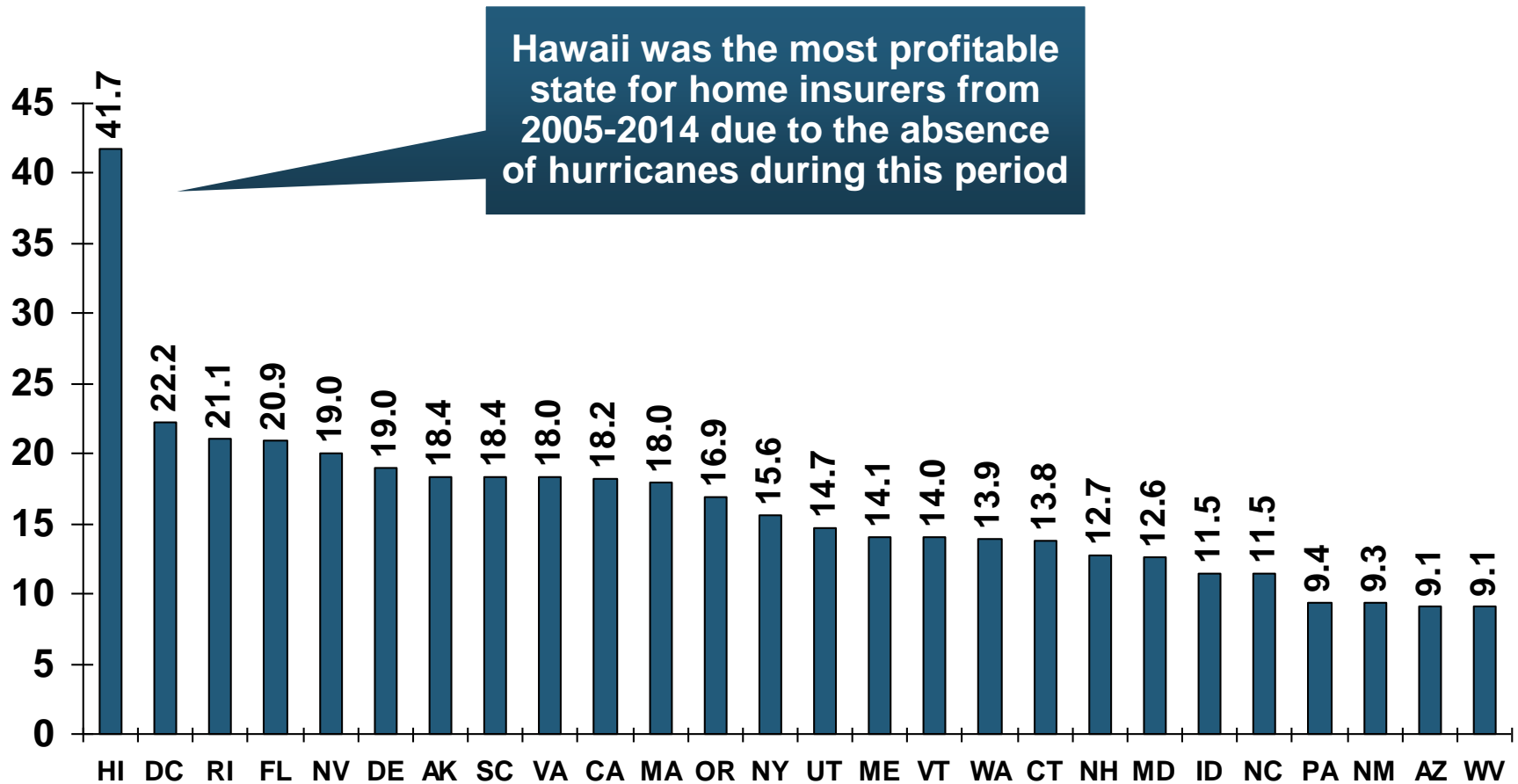
RNW Pvt. Passenger Auto, 2005-2014 Average: Lowest 25 States

(Percent)

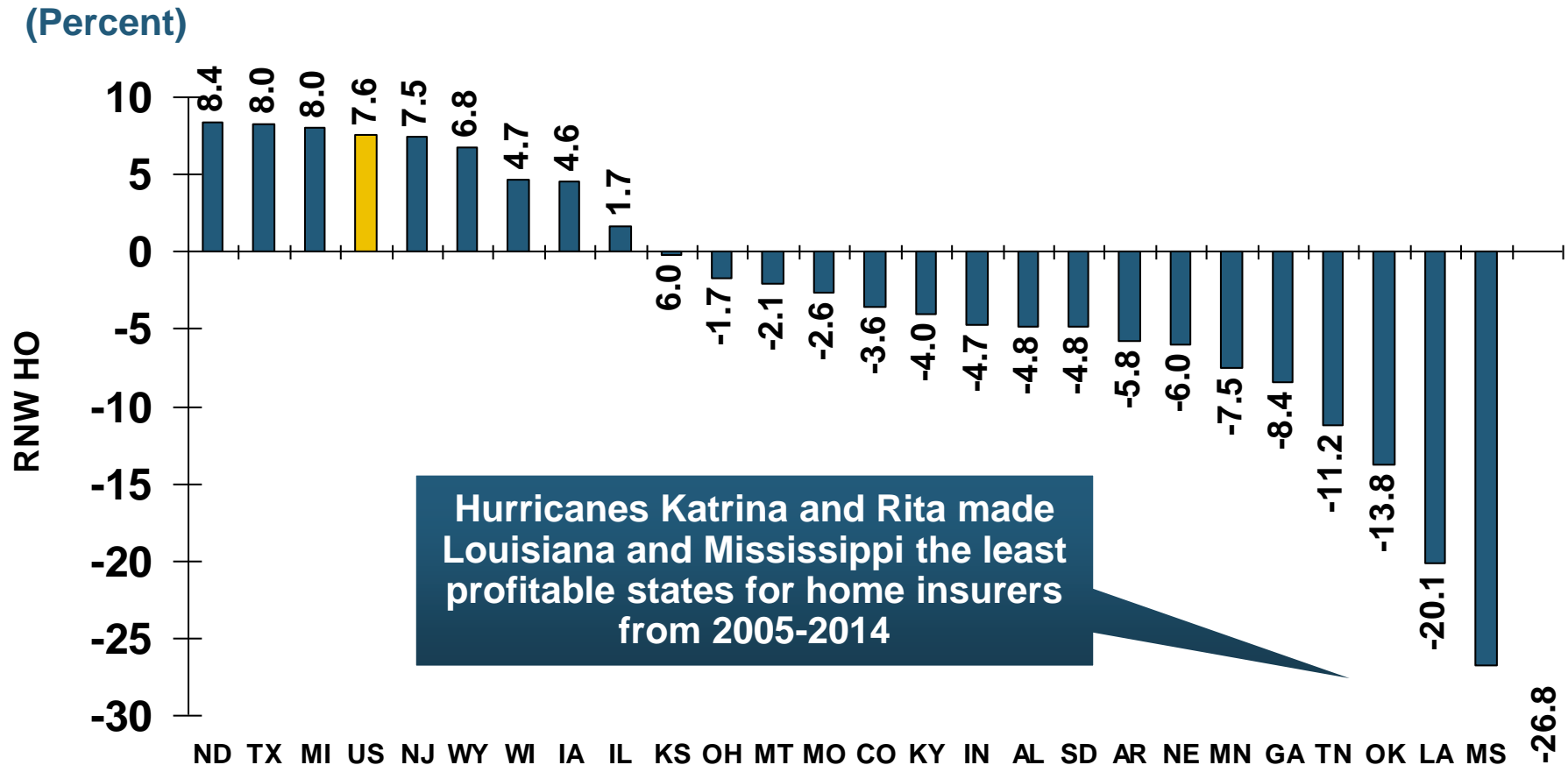


RNW Homeowners Insurance, 2005-2014 Average: Highest 25 States

(Percent)



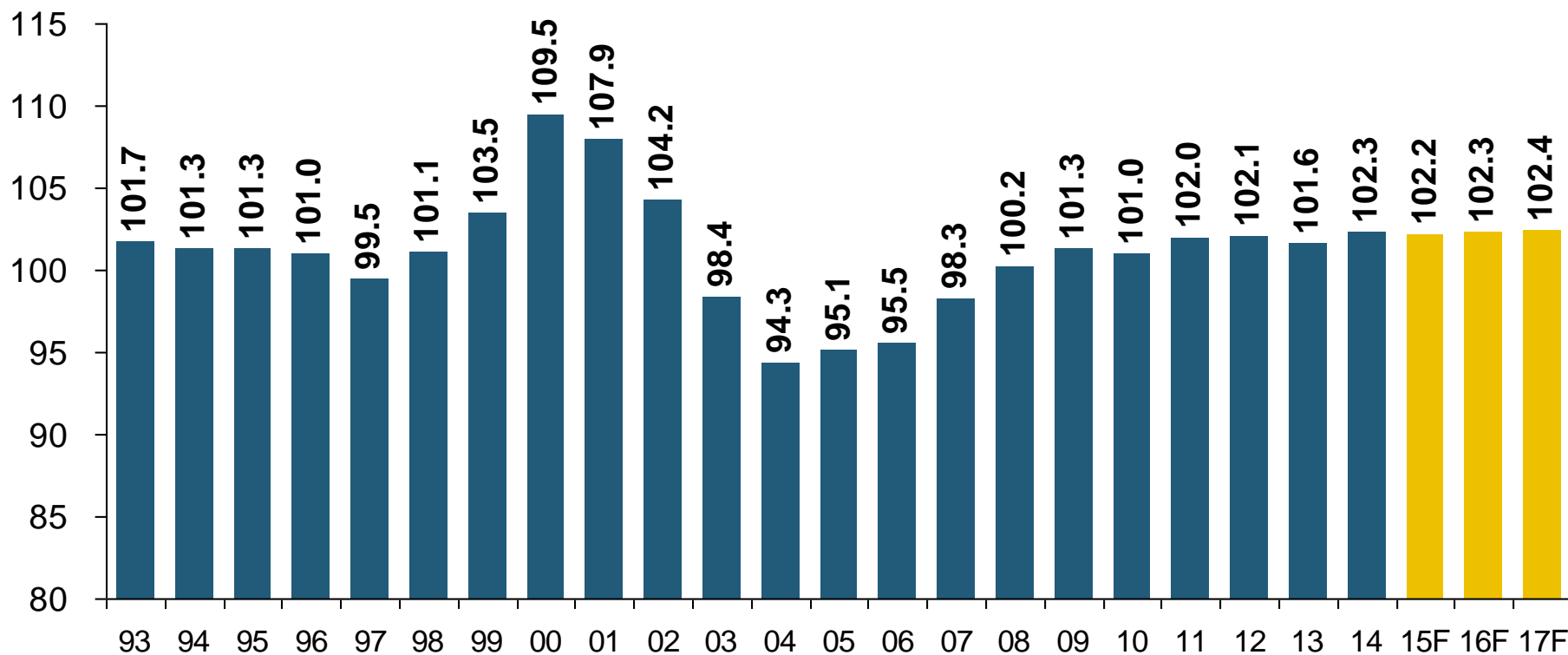
RNW Homeowners Insurance, 2005-2014 Average: Lowest 25 States



Personal Lines Underwriting Performance

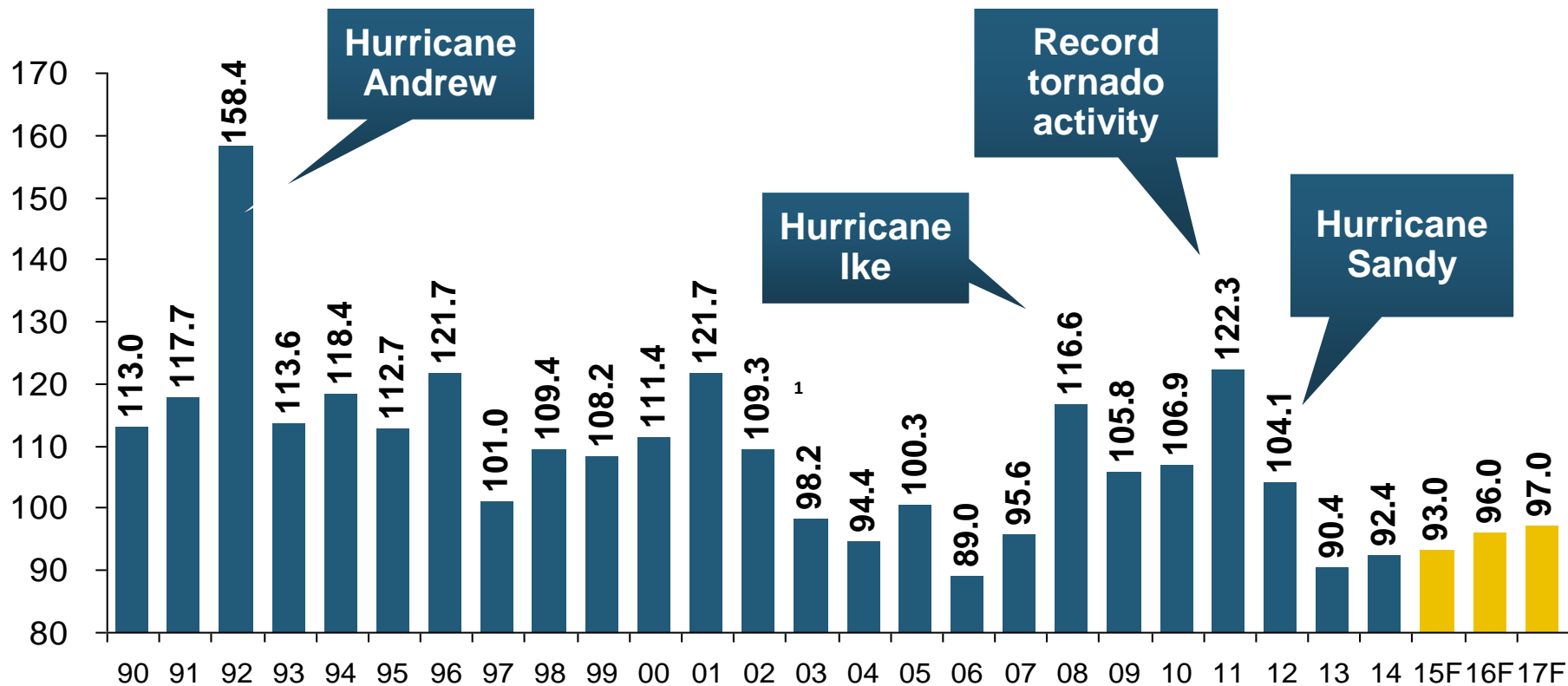
***Auto, Home Underwriting
Performance Exhibit Periods of
Both Stability and Volatility***

Private Passenger Auto Combined Ratio: 1993–2017F



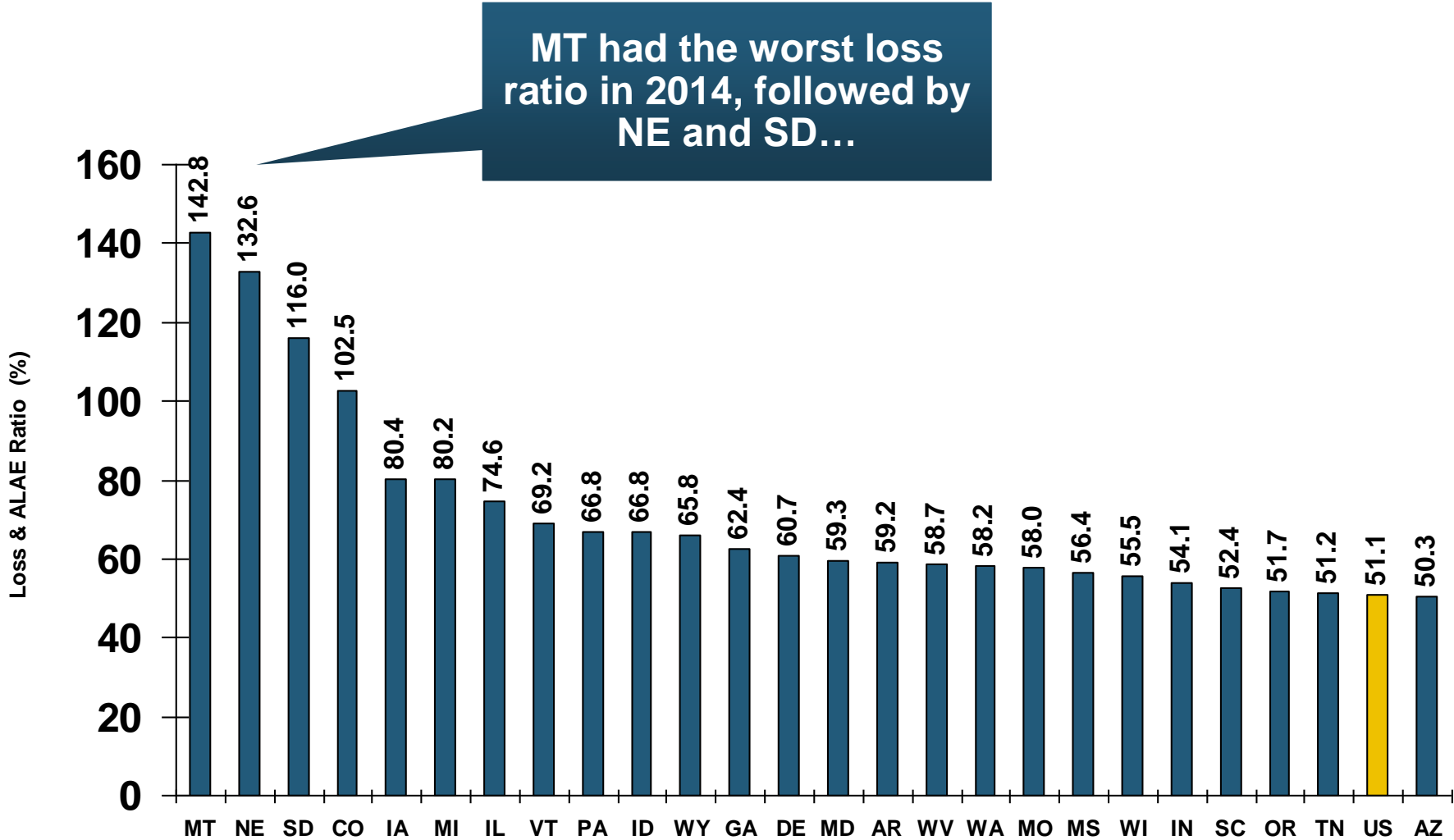
Private Passenger Auto Underwriting Performance Is Exhibiting Remarkable Stability

Homeowners Insurance Combined Ratio: 1990–2017F

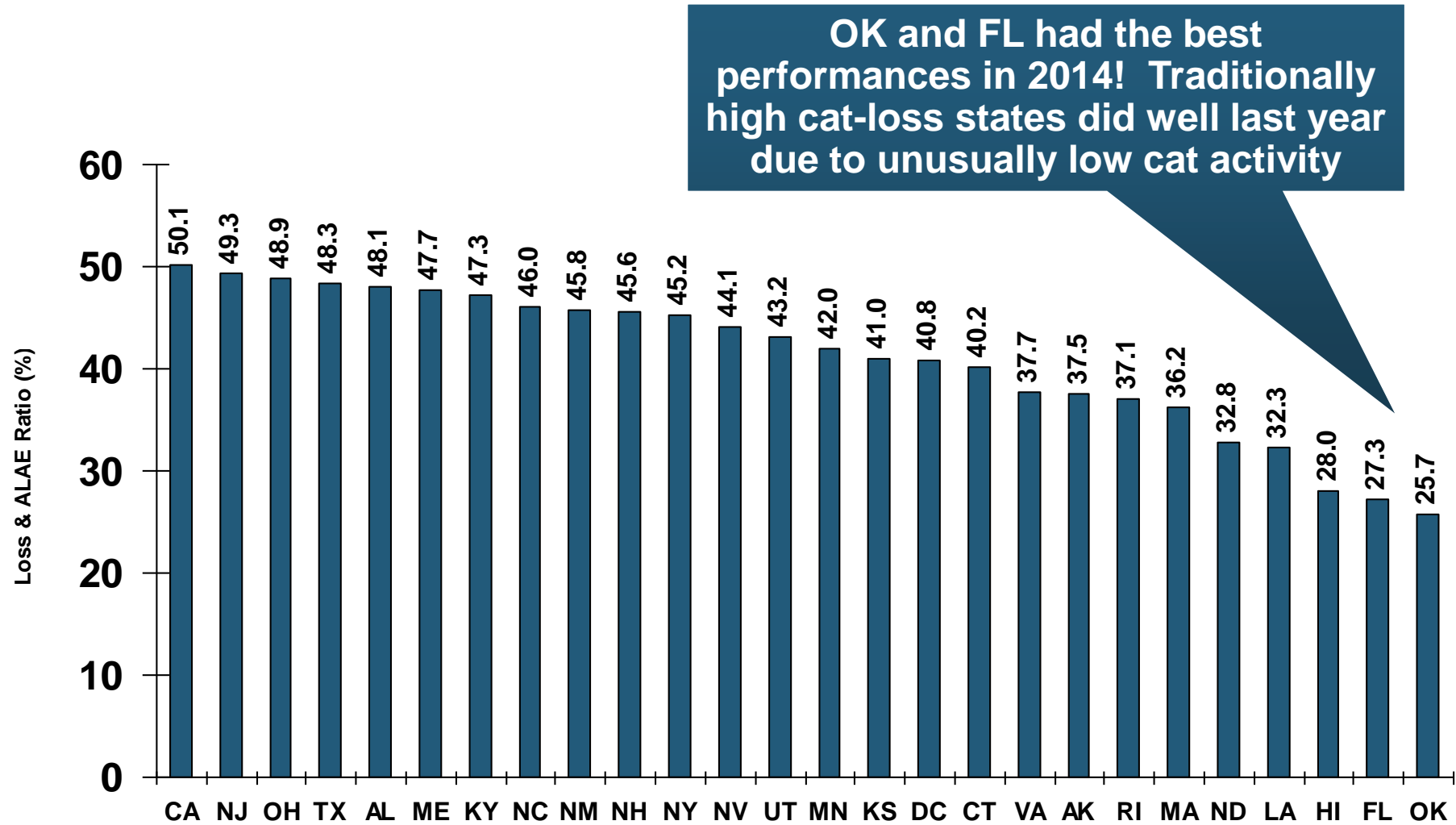


Homeowners Performance Has Improved Markedly Since the 2011/12's Large Cat Losses. Extreme Regional Variation Can Be Expected Due to Local Catastrophe Loss Activity

Homeowners Multi-Peril Loss & ALAE Ratio, 2014: Highest 25 States



Homeowners Multi-Peril Loss & ALAE Ratio, 2014: Insurance Information Institute



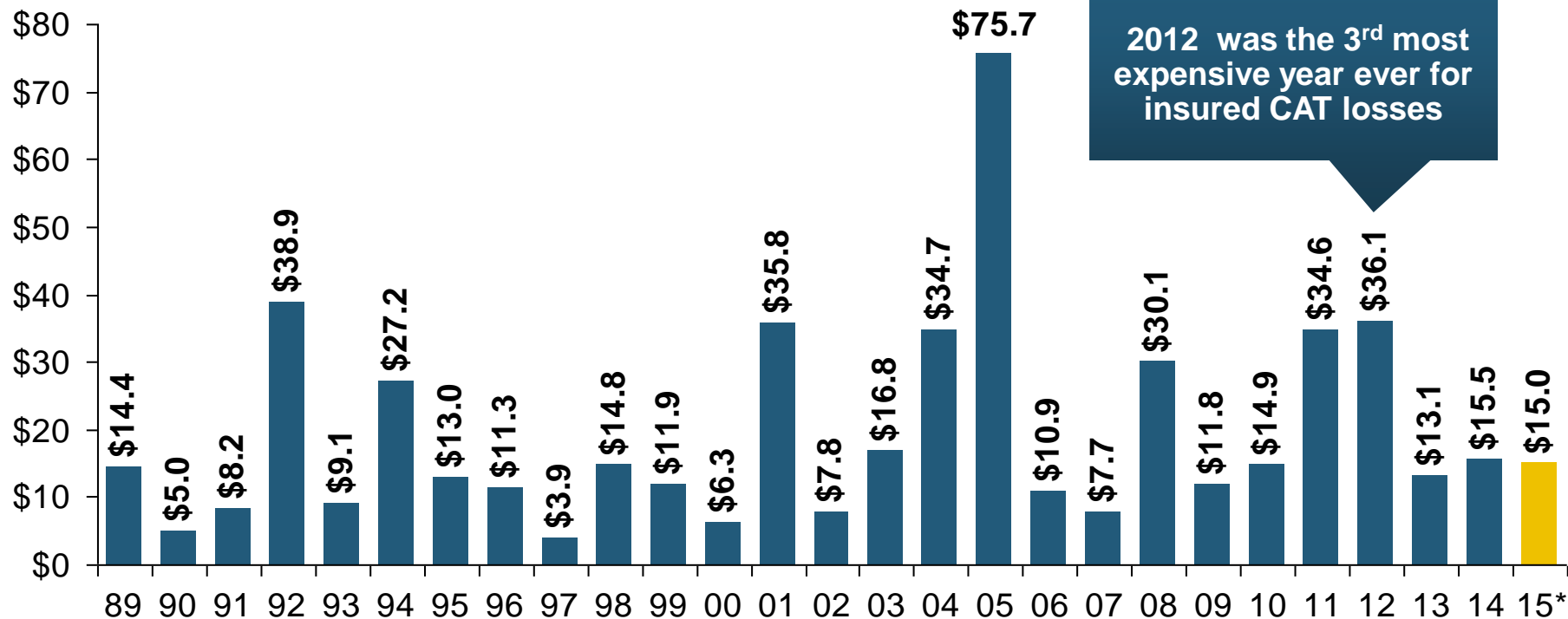
Insured Catastrophe Losses

**2013/14 and YTD 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 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.)

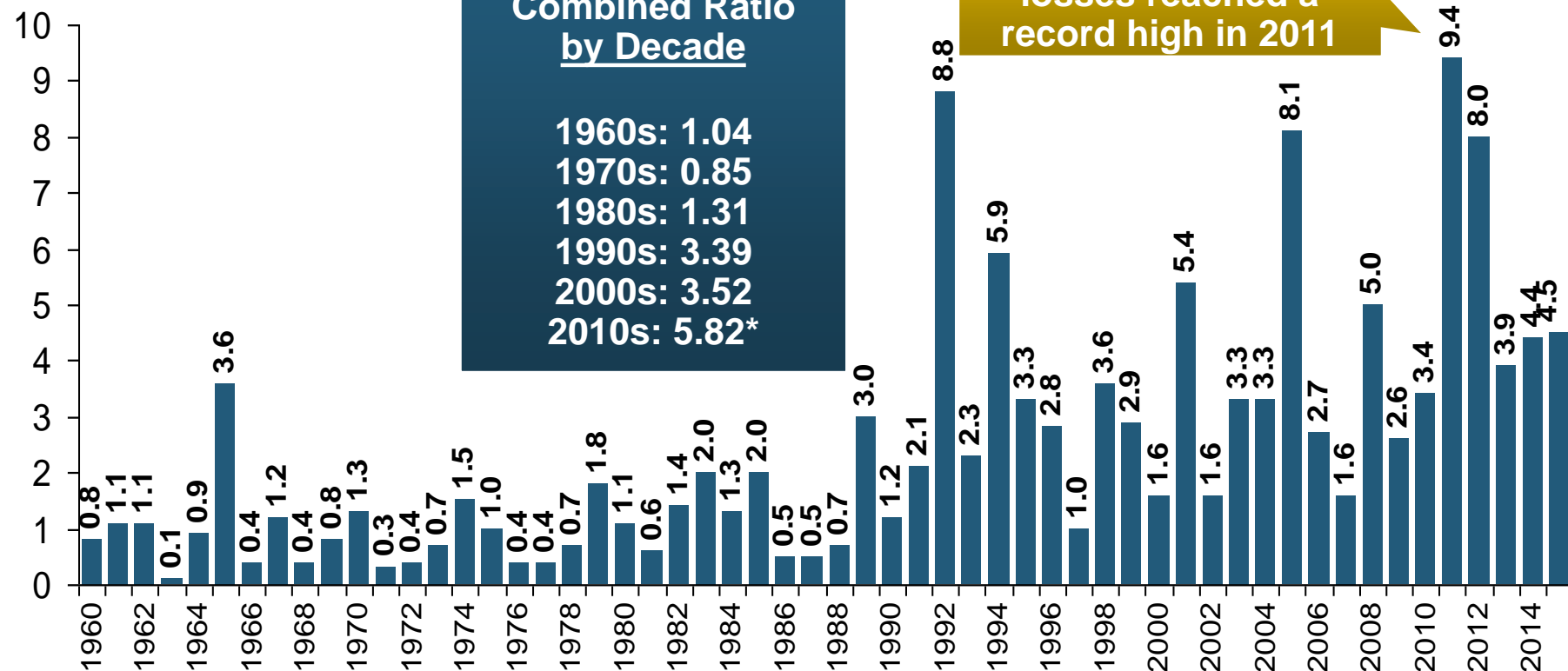
*Estimate through 12/31/15 in 2015 dollars.

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



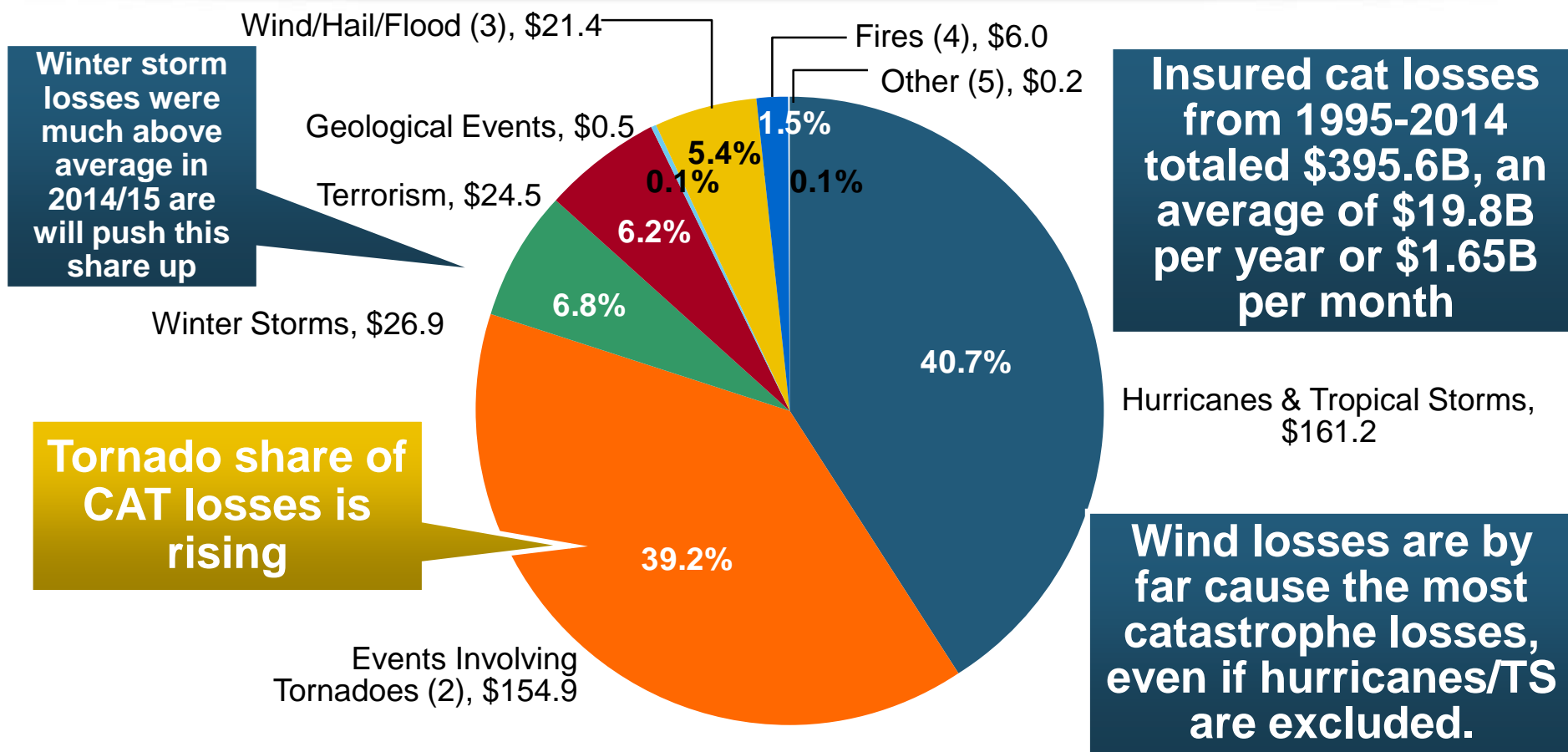
The Catastrophe Loss Component of Private Insurer Losses Has Increased Sharply in Recent Decades

*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.

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

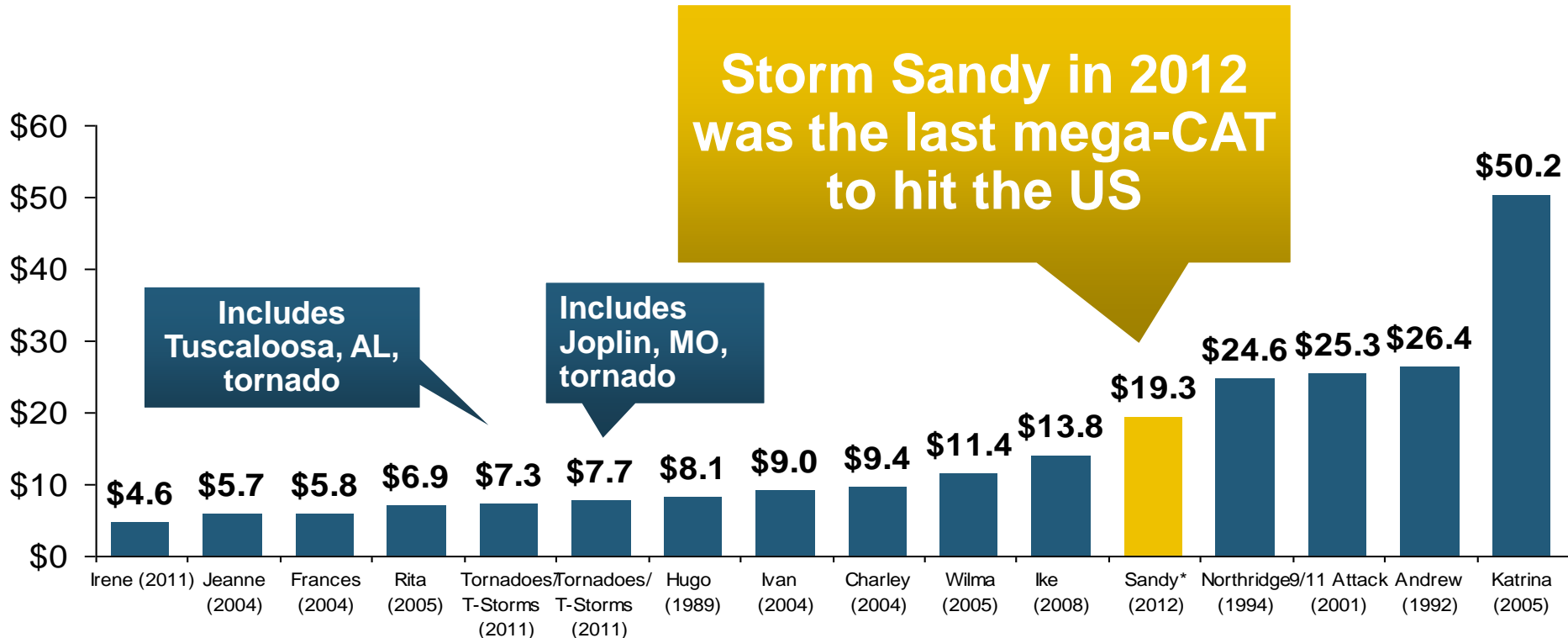


1. Catastrophes are defined as events causing direct insured losses to property of \$25 million or more in 2014 dollars.
2. Excludes snow.
3. Does not include NFIP flood losses
4. Includes wildland fires
5. Includes civil disorders, water damage, utility disruptions and non-property losses such as those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

Source: ISO's Property Claim Services Unit.

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

(Insured Losses, 2014 Dollars, \$ Billions)



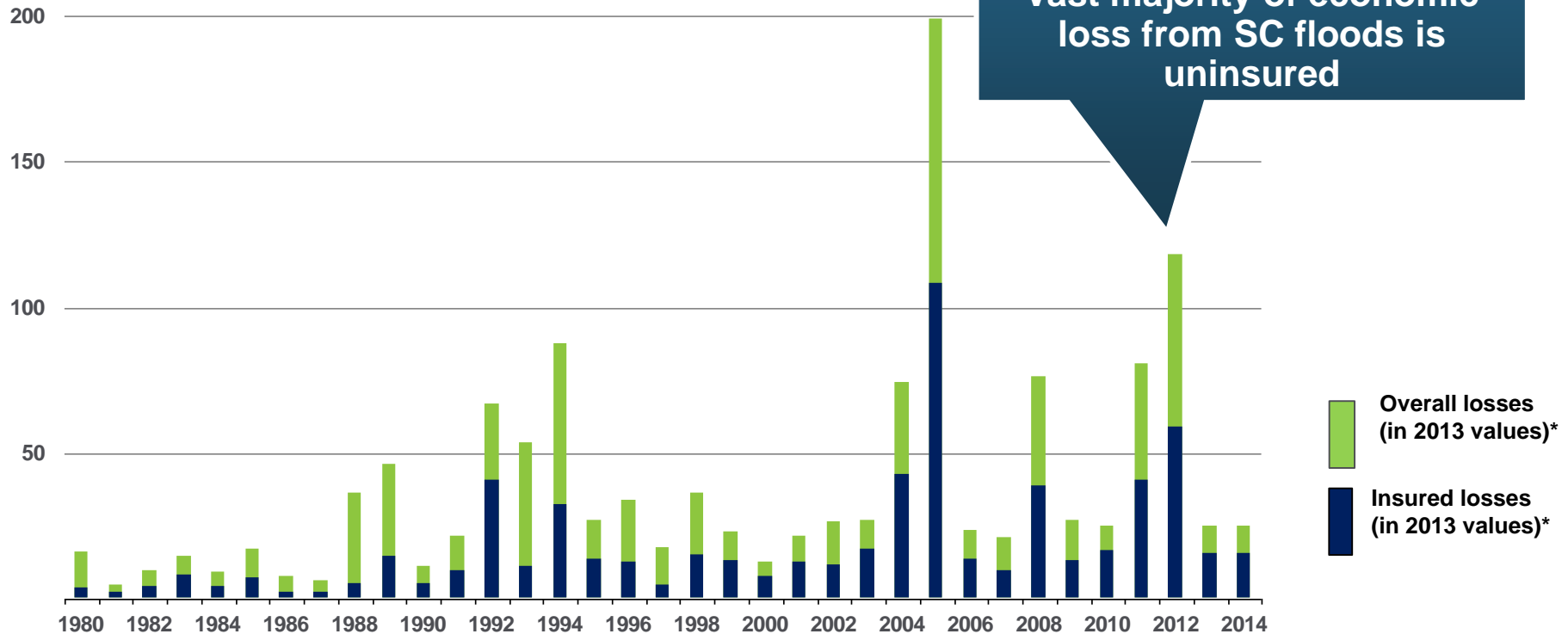
12 of the 16 Most Expensive Events in US History Have Occurred Since 2004

Loss Events in the US, 1980 – 2014

Overall and Insured Losses

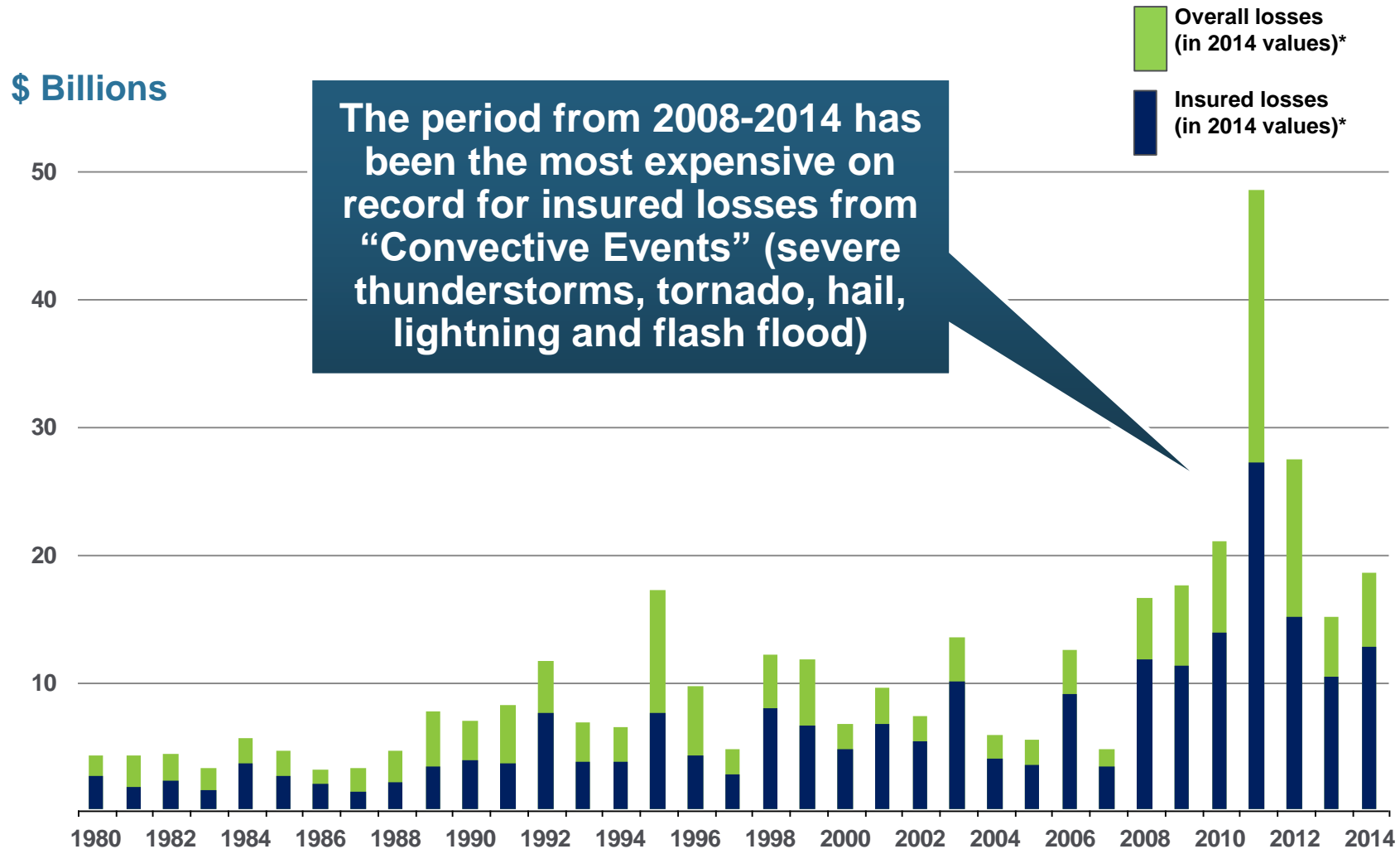
Overall losses totaled \$25bn; Insured losses totaled \$15.3bn

\$ Billions



Convective Loss Events in the US

Overall and insured losses, 1980 – 2014



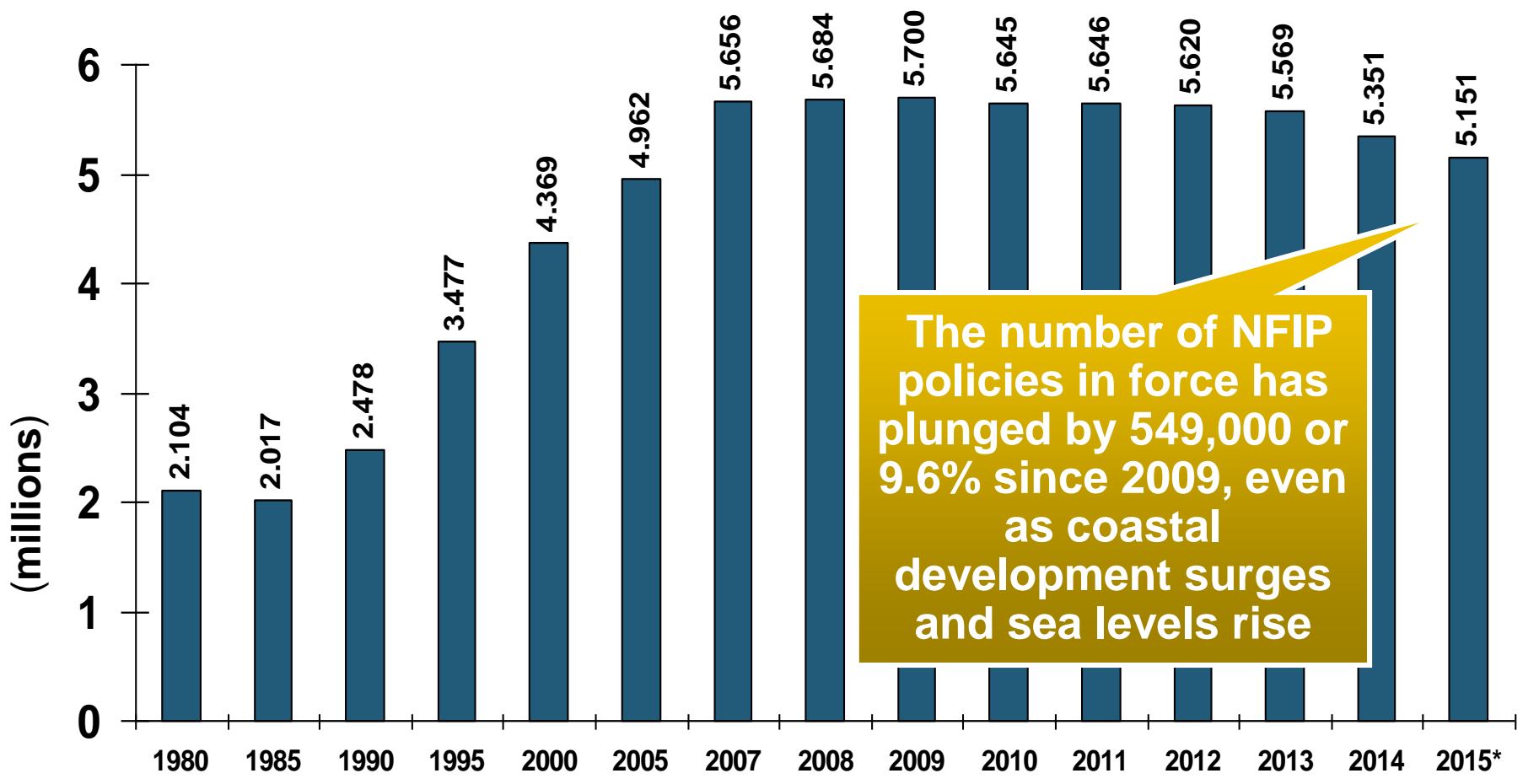
*Losses adjusted to inflation based on CPI

Source: Geo Risks Research, NatCatSERVICE

Analysis contains:

severe storm, tornado, hail, flash flood and lightning

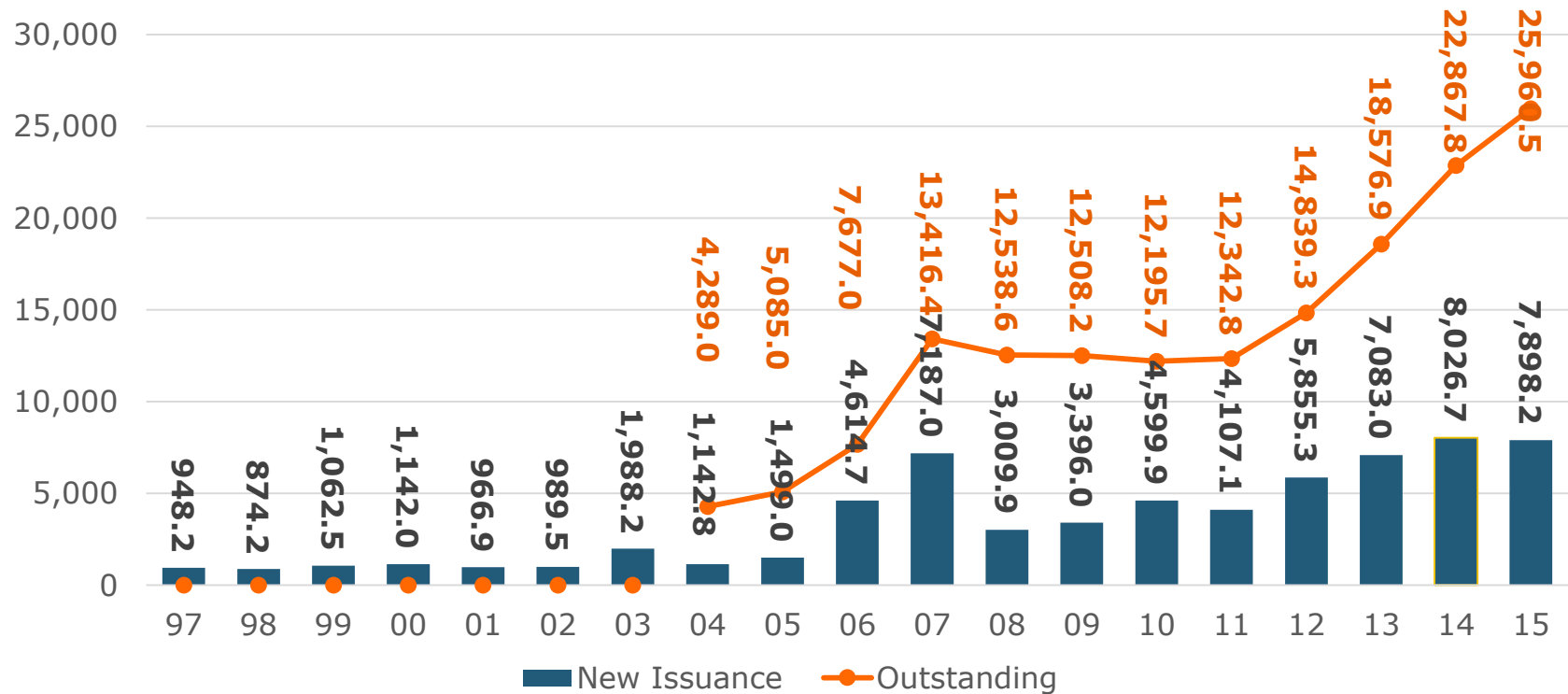
Number of National Flood Insurance Program Policies in Force at Year-End, 1980-2015*



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

Catastrophe Bond Issuance and Outstanding: 1997-2015

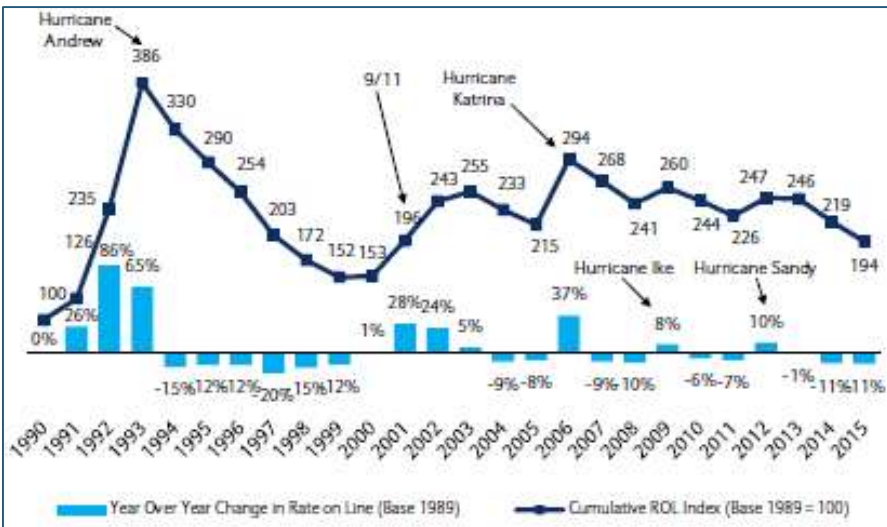
Risk Capital Amount (\$ Millions)



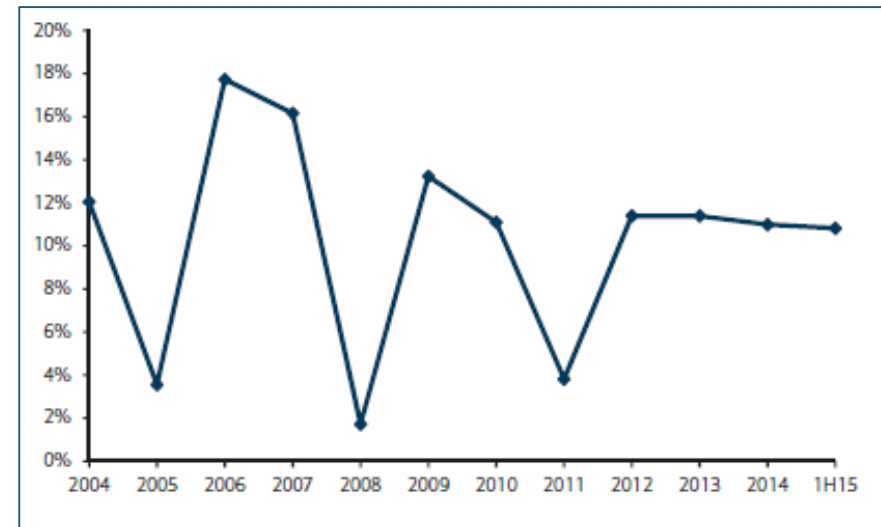
Cat Bond Issuance Declined Slightly in 2015 from 2014's Record Pace. Lower Yields on Bonds Explain Some of the Contraction.

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

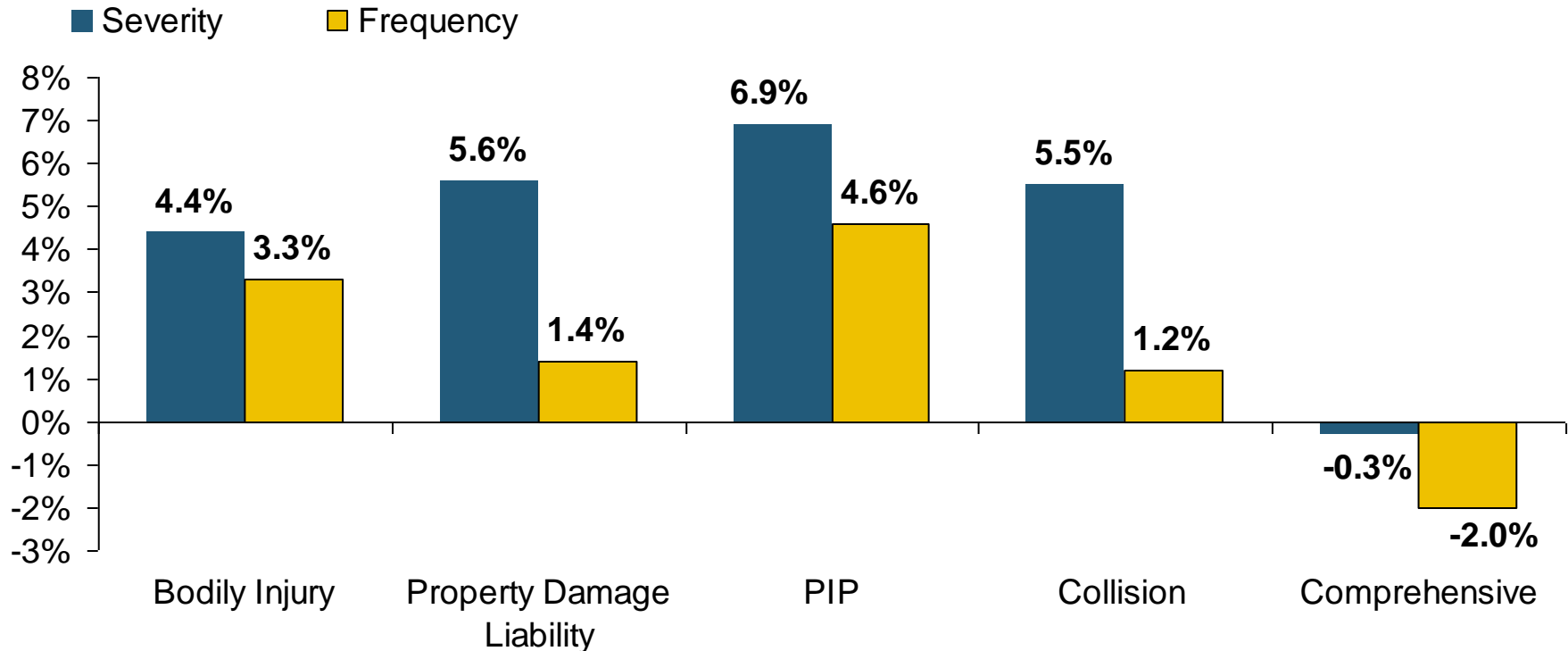
Claim Trends in Private Passenger Auto Insurance

**Rising Frequencies and Severities
in Many Coverages**

Will that Pattern Be Sustained?

Auto Severity & Frequency by Coverage: Trending Up in 2015*

Annual Change, 2015* Over 2014



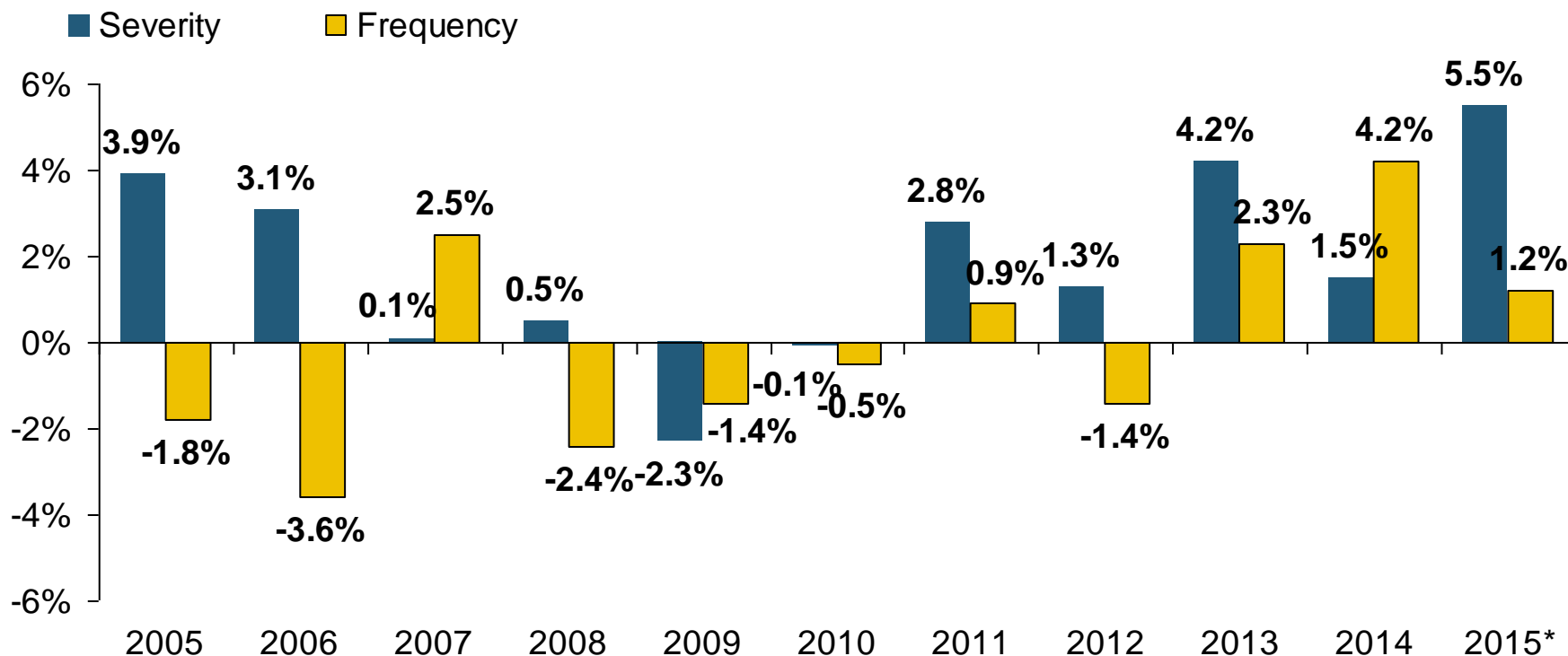
Frequency and Severity Were Up Across Most Coverage Types in 2015; A Trend Likely to Continue in 2016

*2015 figure is for the 4 quarters ending with 2015:Q3 (latest available).

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

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

Annual Change, 2005 through 2015*



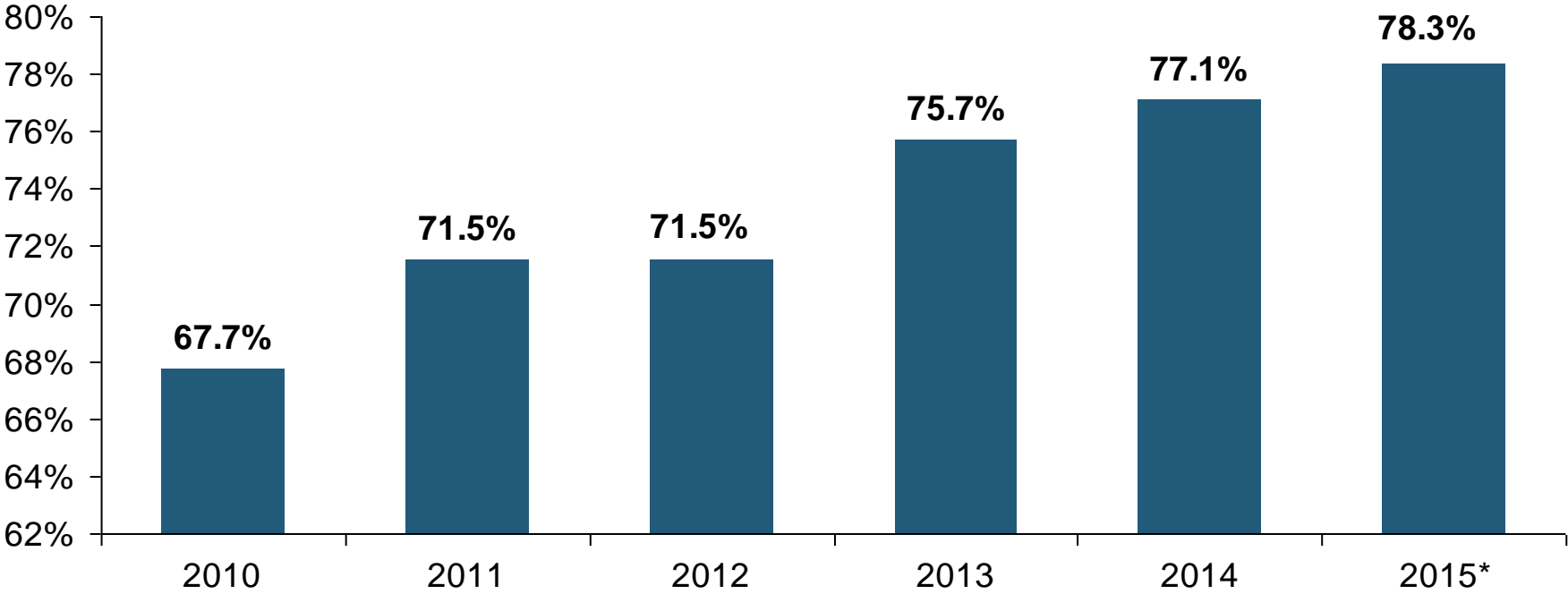
The Recession, High Fuel Prices Helped Temper Frequency and Severity, But this Trend Has Clearly Reversed, Consistent with Experience from Past Recoveries

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

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

Collision Loss Ratio Trending Upward: Private Passenger Auto, 2010 – 2015*

Loss Ratio



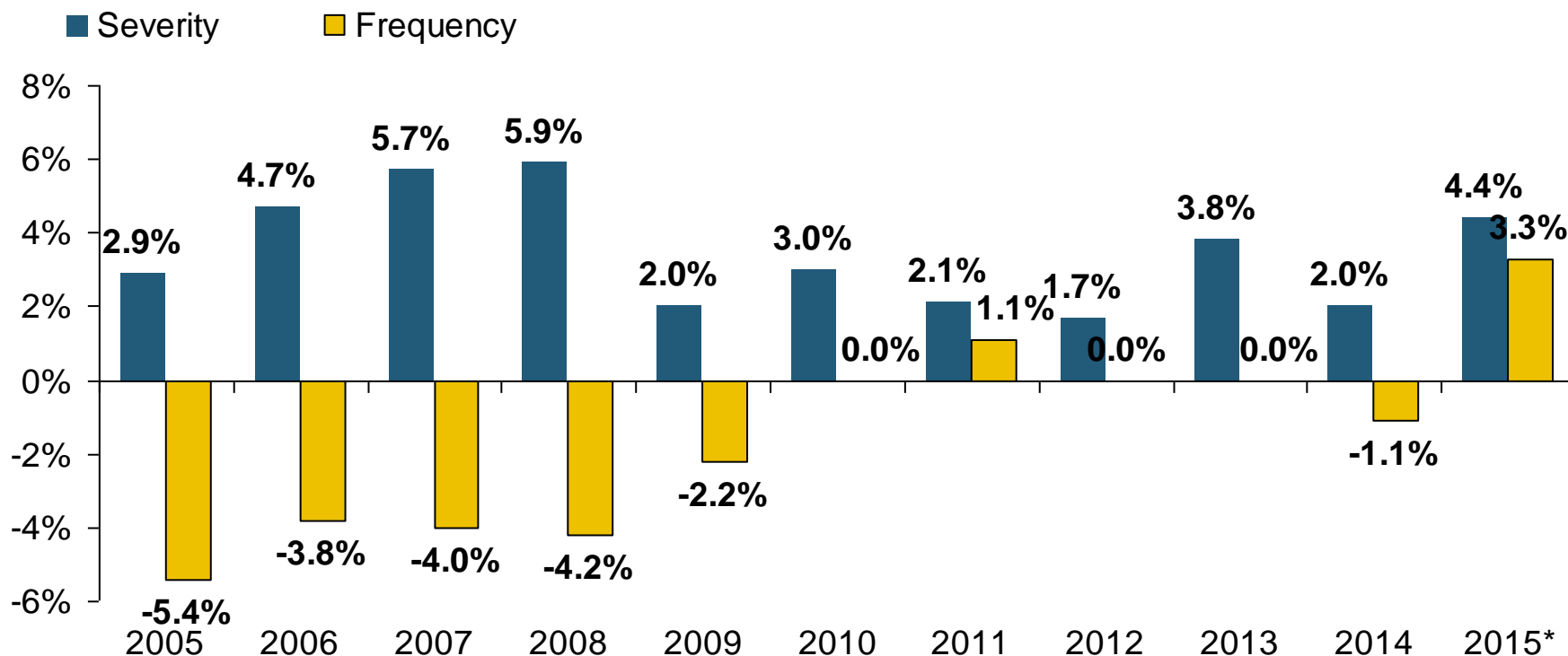
Collision Loss Ratios are Trending Steadily Upward

*2015 figure is for the 4 quarters ending with 2015:Q3 (latest available).

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

Bodily Injury: Severity Trend Is Up, Frequency Decline Has Ended—Rising?

Annual Change, 2005 through 2015:Q3*

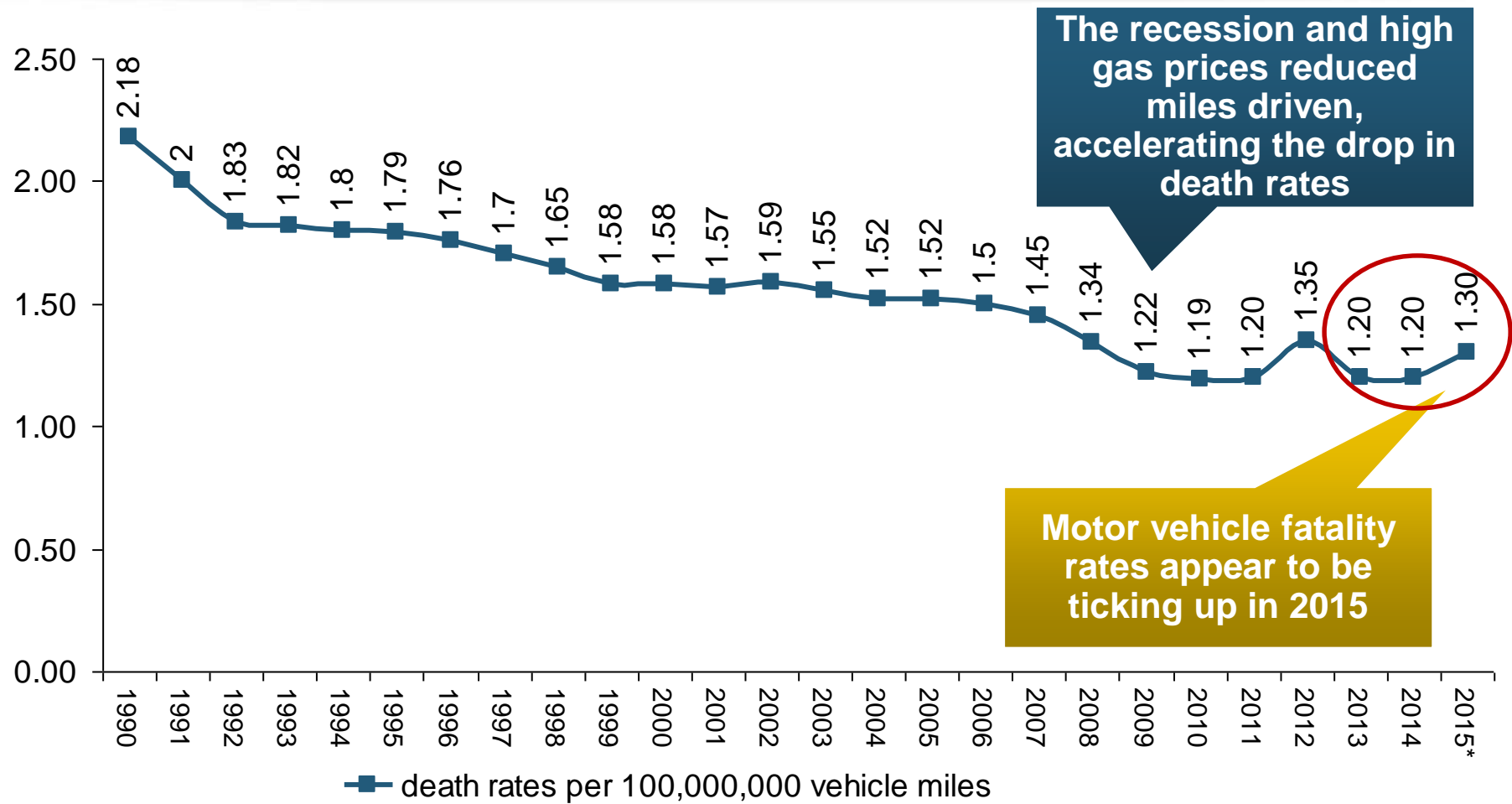


Cost Pressures Will Increase if BI Frequency and Severity Trends Persist

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

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

Death Rates per 100,000,000 Vehicle miles, 1990-2015*

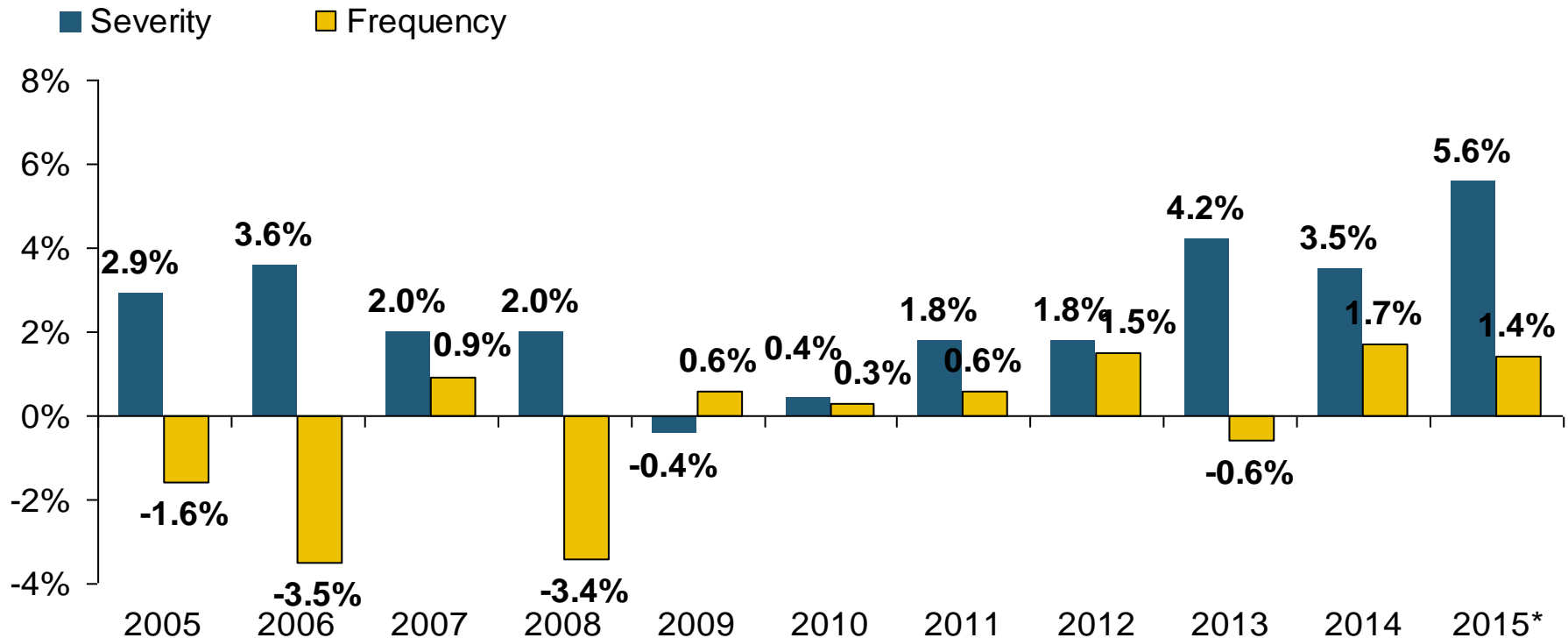


Vehicle death rates fell by nearly half between 1990 and 2010

*Projected rate for 2015 based on date through June 2015.
Source: National Safety Council; Insurance Information Institute.

Property Damage Liability: Severity and Frequency Are Up

Annual Change, 2005 through 2015*



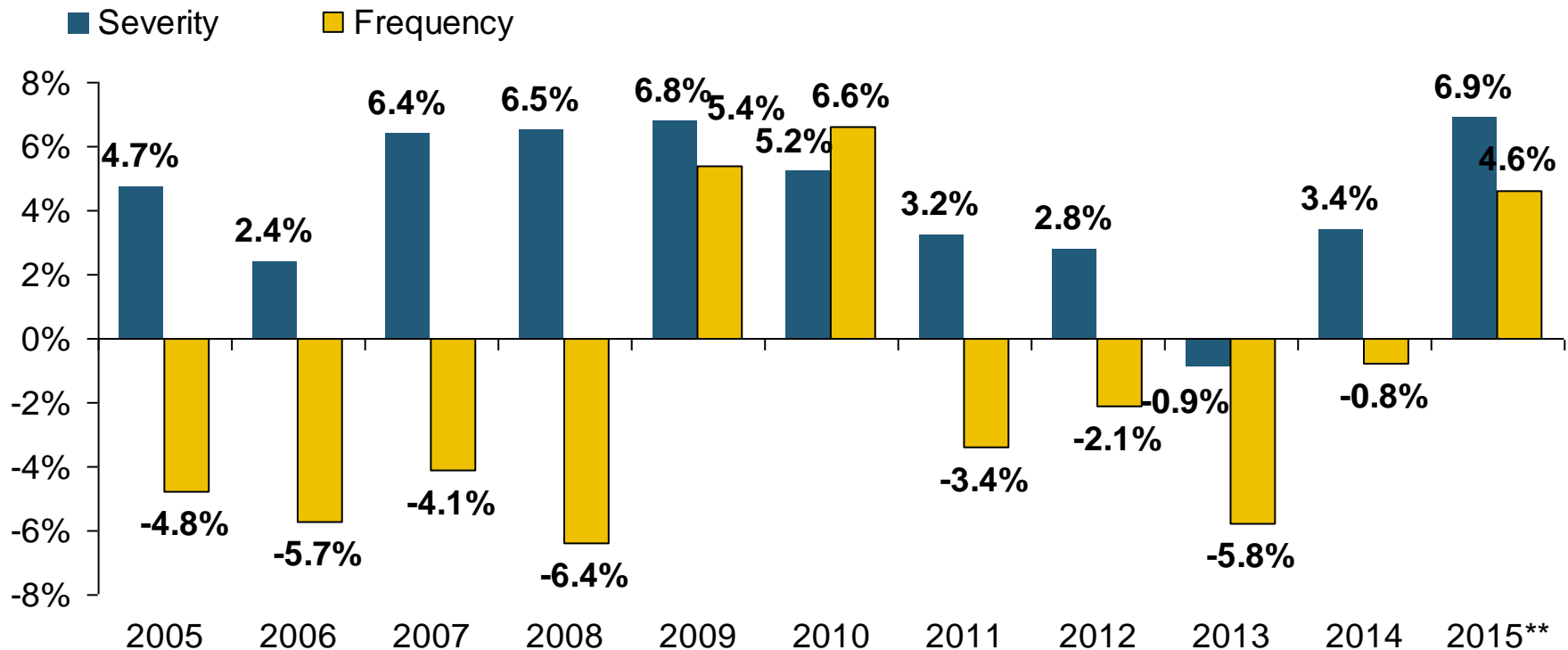
Severity/Frequency Trends Have Been Volatile, But Rising Severity since 2011 Is a Concern

*2015 figure is for the four quarters ending in 2015:Q3.

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

No-Fault (PIP) Liability: Severity is Up, Frequency Relatively Flat*

Annual Change, 2005 through 2015**



No-Fault Systems Are Less Problematic in Some States but Still of Concern in Some, Such as MI

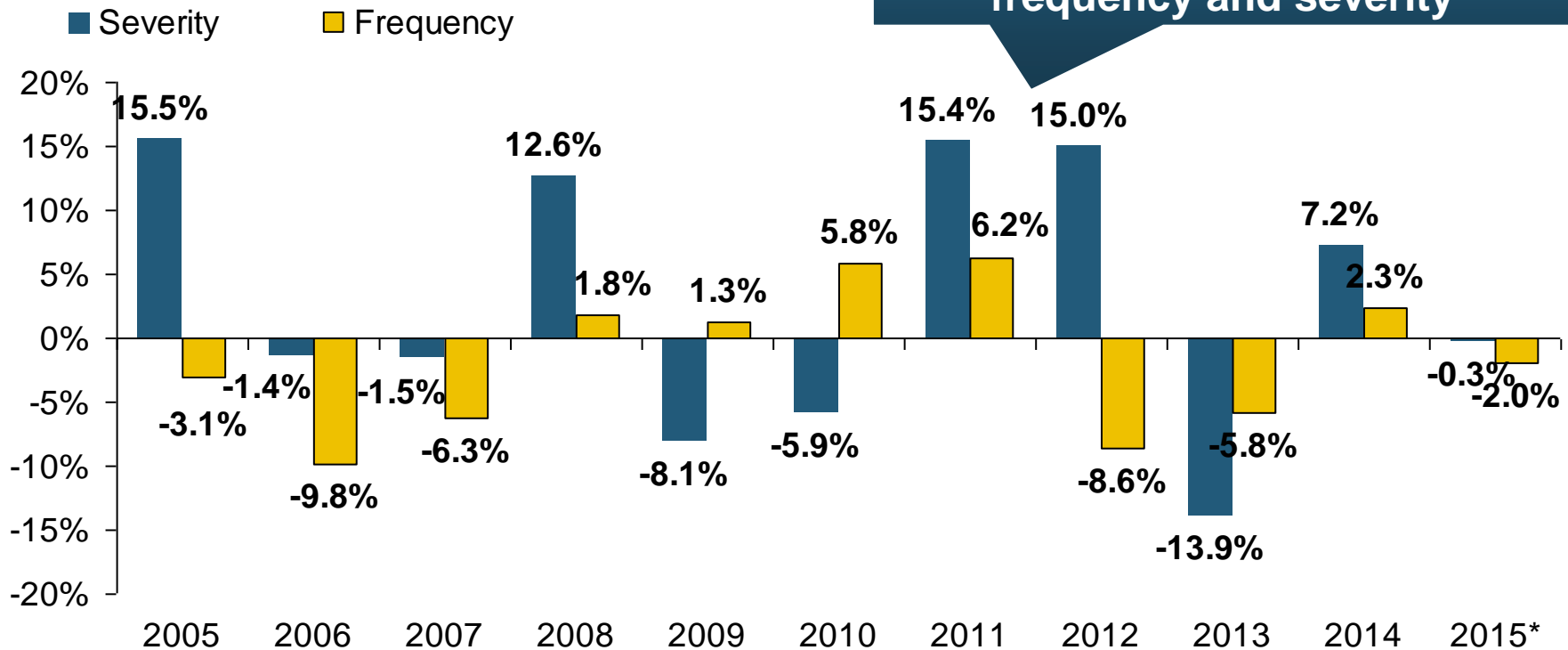
*No-fault states included are: FL, HI, KS, KY, MA, MI, MN, NY, ND and UT.

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

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

Comprehensive Coverage: Severity Trends Are Unfavorable

Annual Change, 2005 through 2015*



Weather Creates Volatility for Comprehensive Coverage

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

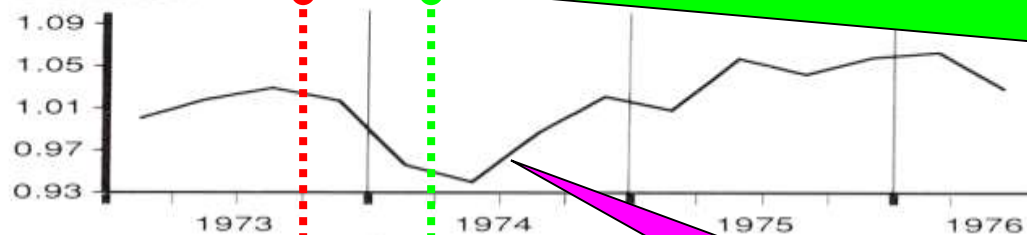
Source: ISO/PCI *Fast Track* data; Insurance Information Institute

Auto Insurance: Claim Frequency Impacts of Energy Crisis of 1973/4

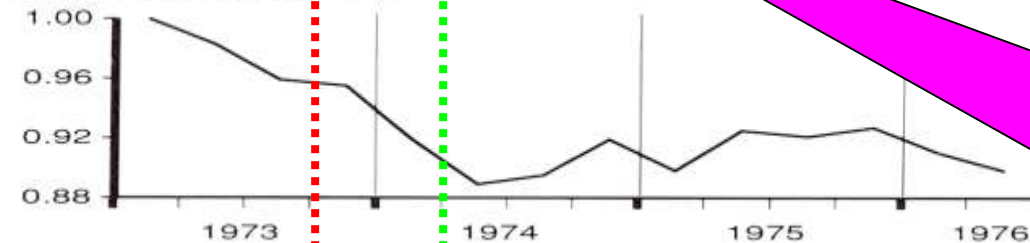
Figure 6

The First Crisis—Frequency

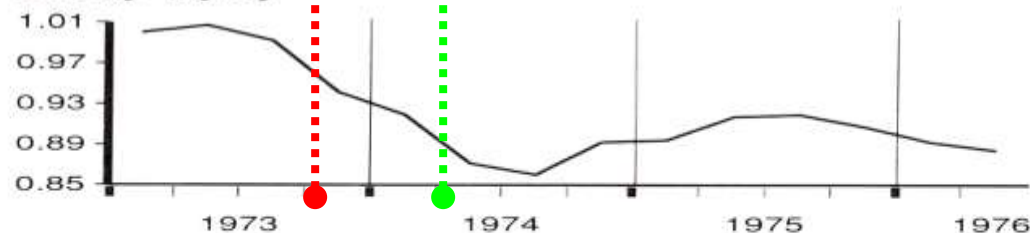
Collision



Property Damage*



Bodily Injury**



*Seasonally Adjusted, Quarterly Paid Fast Track data indexed to First Quarter 1973.

**ISO Paid Data, year-ended quarter indexed to First Quarter 1973.

**Oct. 17,
1973: Arab
oil embargo
begins**

**Frequency
Impacts**
Collision: -7.7%
PD: -9.5%
BI: -13.3%

Driving Stats
•Gas prices rose
35-40%
•Miles driven
fell 6.7% in
1974

**March 17,
1974: Arab
oil states
announce
end to
embargo**

**Frequency
began to
rebound
almost
immediately
after the
embargo
ended**

Auto Insurance: Claim Severity

Impacts of Energy Crisis of 1973/4

Oct. 17,
1973: Arab
oil embargo
begins

**Severity
Impacts**
Collision: -
7.5%
PD: +15.9%
BI: N/A*

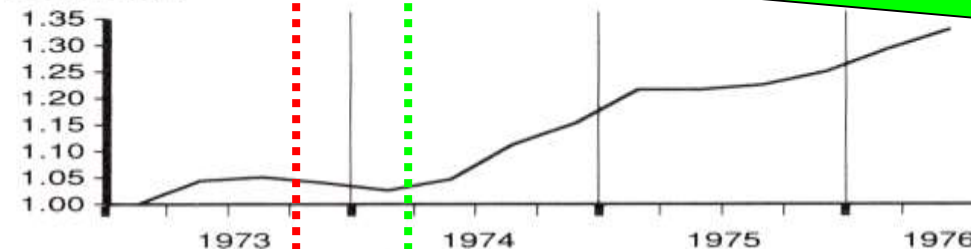
Driving Stats
• Gas prices
rose 35-40%
• Miles driven
fell 6.7% in
1974

Source: ISO.

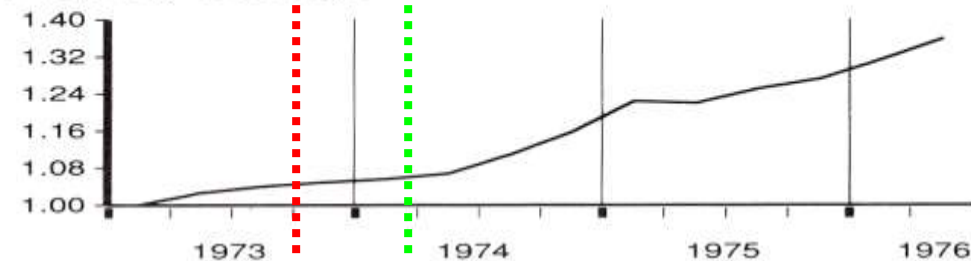
Figure 7

The First Crisis—Severity*

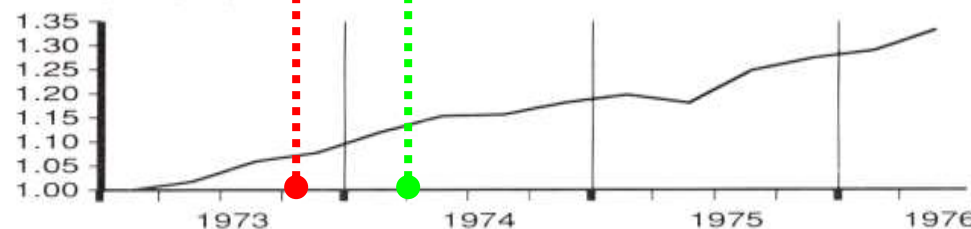
Collision



Property Damage



Bodily Injury



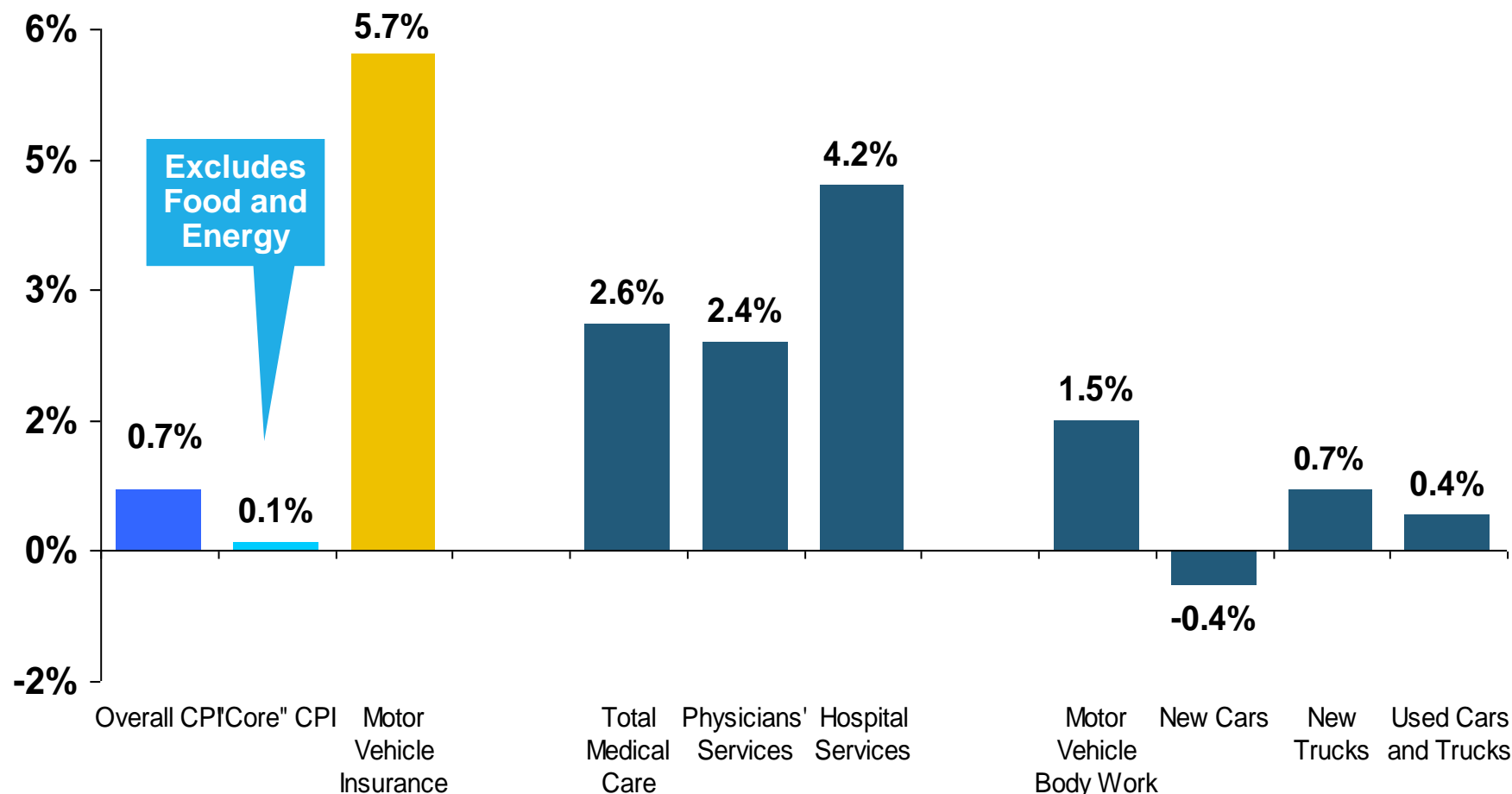
*Seasonally Adjusted, Quarterly Paid Fast Track data indexed to First Quarter 1973.

March 17,
1974: Arab
oil states
announce
end to
embargo

Collision
severity
began to
rebound
almost
immediately
after the
embargo
ended; PD
accelerated
as inflation
rose; No
discernable

Auto Insurance Claim Cost Drivers Continue to Grow Faster than CPI

Price Level Change: December 2015 vs. December 2014



Healthcare costs are a major cost driver and are expected to accelerate in the years ahead

Defense Costs and Cost Containment Expenses as a Percent of Incurred Losses, 2011 – 2013*

(\$000)

	2011		2012		2013	
	Amount	As a percent of incurred losses	Amount	As a percent of incurred losses	Amount	As a percent of incurred losses
Products liability	\$1,140,230	72.0%	\$873,860	114.7%	\$1,166,236	75.1%
Medical malpractice	1,793,296	57.5	1,686,009	45.7	1,656,049	53.3
Commercial multiple peril (2)	1,896,935	37.6	2,022,739	46.0	2,096,543	37.7
Other liability	4,464,140	25.0	4,959,838	24.8	4,914,106	25.4
Workers compensation	3,087,836	12.6	3,071,093	12.3	3,012,719	12.3
Commercial auto liability	960,961	10.3	1,091,434	10.4	1,207,596	10.7
Private passenger auto liability	3,960,967	6.2	4,353,427	6.7	4,600,395	6.8
All liability lines	\$17,304,365	13.8%	\$18,058,400	13.9%	\$18,653,644	14.0%

(1) Net of reinsurance, excludes state funds.

(2) Liability portion only.

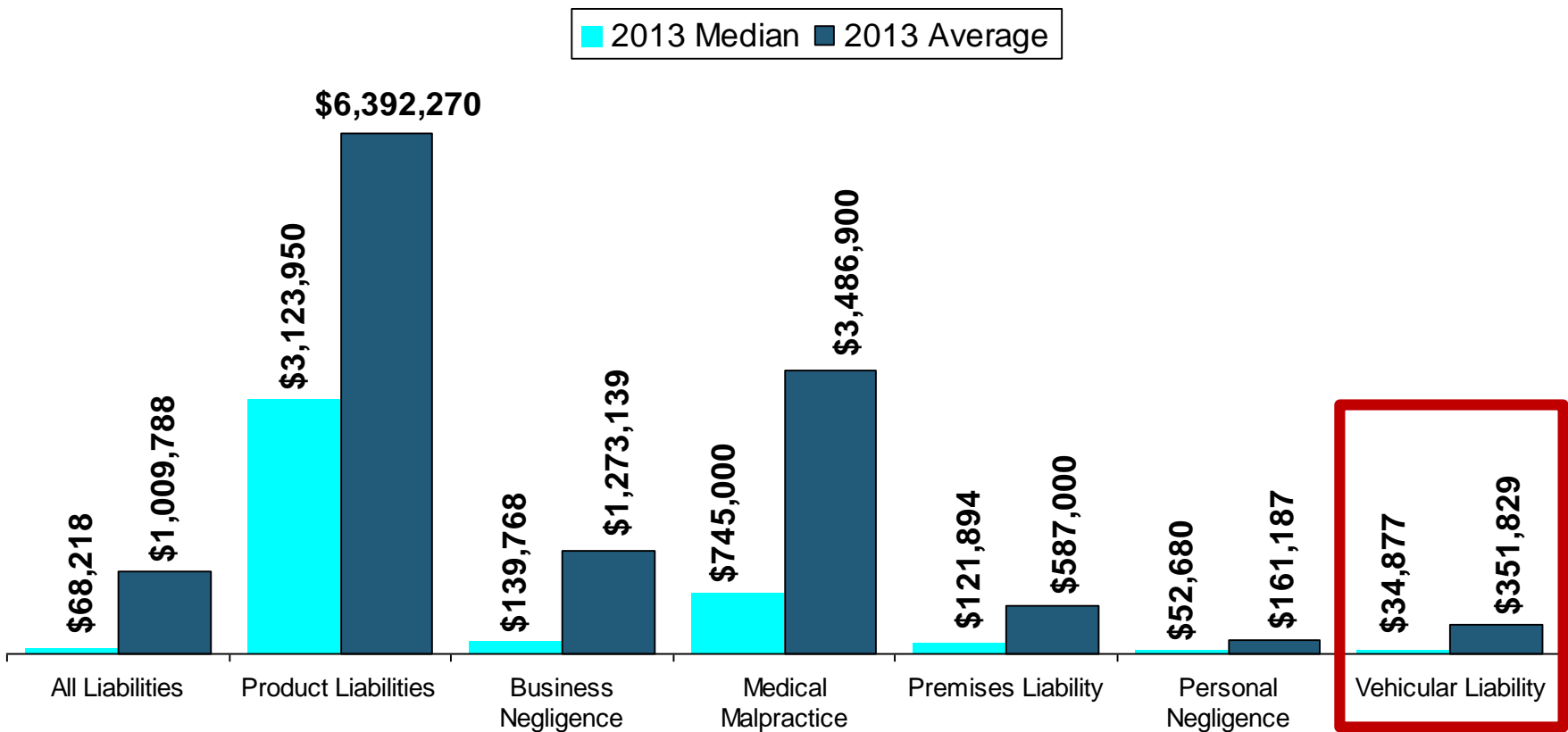
Defense and Cost Containment expenses in Pvt. Passenger Auto Liability have edged up slightly in recent years, from 6.2% of incurred losses to 6.8%

*Latest available.

Source: SNL Financial; Insurance Information Institute.

Median and Average Personal Injury Jury Award by Type of Liability, 2013

Products Liability and Medical Malpractice cases tend to have among the highest jury awards

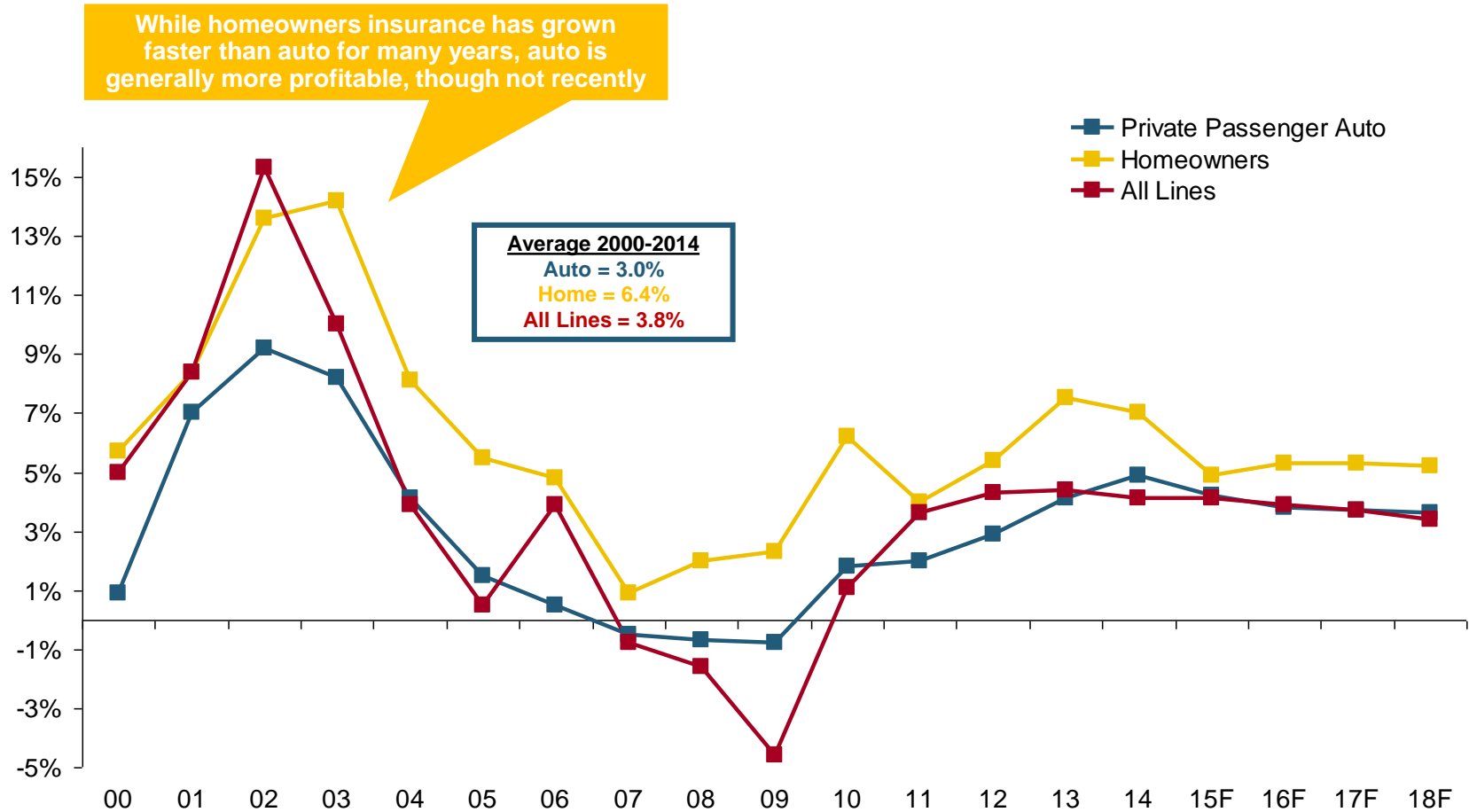


Source: *Current Award Trends in Personal Injury*, 54th Edition; Insurance Information Institute.

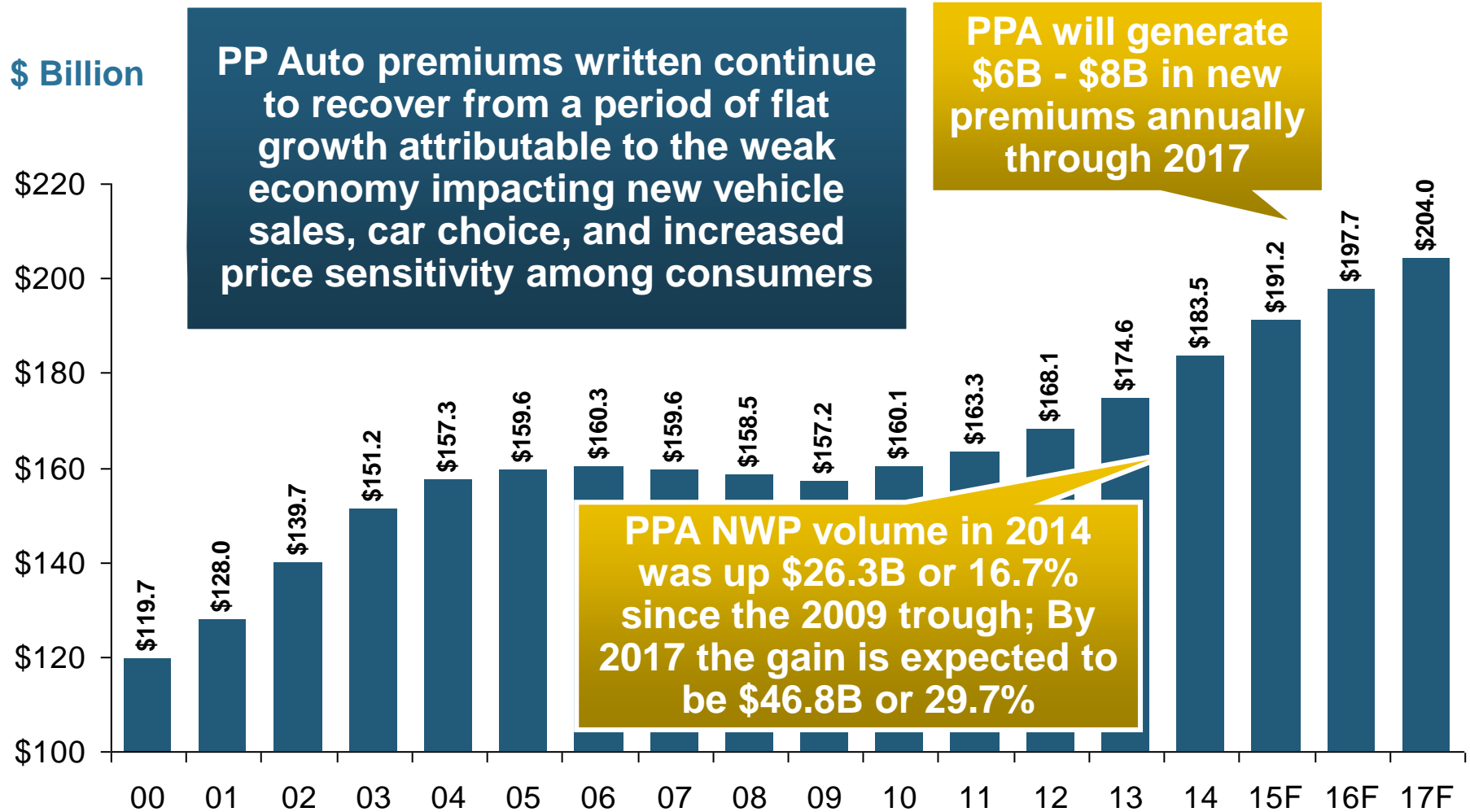
Personal Lines Growth Analysis

**Growth Trajectories Differ
Substantially by State and
Over Time**

Auto & Home vs. All Lines, Net Written Premium Growth, 2000–2018F

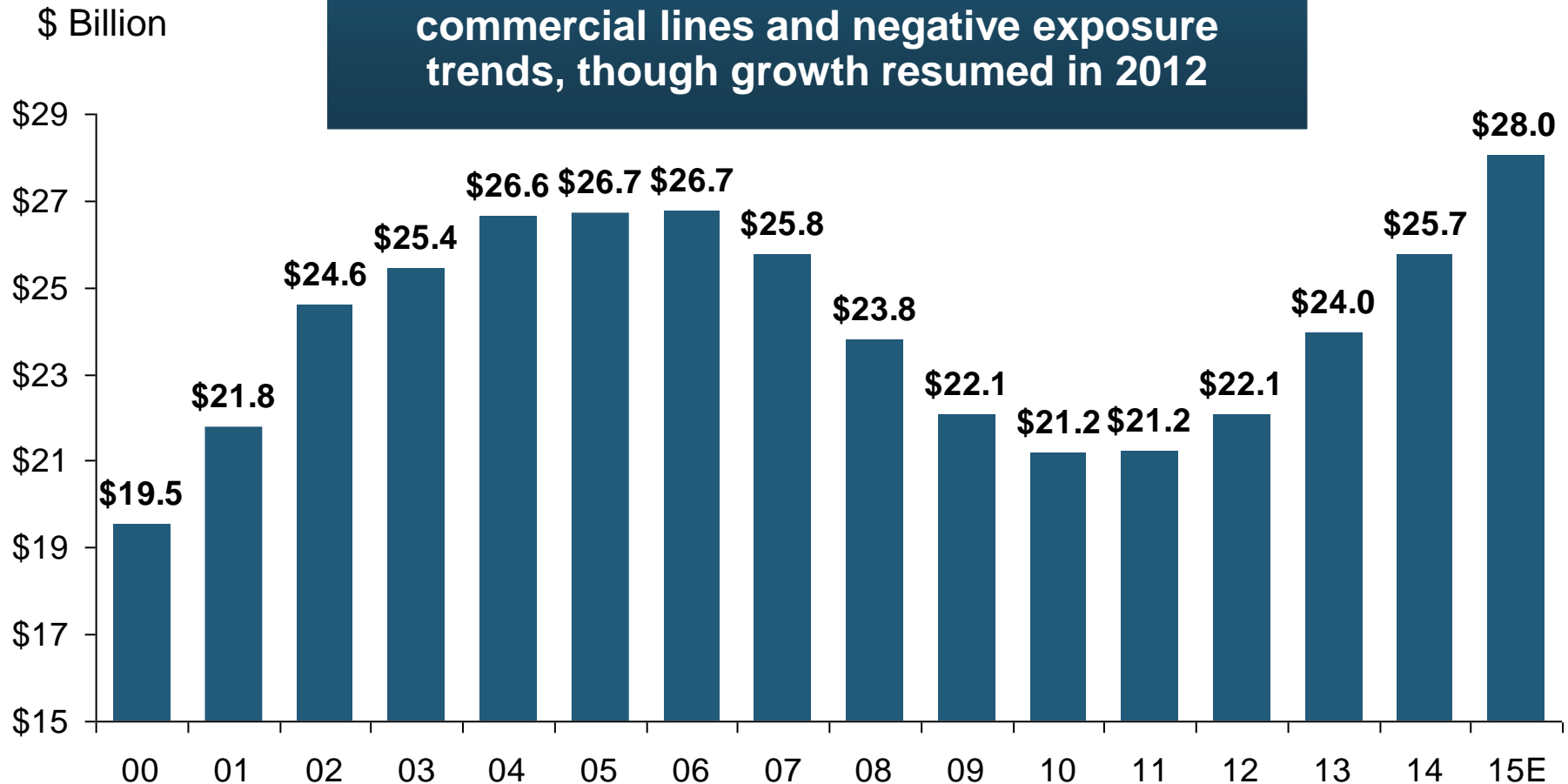


Private Passenger Auto Insurance Net Written Premium, 2000–2017F



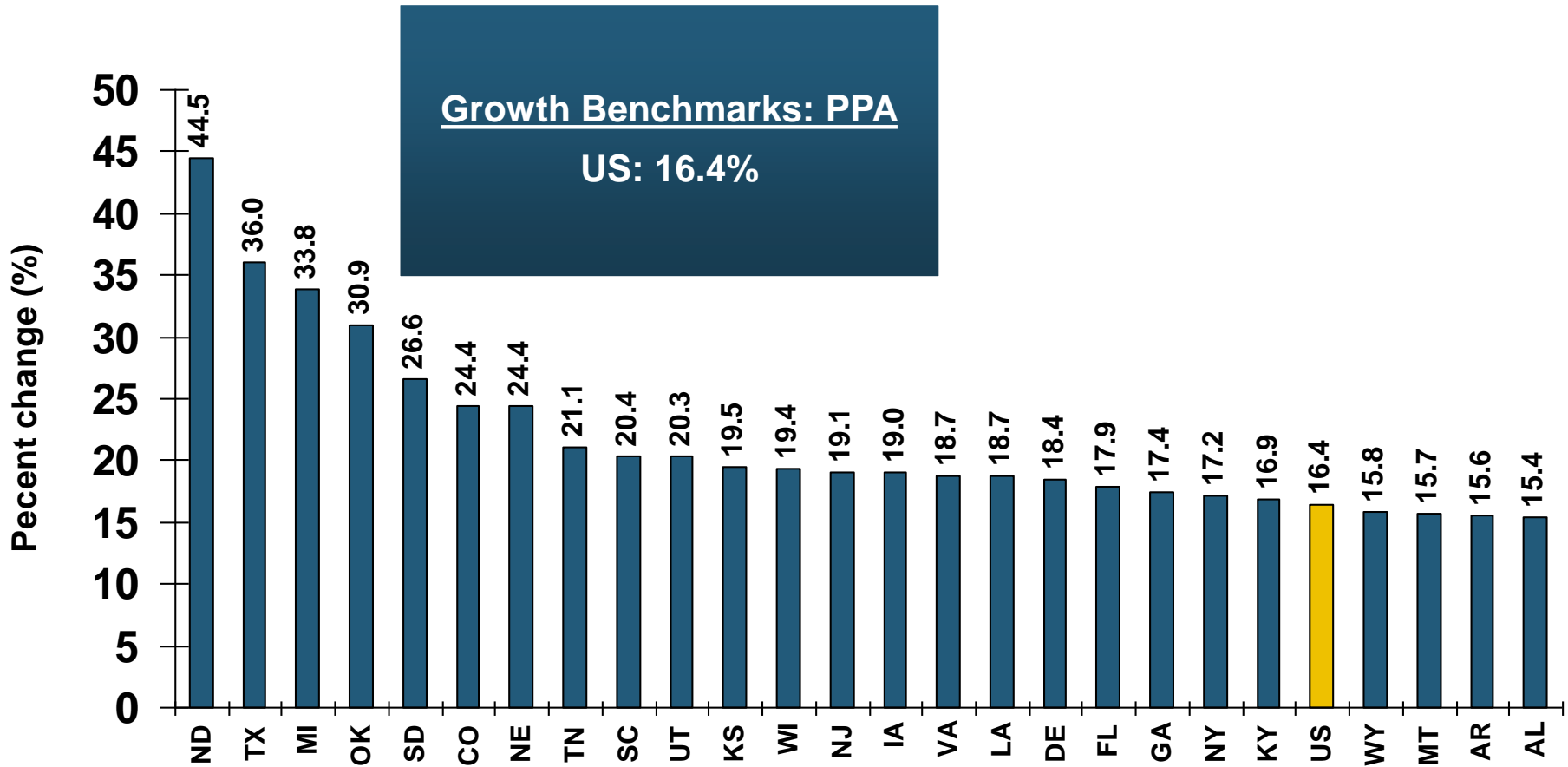
Commercial Auto Insurance Net Written Premium, 2000–2015F

In contrast to positive PP Auto NPW growth, Commercial Auto premiums fell 21.3% between 2005 and 2011 due to soft market conditions in commercial lines and negative exposure trends, though growth resumed in 2012



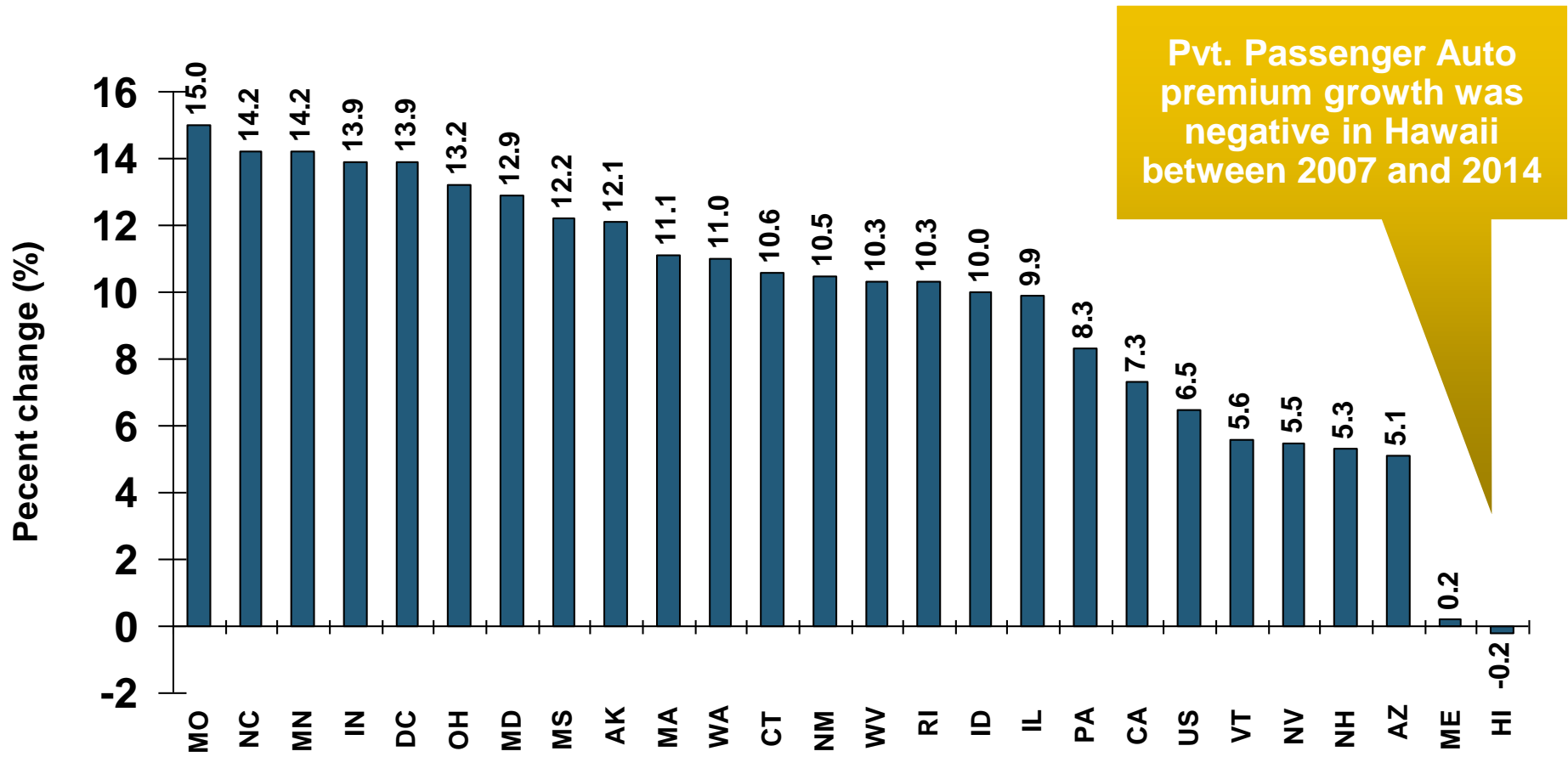
Direct Premiums Written: PP Auto Percent Change by State, 2007-2014

Top 25 States



Direct Premiums Written: PP Auto Percent Change by State, 2007-2014

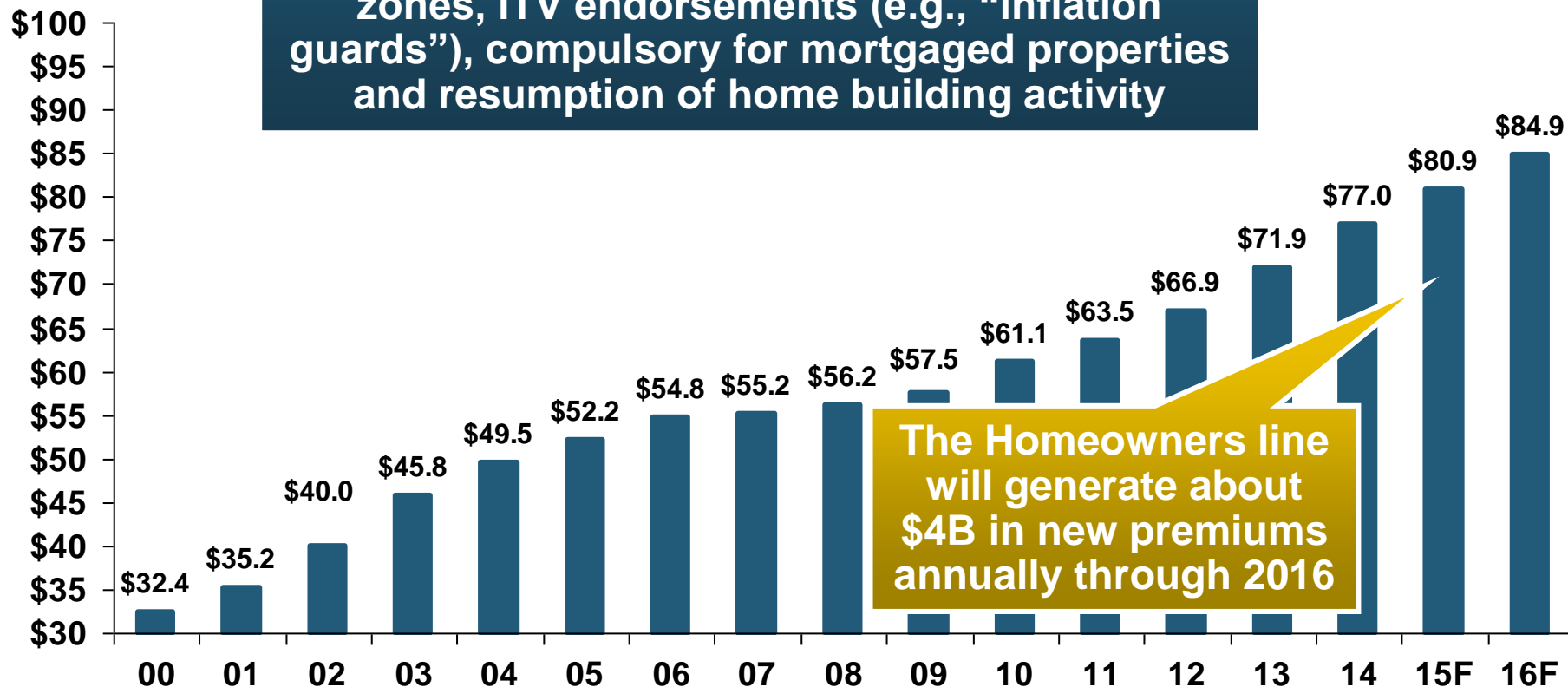
Bottom 25 States



Homeowners Insurance Net Written Premium, 2000–2016F

\$ Billions

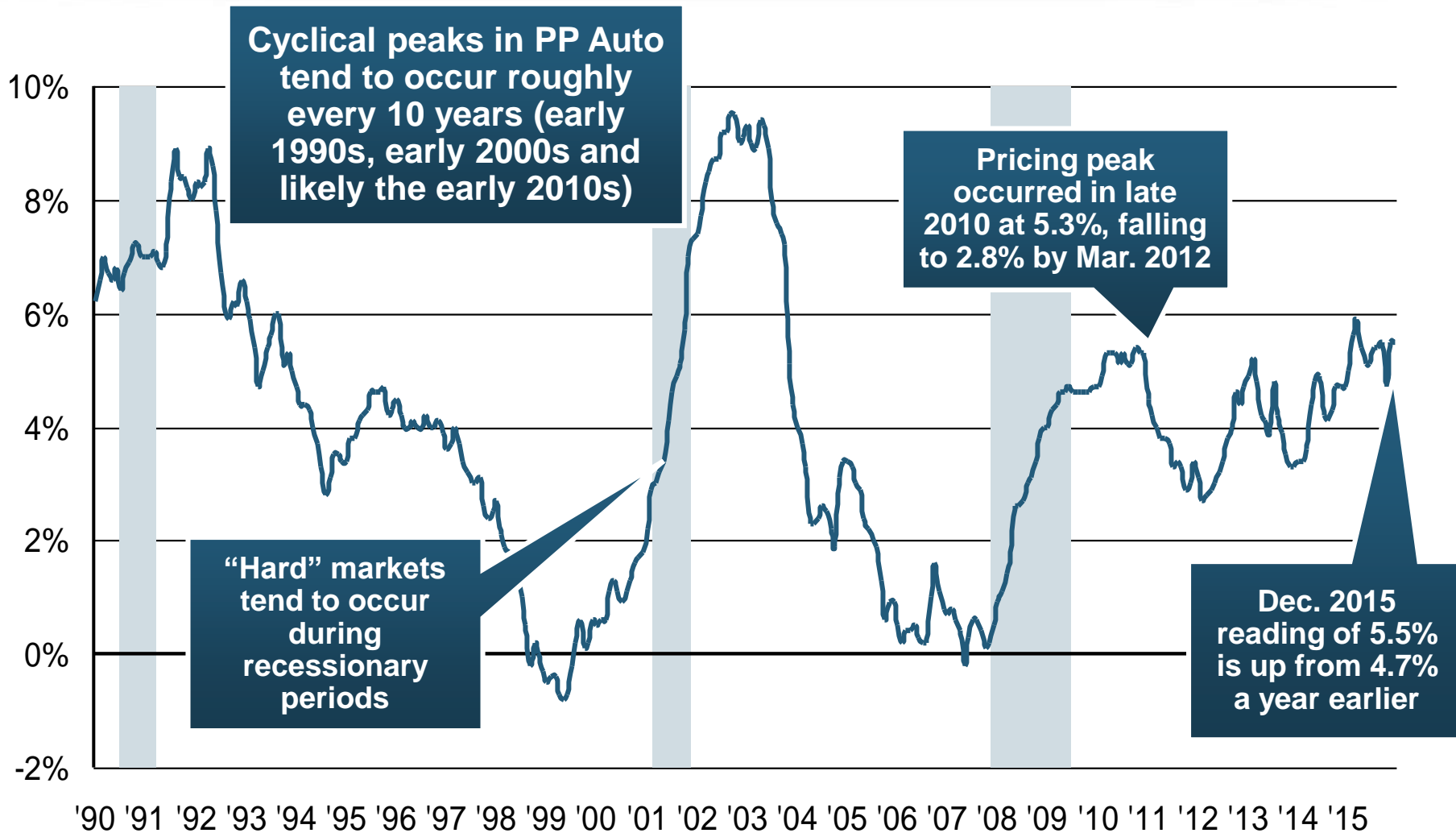
Homeowners insurance NWP continues to rise (up 150% 2000-2015F) despite very little unit growth during the real estate crash. Reasons include rate increases, especially in coastal zones, ITV endorsements (e.g., “inflation guards”), compulsory for mortgaged properties and resumption of home building activity



Personal Lines Growth Drivers

**Rate and Exposure are Both
Presently Important
Growth Drivers**

Monthly Change in Auto Insurance Prices, 1991–2015*

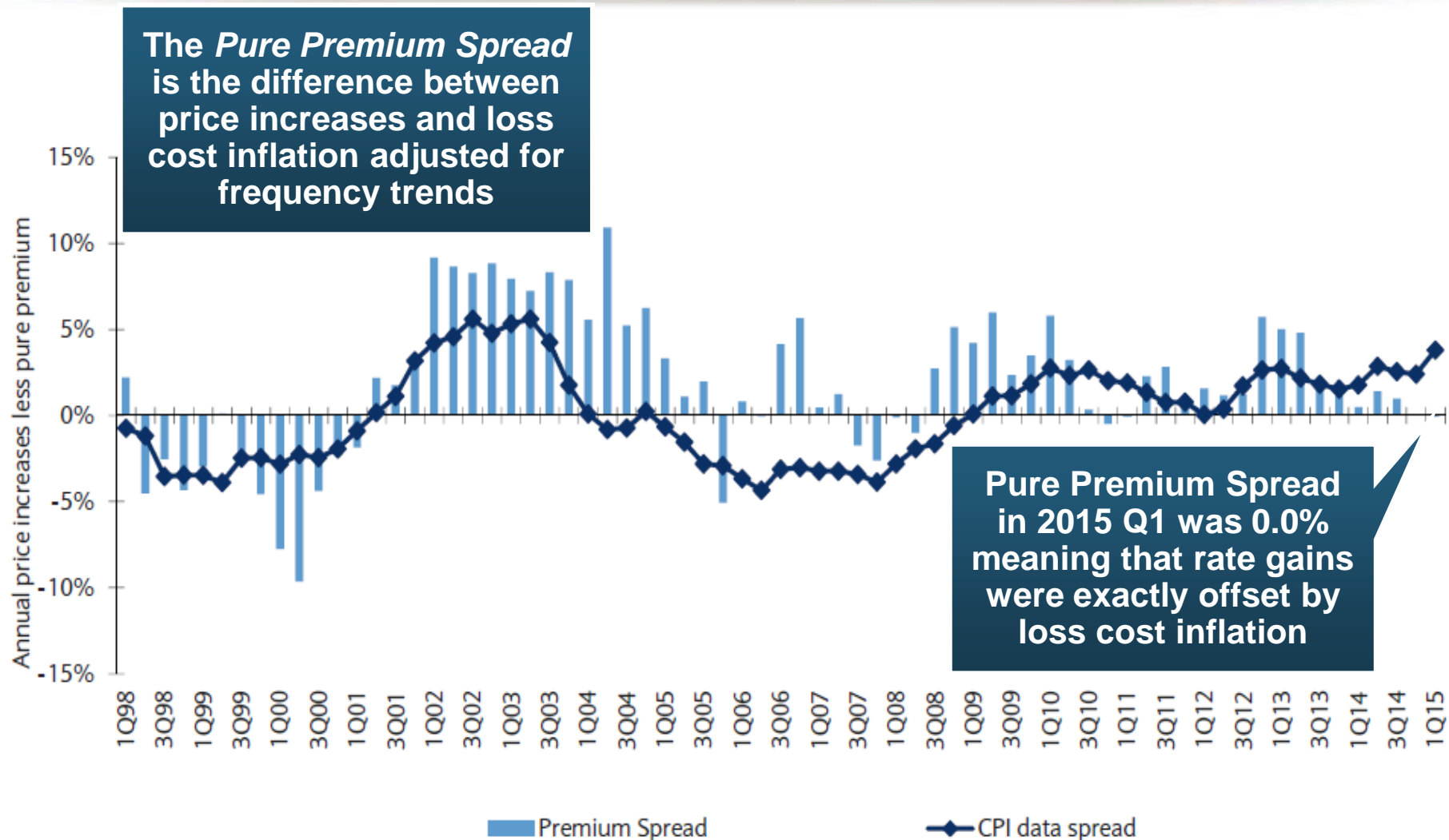


*Percentage change from same month in prior year; through Dec. 2015; seasonally adjusted

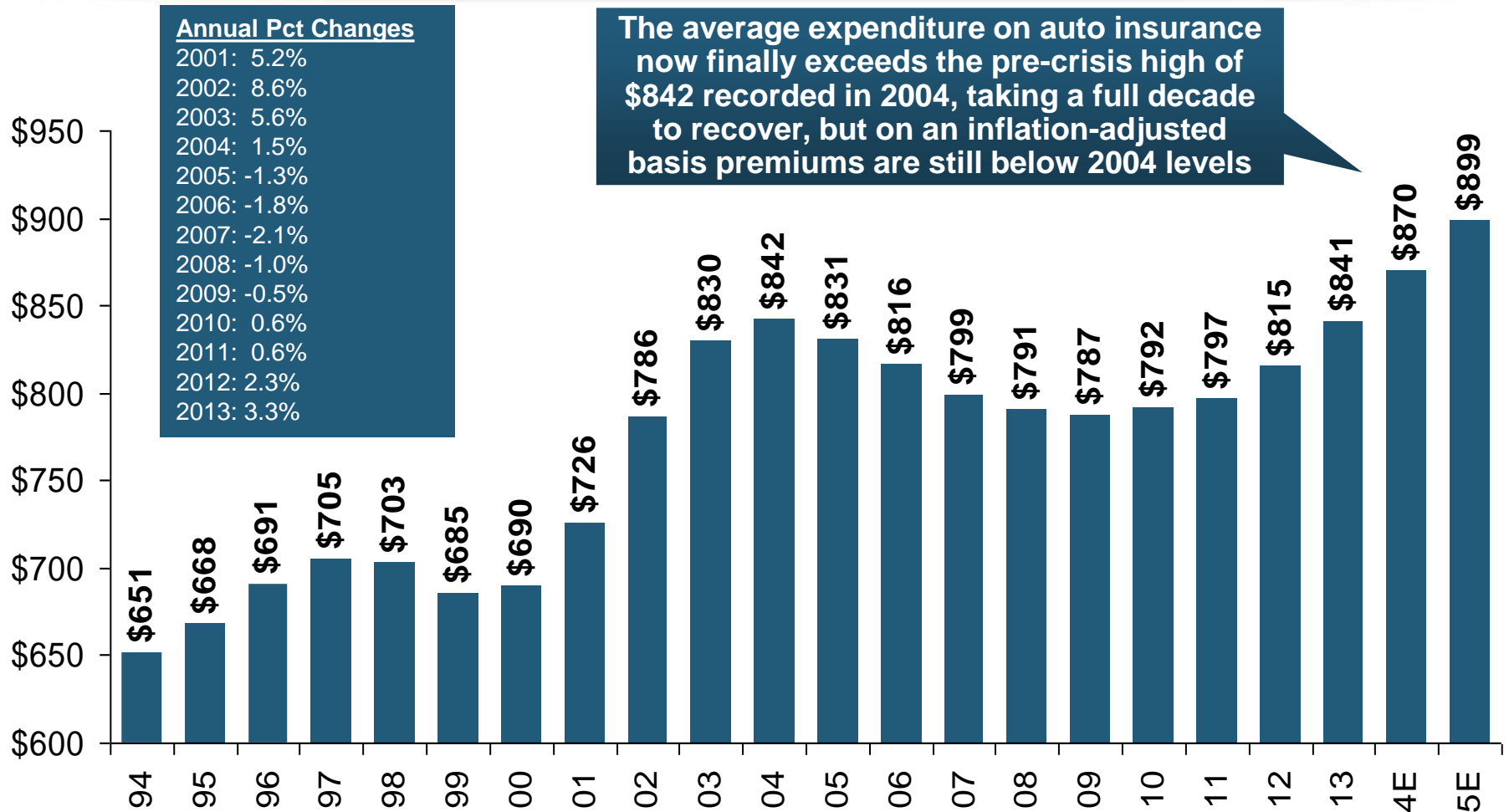
Note: Recessions indicated by gray shaded columns.

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

Private Passenger Auto: Premium Growth vs. Loss Cost Spread



Average Expenditures* on Auto Insurance, 1994-2015E



Across the U.S., auto insurance expenditures fell by 0.8% in 2008 and 0.5% in 2009 but rose 0.5% in 2010, 0.8% in 2011, 2.3% in 2012 and 3.3% in 2013; I.I.I. estimate is for +3.4% in 2014 and 2015.

* The NAIC data are per-vehicle (actually, per insured car-year)

Sources: NAIC for 1994-2013; Insurance Information Institute estimates for 2014-2015 based on CPI and other data.

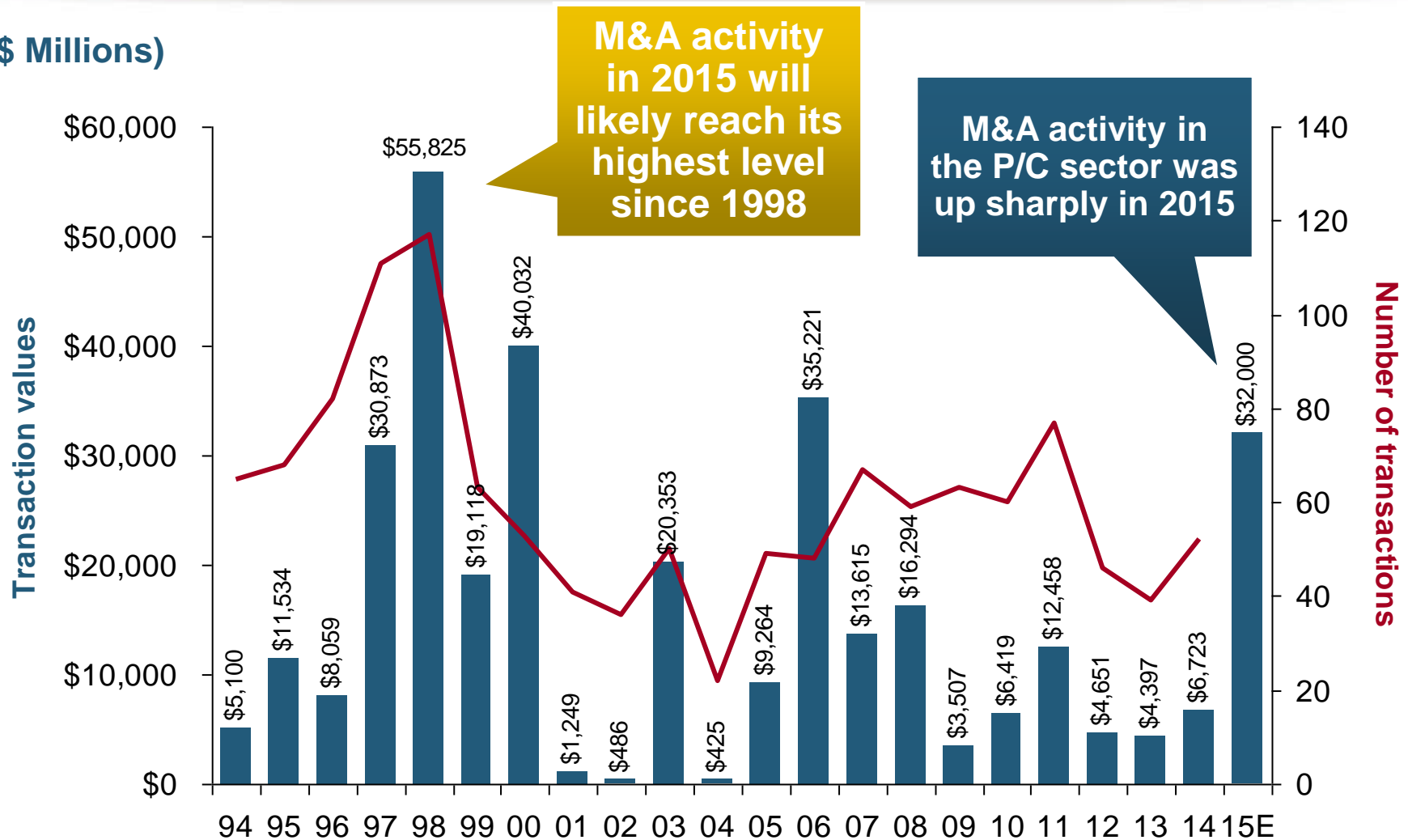
M&A UPDATE: *A PATH TO GROWTH?*

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

***Not Currently Focused on
Personal Lines***

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

(\$ Millions)



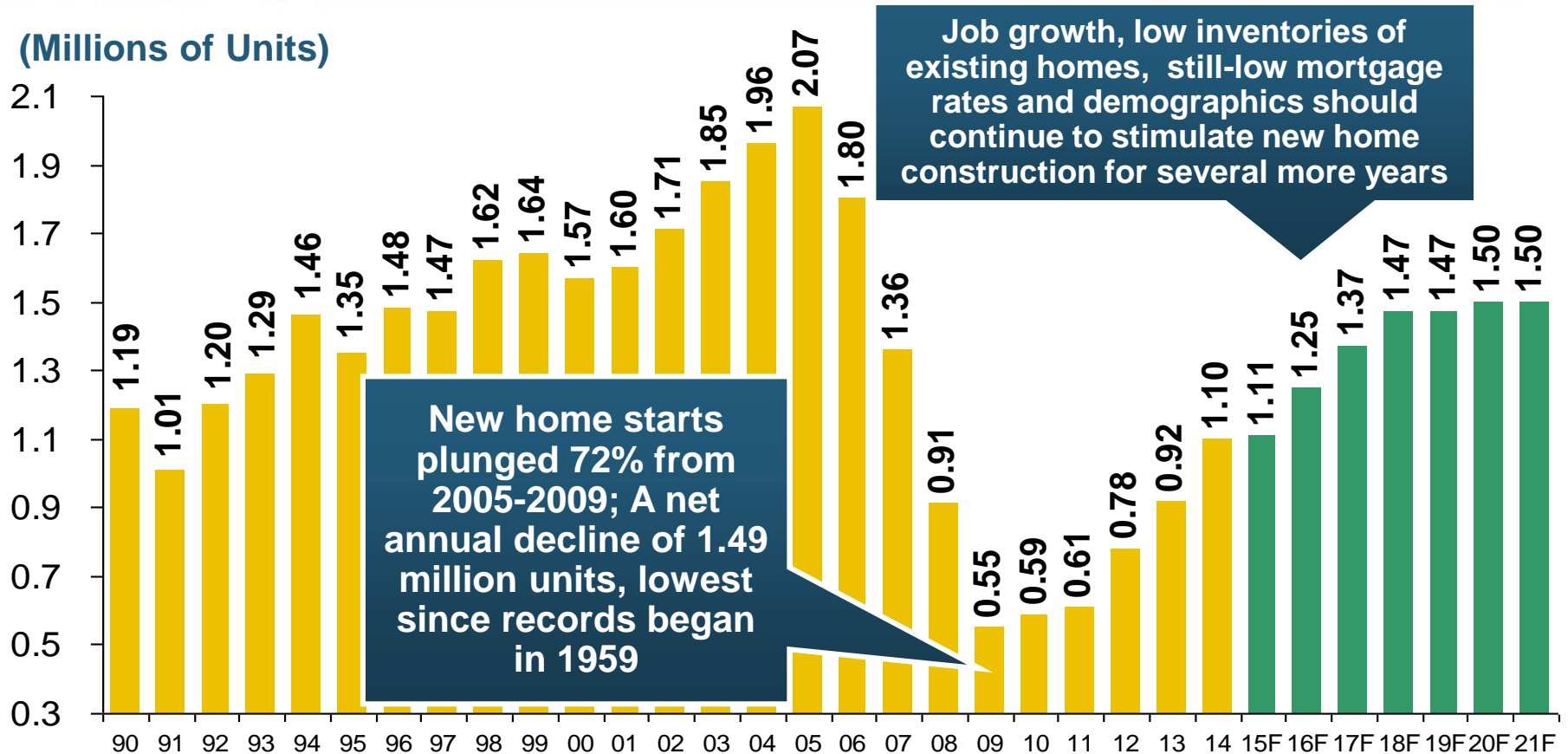
(1) Includes transactions where a U.S. company was the acquirer and/or the target.

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

Personal Lines: Economic and Demographic Considerations

***Auto, Home Are Sensitive to
Underlying Economic
Conditions***

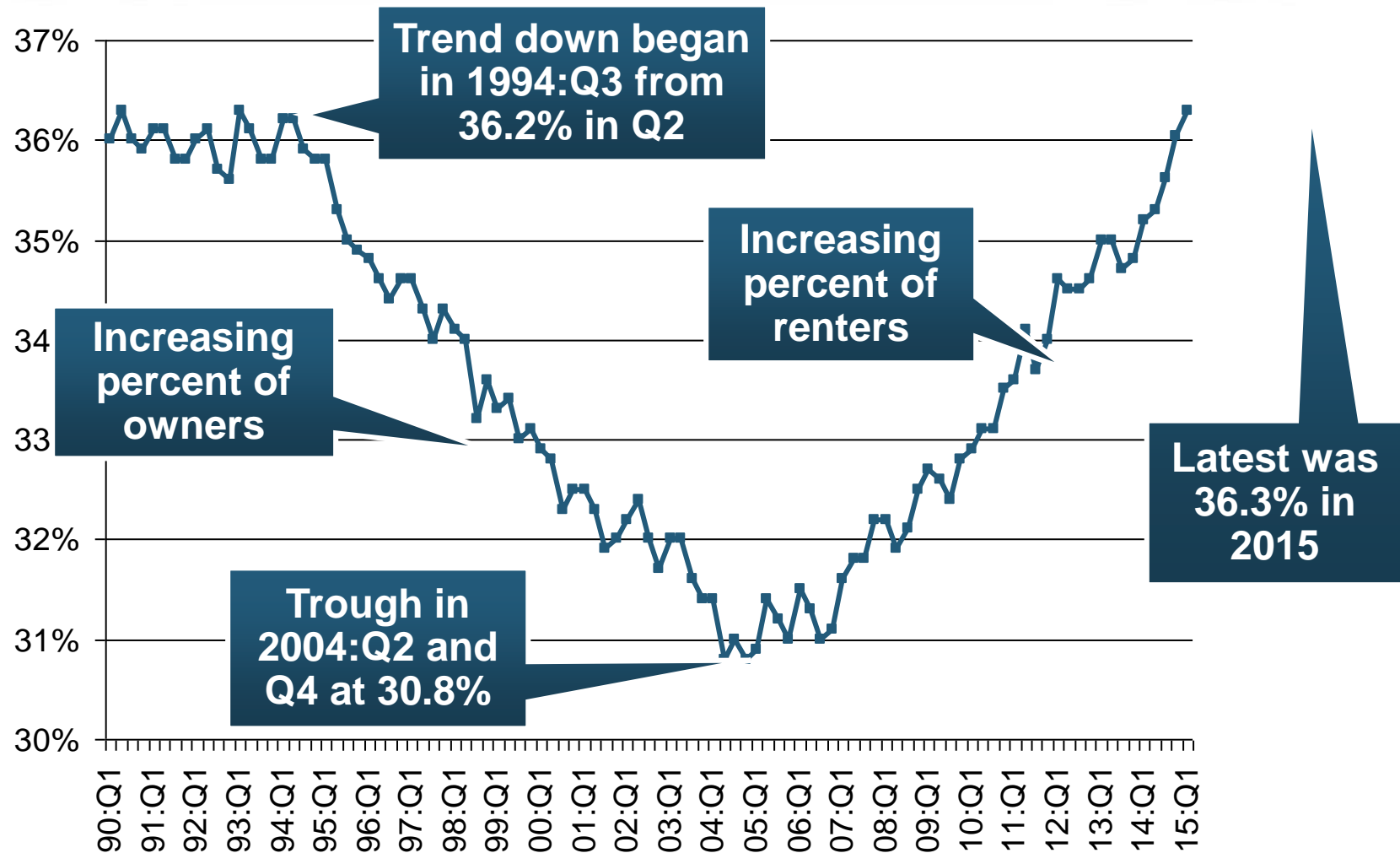
New Private Housing Starts, 1990-2021F



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 (1/16 for 2016-17; 10/15 for 2018-21F; Insurance Information Institute.

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



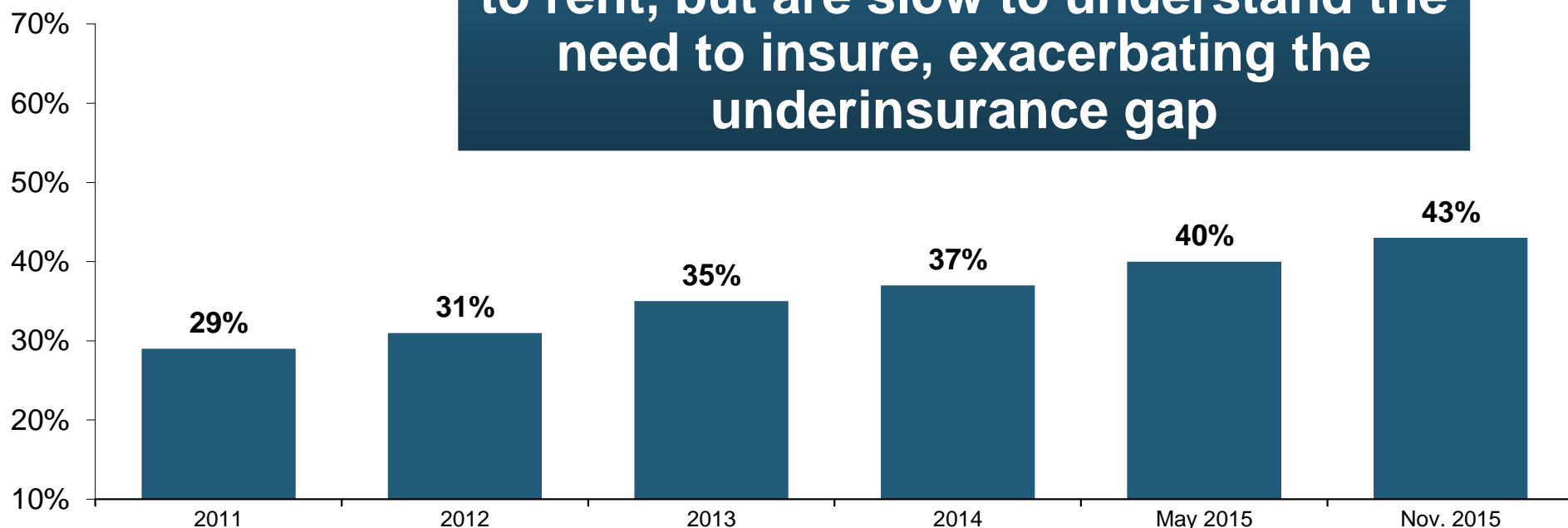
Since the Great Recession ended in June 2009, renters occupied 5.7 million more units (+15.6%).

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. *As of Q1.

I.I.I. Poll: Renter's Insurance

Q. Do you have renters insurance? ¹

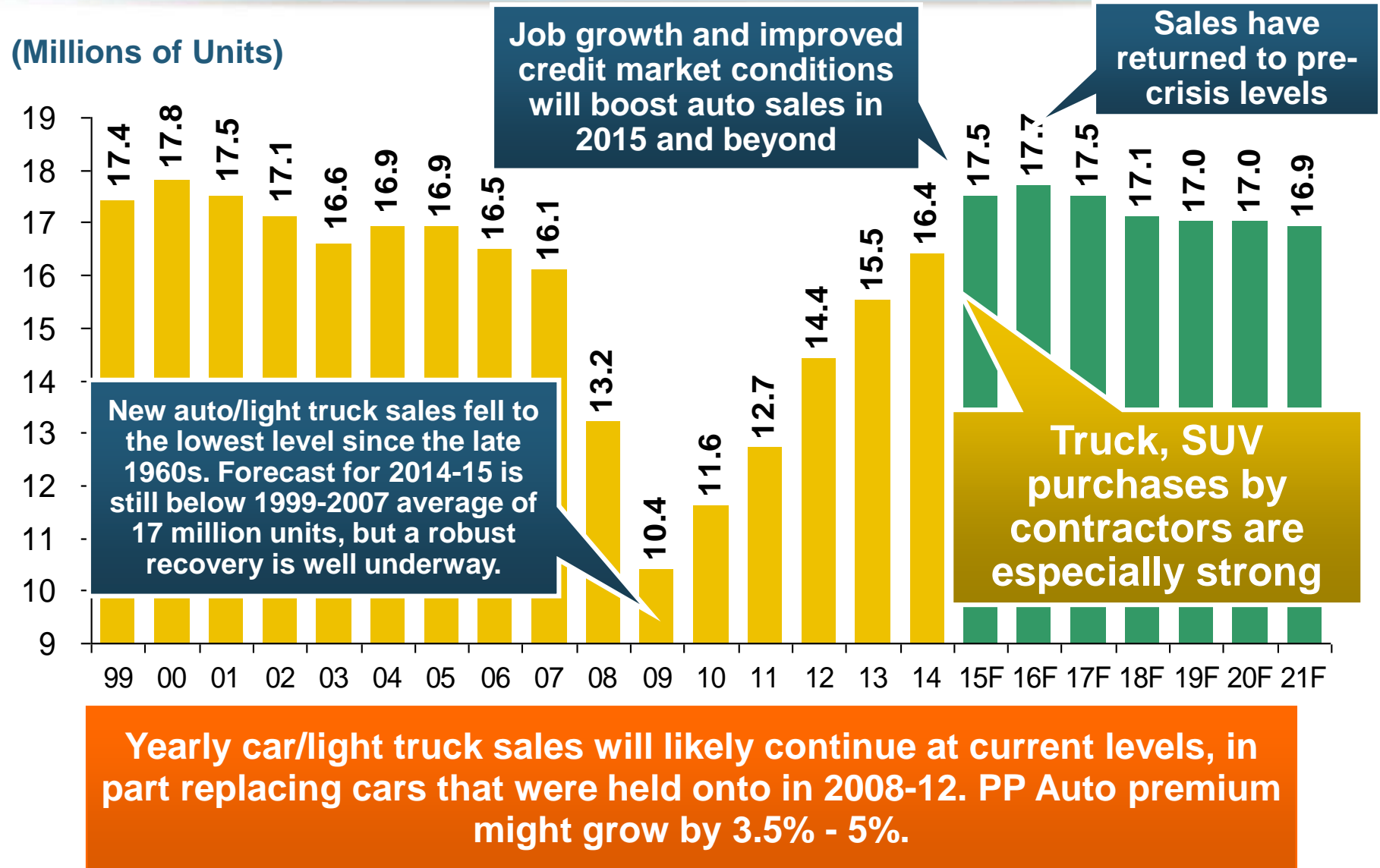
Americans are increasingly choosing to rent, but are slow to understand the need to insure, exacerbating the underinsurance gap



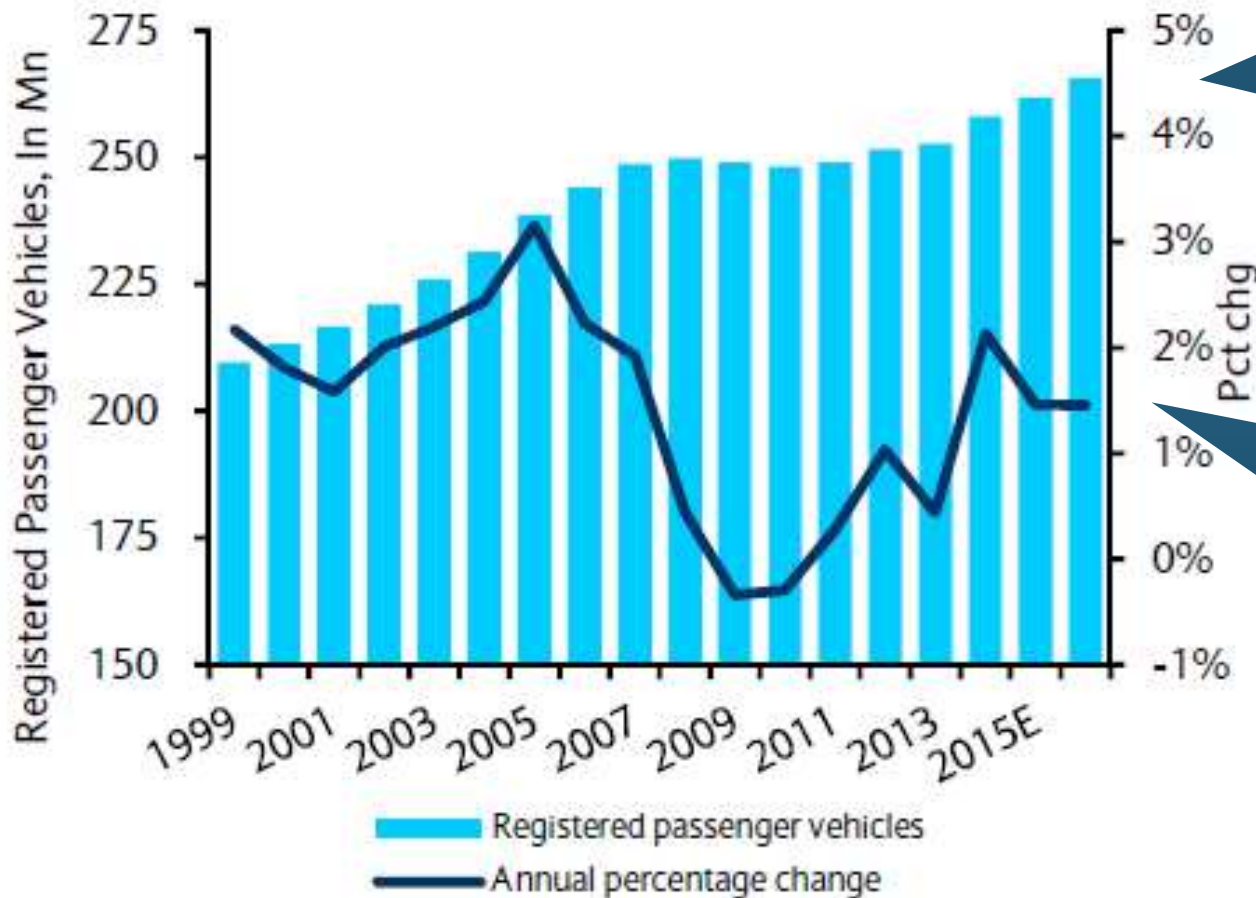
The Percentage of Renters Who Have Renters Insurance Has Been Rising Since 2011.

¹Asked of those who rent their home.

Auto/Light Truck Sales, 1999-2021F



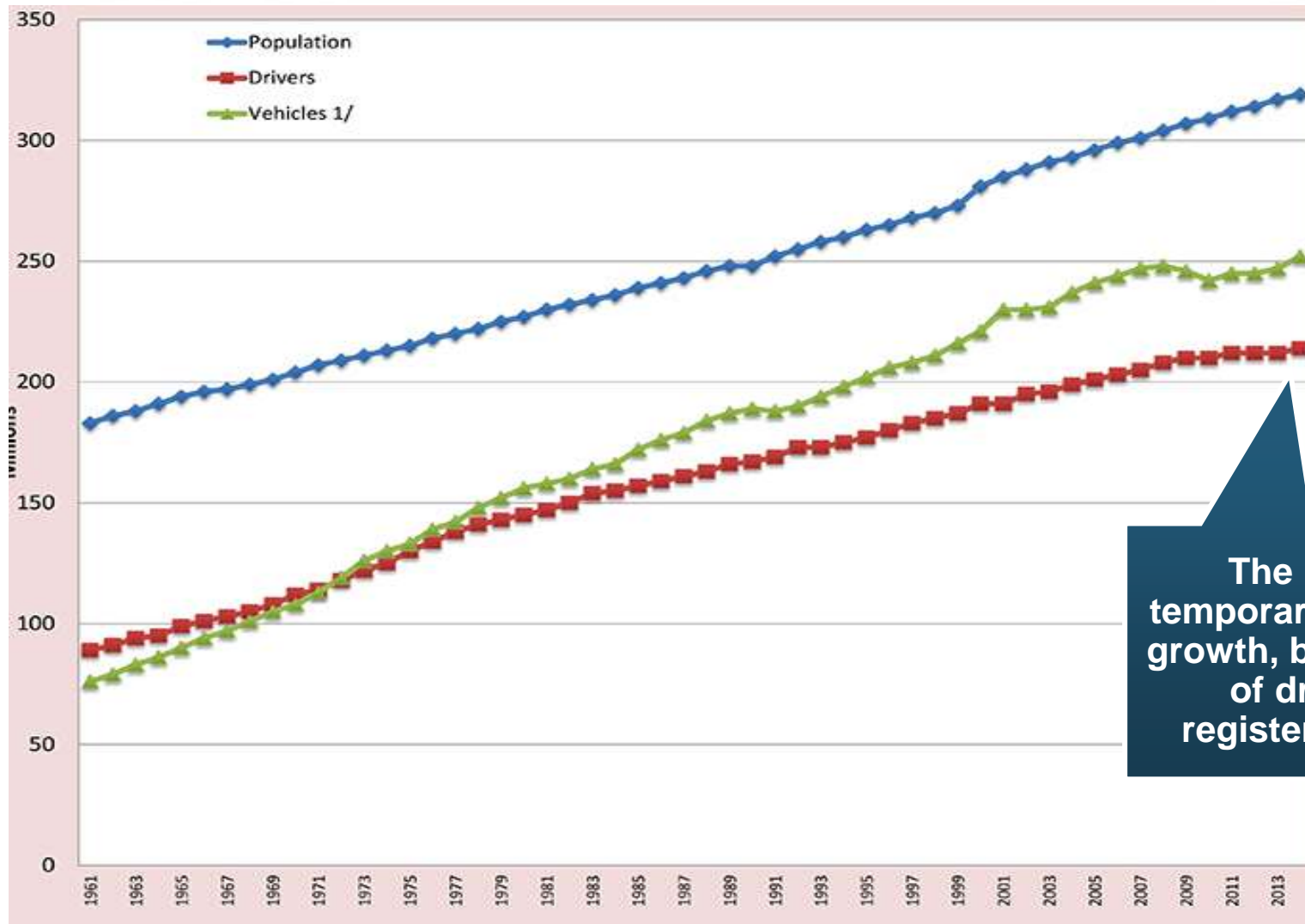
Number of Registered Passenger Vehicles in US, 1999 – 2015E



Vehicle registrations are growing once again and now finally exceed pre-crisis peak

Vehicle registrations are expected to increase at an annual rate of about 1.5% per year in 2015 and 2016

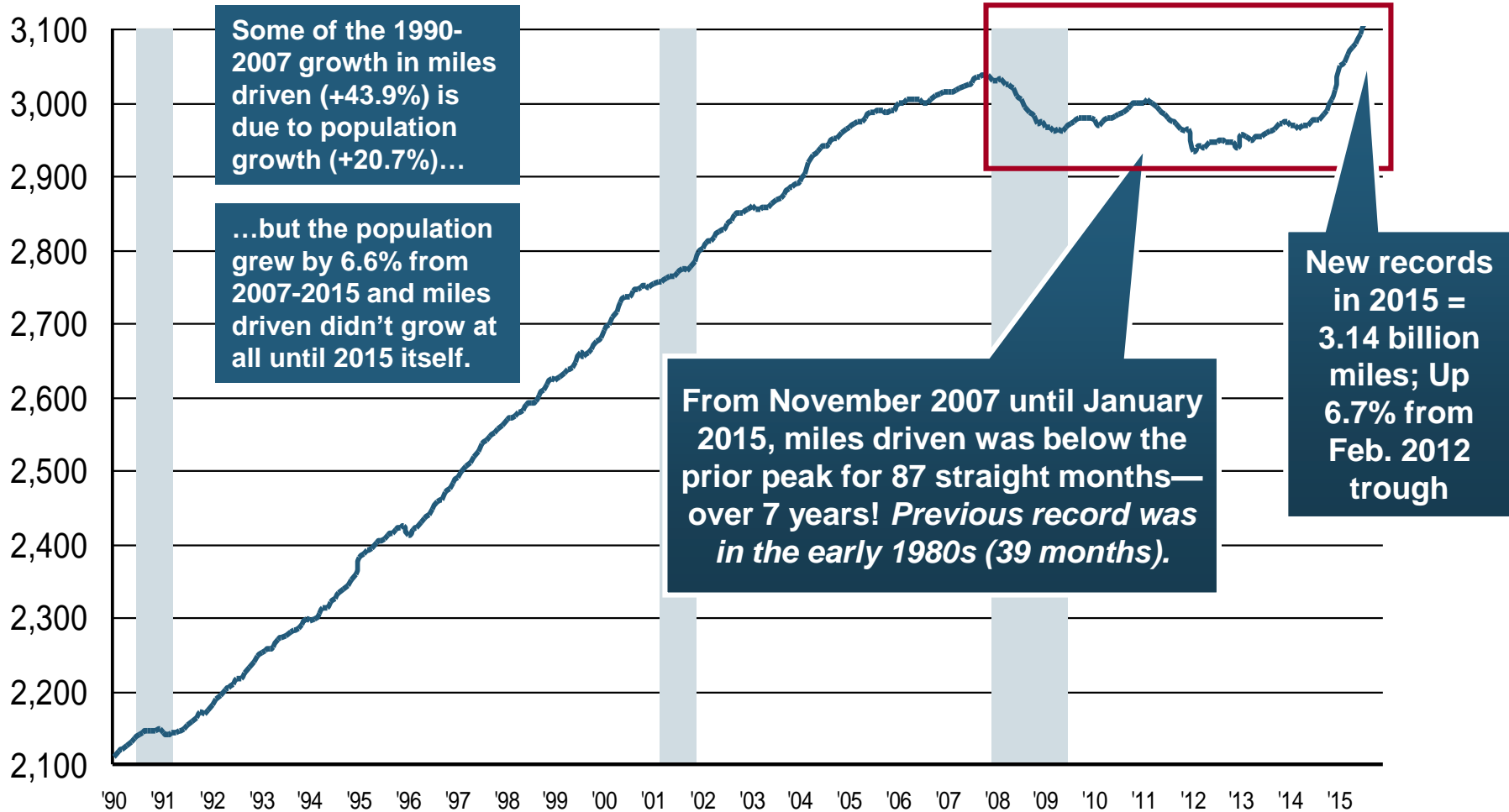
Licensed Drivers, Vehicle Registrations and Resident Population: *All UP!*



Source: Federal Highway Administration: <http://www.fhwa.dot.gov/policyinformation/statistics/2014/dv1c.cfm>
accessed 2/1/16; Insurance Information Institute.

America is Driving More Again (Finally!): Total Miles Driven*, 1990–2015*

Billions



*Moving 12-month total. The 2015 data are through November 2015, the latest available.

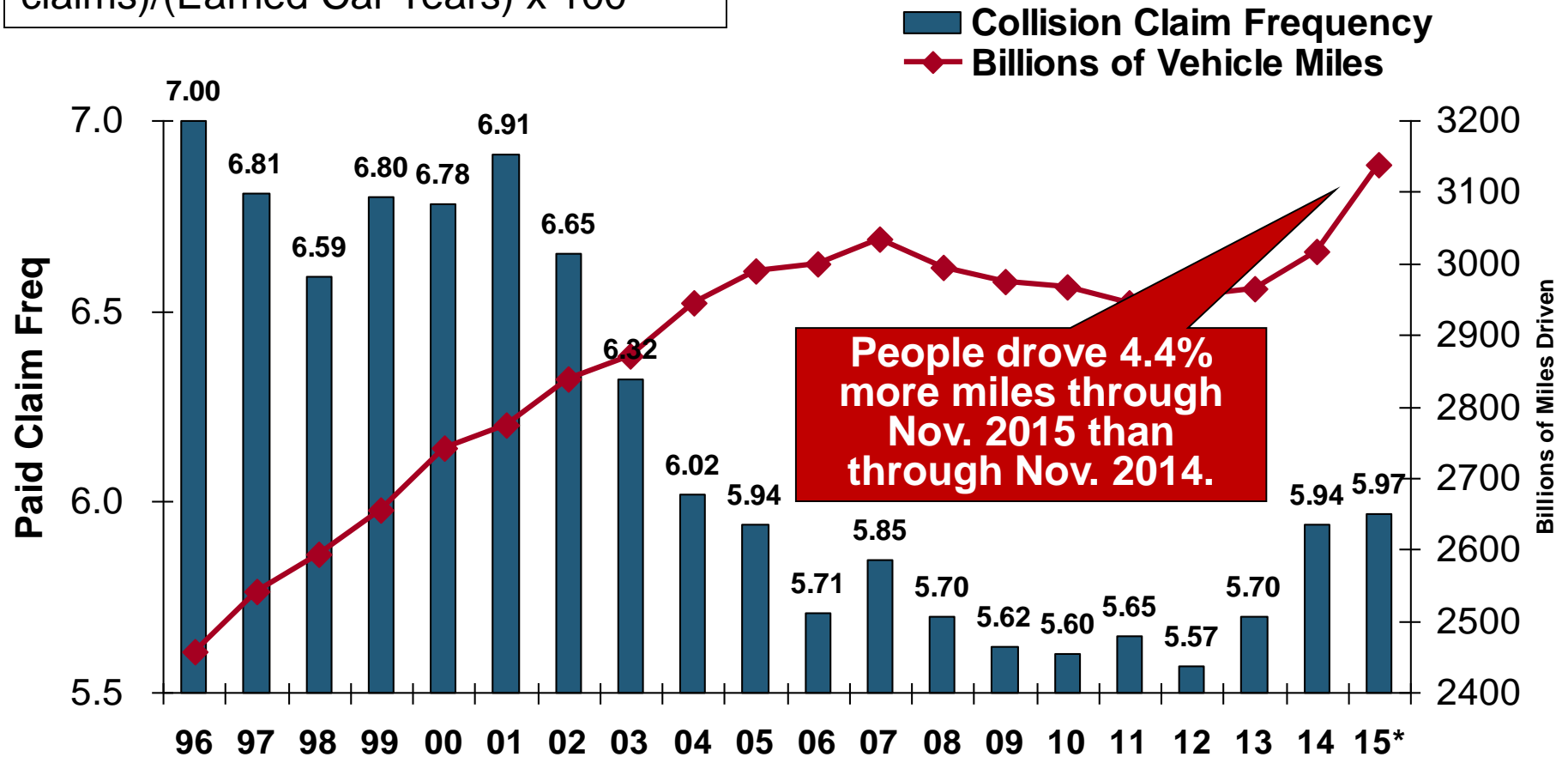
Note: Recessions indicated by gray shaded columns.

Sources: Federal Highway Administration (http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm);

National Bureau of Economic Research (recession dates); Insurance Information Institute.

Do Changes in Miles Driven Affect Auto Collision Claim Frequency?

Paid Claim Frequency = (No. of paid claims)/(Earned Car Years) x 100



Sources: Federal Highway Administration (<http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.cfm>); ISO Fast Track Monitoring System, *Private Passenger Automobile Fast Track Data*: 3rd Qtr. 2015 and earlier reports. *2015 ISO figure is for 12 months ending 2015 Q3. FHA data for 2015 is 12-month moving average ending May 2015.

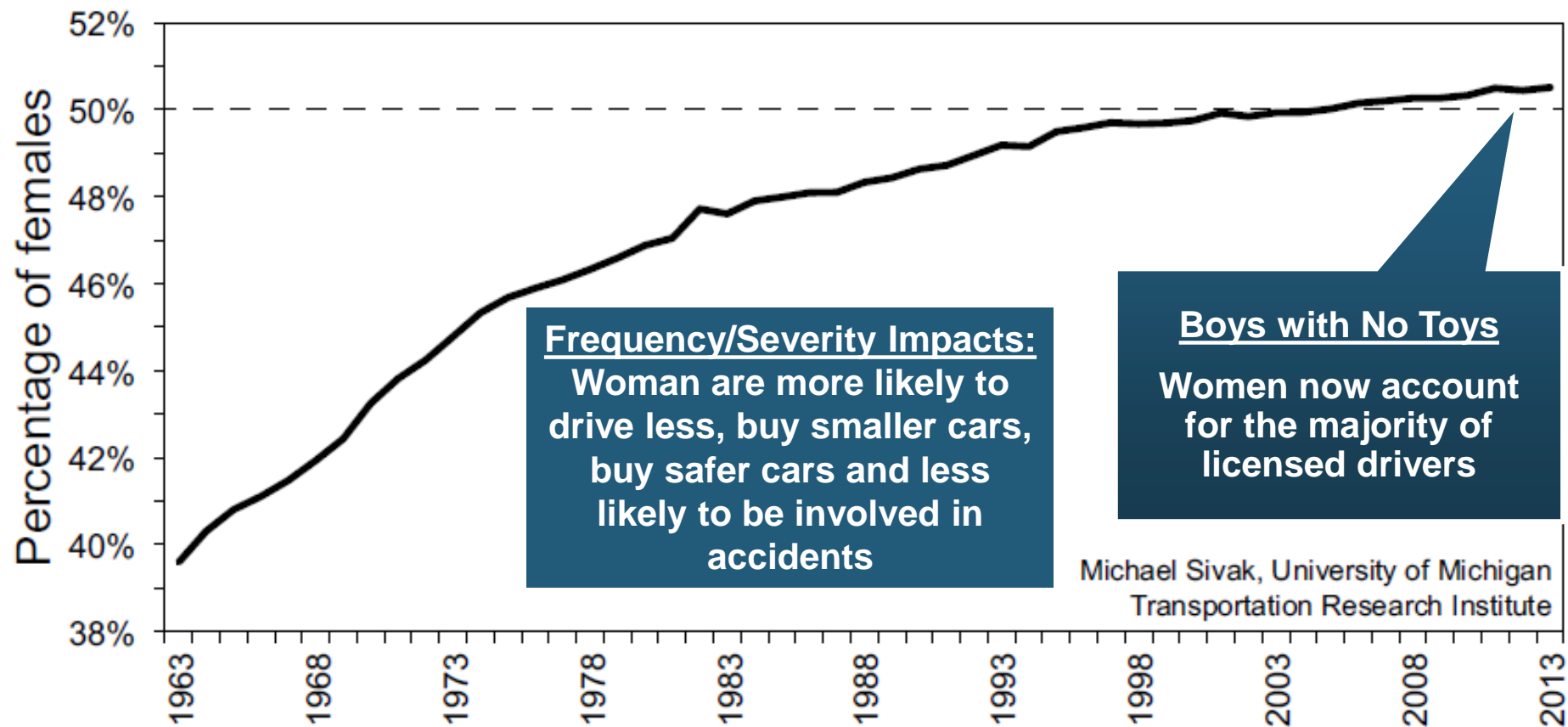
Change in Proportion of Persons with Driver Licenses in the US, by Age, 1983-2014

Age	Change from 1983 to 2014	Change from 2008 to 2014	Change from 2011 to 2014
16	-47.0%	-21.2%	-10.9%
17	-34.8%	-10.2%	-0.2%
18	-25.2%	-8.1%	-0.3%
19	-21.0%	-8.6%	-0.4%
20-24	-16.4%	-6.5%	-3.8%
25-29	-11.0%	-1.4%	-2.7%
30-34	-10.3%	-4.4%	-2.8%
35-39	-7.4%	-4.1%	-2.5%
40-44	-3.4%	-3.0%	-2.7%
45-49	-2.2%	-2.7%	-1.5%
50-54	-0.2%	-3.2%	-1.1%
55-59	+4.1%	-3.3%	-1.5%
60-64	+9.9%	-4.0%	-0.6%
65-69	+15.4%	-2.8%	-1.7%
≥70	+43.6%	+0.8%	-0.3%

Smaller proportions of younger drivers have licenses but not because they're all taking Uber.

The AARP crowd can't be pried away from the cars

Girl Power: Females with a Driver's License as a % of All Licensed Drivers

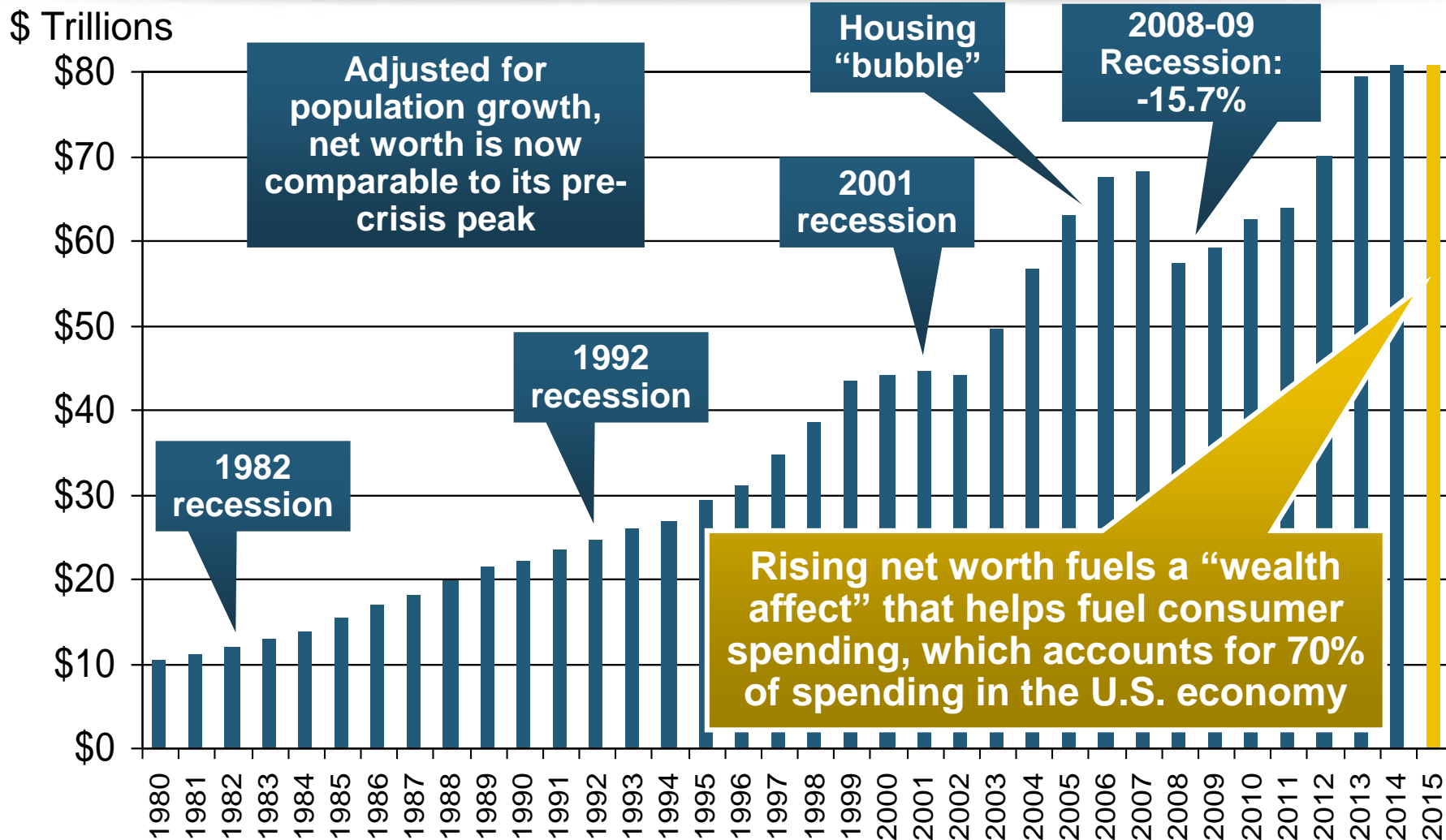


Source: University of Michigan Transportation Research Institute, "Female Drivers in the United States: From Minority to Majority?" by M. Sivak,, UMTRI-2016-16, May 2015; Insurance Information Institute.

Household Balance Sheets Are Relatively Strong

**Wealth Effects:
Indebtedness Influence
Auto Purchase Decisions**

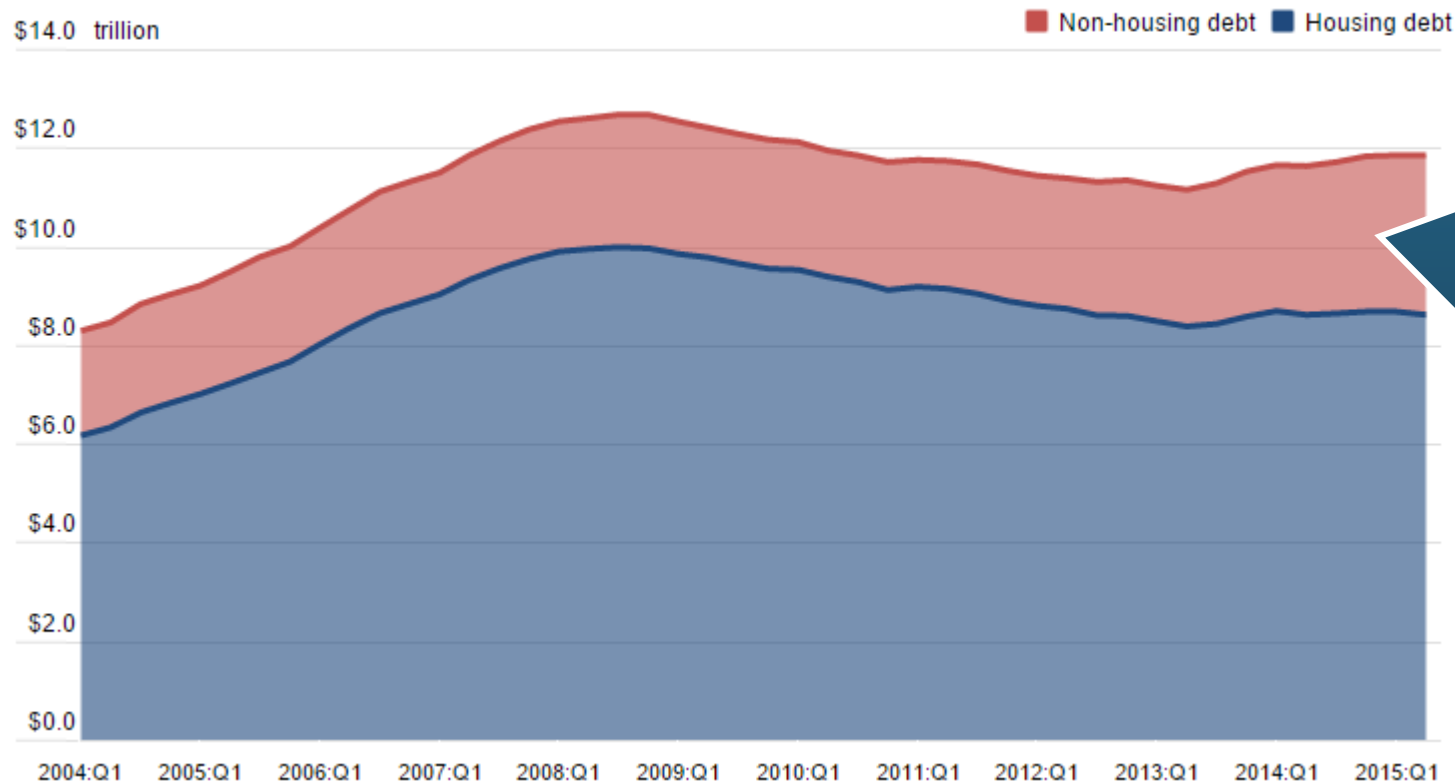
Net Worth of Households* Recently Hit A Historic High



*and nonprofit organizations. Data are as of year-end, except in 2015:Q1 (data posted on June 11, 2015. Data not seasonally adjusted or inflation-adjusted; <http://www.federalreserve.gov/releases/z1/Current/z1r-5.pdf>
Source: Federal Reserve Board at <http://www.federalreserve.gov/releases/z1/Current/z1r-5.pdf>

Household Debt Balance, 2004 – 2015:Q1

Total Debt Balance

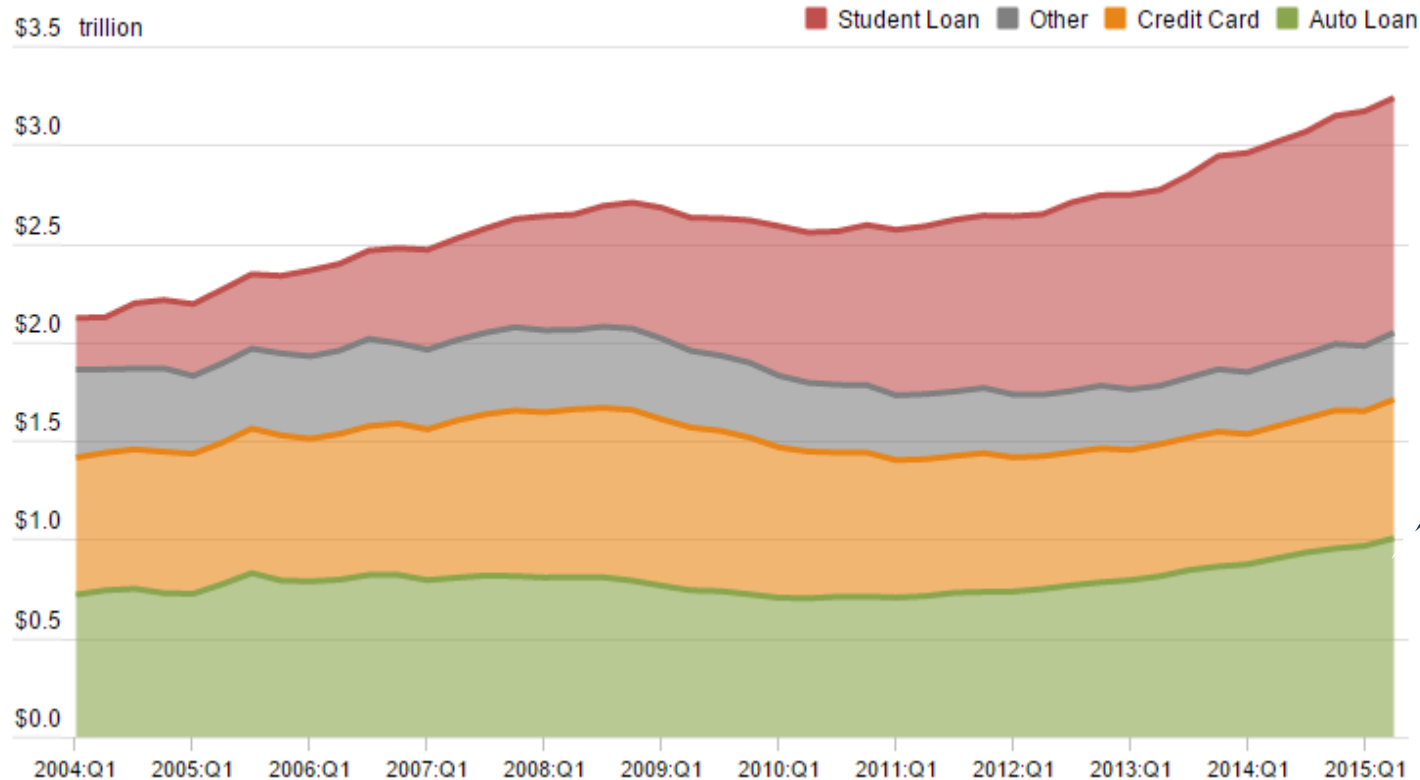


Overall household debt remains below pre-crisis peak but non-housing debt is actually larger due to student loans and auto loan debt

Household balance sheets remain much healthier than they were prior to the “Great Recession”

Auto Loans and Other Non-Housing Debt, 2004 – 2015:Q1

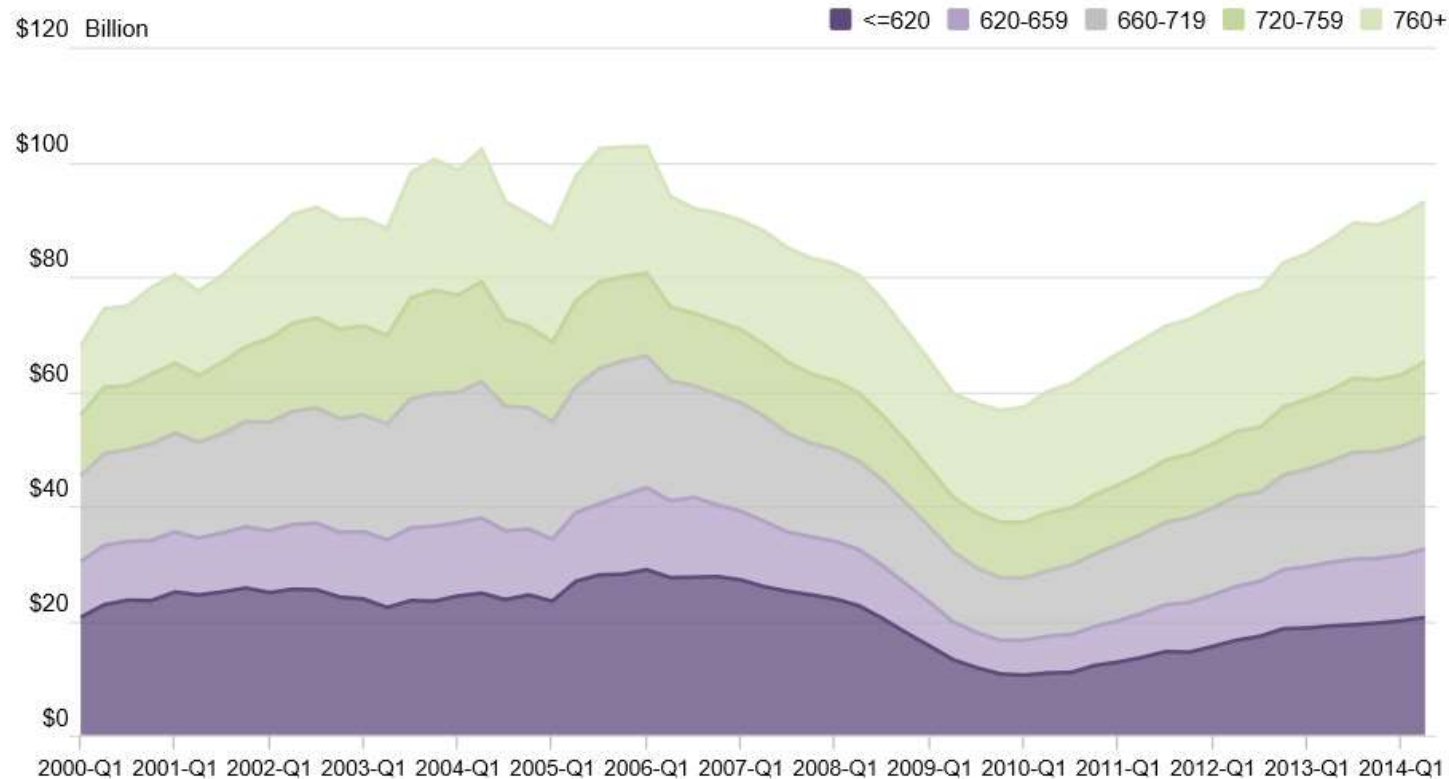
Non-Housing Debt Balance



Banks are becoming increasingly aggressive in marketing auto loans

Lenders are Issuing a Rising Number of New Auto Loans, Even for People with Poor Credit Scores

Auto Loan Originations by Credit Score



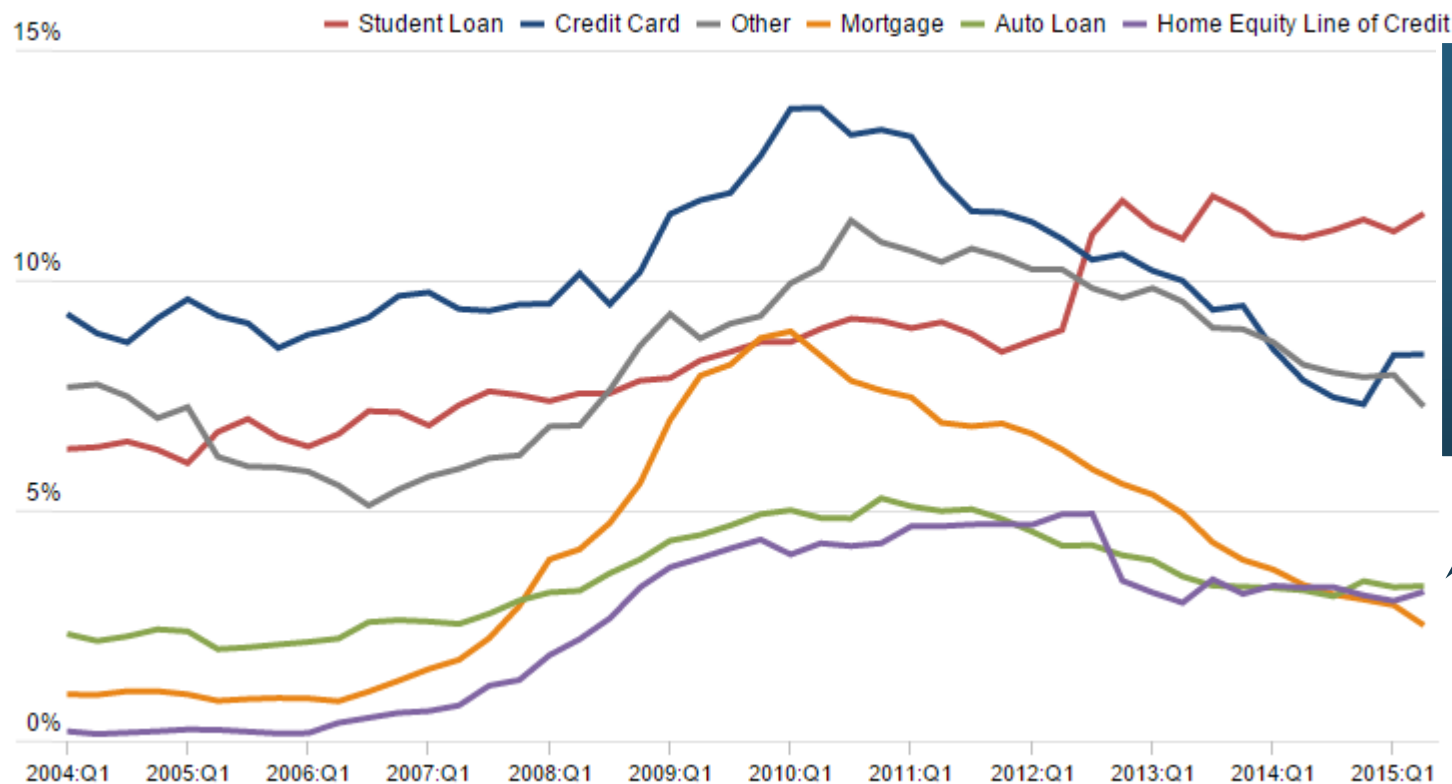
Source: FRBNY Consumer Credit Panel/Equifax

Auto loan originations reached a 10-year high in 2015:Q2

For the past several years, auto loans in nonaccrual status remained at roughly 0.25% of outstanding loans.

Auto Loan and Other Non-Housing Delinquencies, 2004 – 2015*

Percent of Balance 90+ Days Delinquent



Source: FREDM Consumer Credit Panel/Equifax

Auto loan delinquencies have improved dramatically since their crisis peak but remain above pre-crisis levels

So far, increasingly aggressive marketing of auto loans has not resulting in a surge in loan delinquencies and defaults

*As of Q1.

Source: Federal Reserve Bank of NY Consumer Credit Panel/Equifax; I. I.I.

INDUSTRY DISRUPTORS



**Technology, Society and
the Economy Are All
Changing at a Rapid Pace**

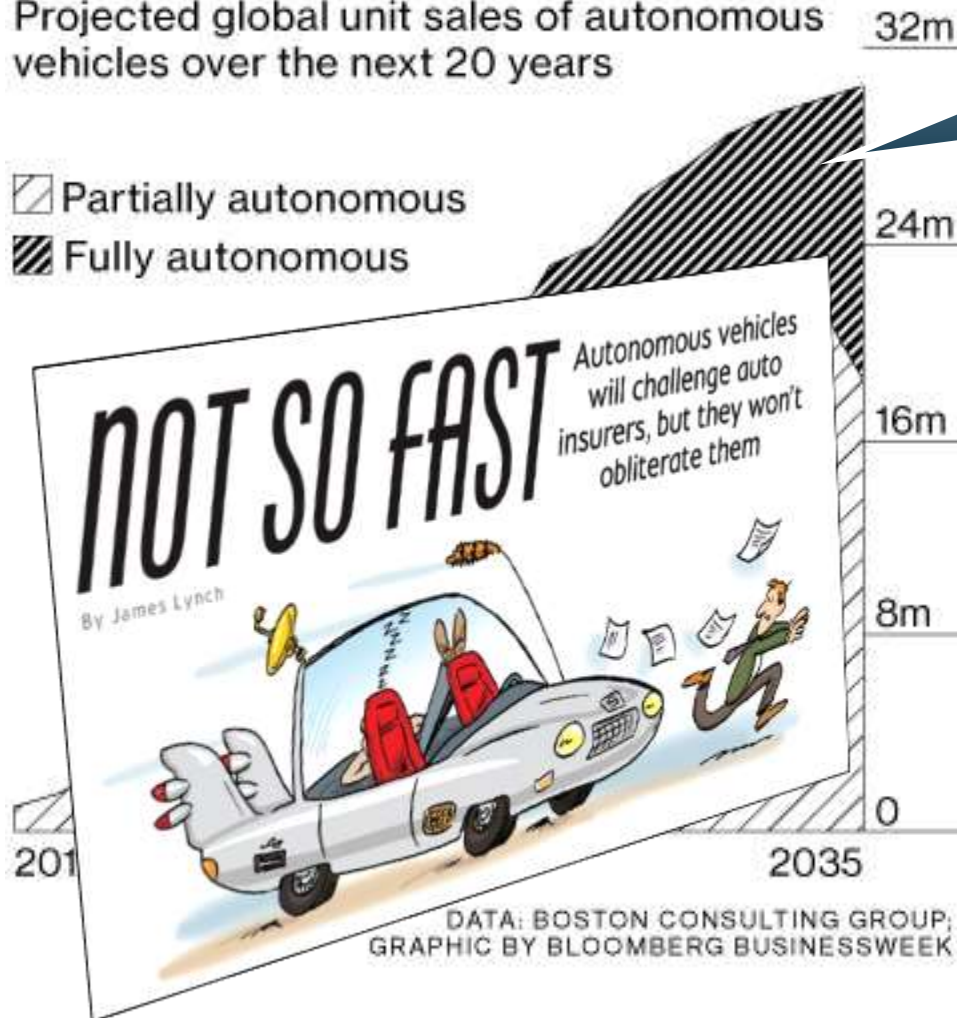
Thoughts on the Future

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?
- Will the number of auto insurers shrink?
- How will liability shift?

On-Demand/Sharing/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 unanswered insurance questions
- Insurance solutions are increasingly available to fill the many insurance gaps that arise



U B E R



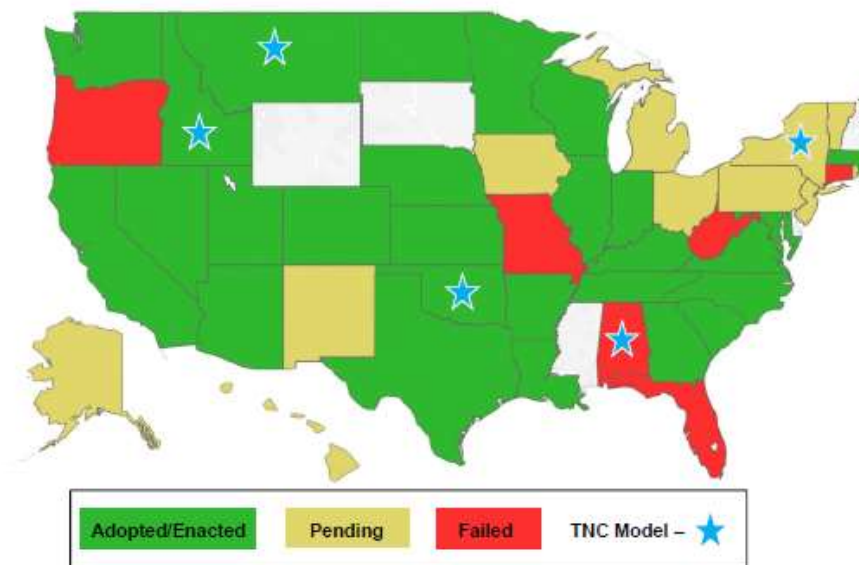
TNC Ridesharing Arrangements: Insurance Applicability

Phase	TNC Coverage
1. Driver logged into TNC App but not "matched" with a passenger	Contingent liability coverage IF personal auto coverage declined/not available (\$50/100/25)*
2. A "match" is made but passenger is not in the driver's car	Primary liability, UM/UIM coverage at a higher limit (\$1M)* Contingent comp/collision coverage
3. A passenger is in the driver's car	Same as Phase 2

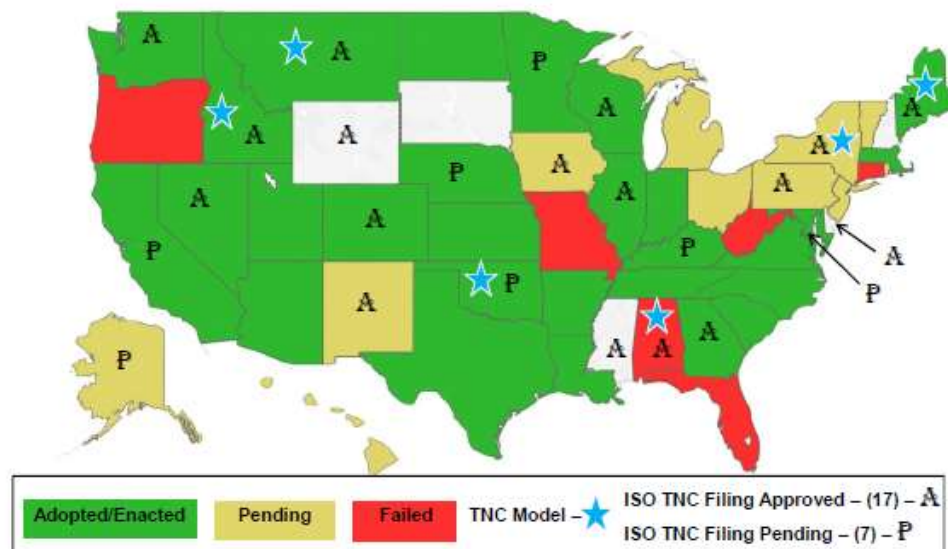
The concern was that TNCs were seeking to offload risk on to personal auto insurers. An increasing number of personal auto insurers have developed solutions to ensure that coverage gaps are minimized

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

Status Ride Sharing Legislation/Regulation



Status of ISO Filings



Homesharing Arrangements: Potential Host Exposure Concerns (Receives Rental Income)

- **Property**
 - Loss to host's property/furnishings
 - Loss of use
- **Liability**
 - Damage to property of traveler, traveler's guests
 - Damage to landlord's property/furnishings
 - Bodily injury to traveler, traveler's guests
- **Comment**
 - A landlord may act as a host (vacant unit)
 - A Homeowners Policy may be issued to the owner-occupant(s) of a 1, 2, 3 or 4 family dwelling

Homesharing Arrangements: Potential Traveler Exposure Concerns

- **Property**
 - Loss to traveler's property
- **Liability**
 - Damage to property/furnishings of host and landlord
 - Bodily injury to traveler's guests, other tenants and visitors to building
 - Personal injury due to poor reviews
- **Comment**
 - Similar exposures currently exist for travelers at hotels, B & B's, guest houses

Homesharing: ISO's Proposed Changes*

1. Policyholder Notice

- Guidance for policyholder to contact insurer

2. Exclusion

- Explicit exclusion for loss/damage/injury arising out of homesharing
- Applicable to host, landlord
- To the extent possible, preserve existing coverage for rentals that do not originate from homesharing, such as that providing for roomers, boarders

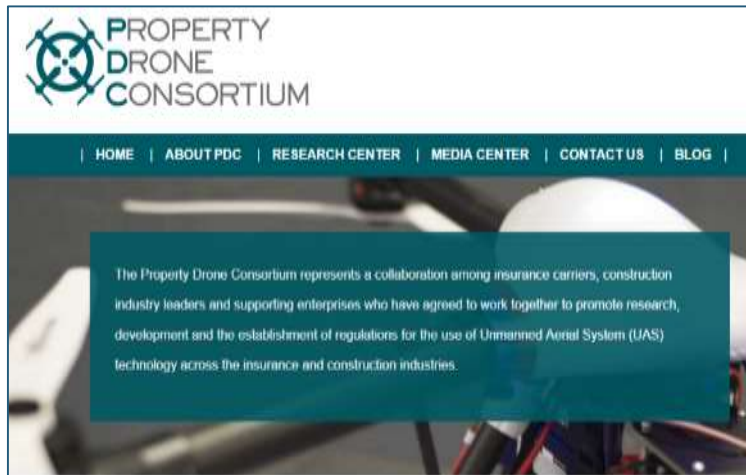
3. Coverage option

- Property and liability coverage for loss/damage/injury arising out of homesharing
- Applicable to host, landlord

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



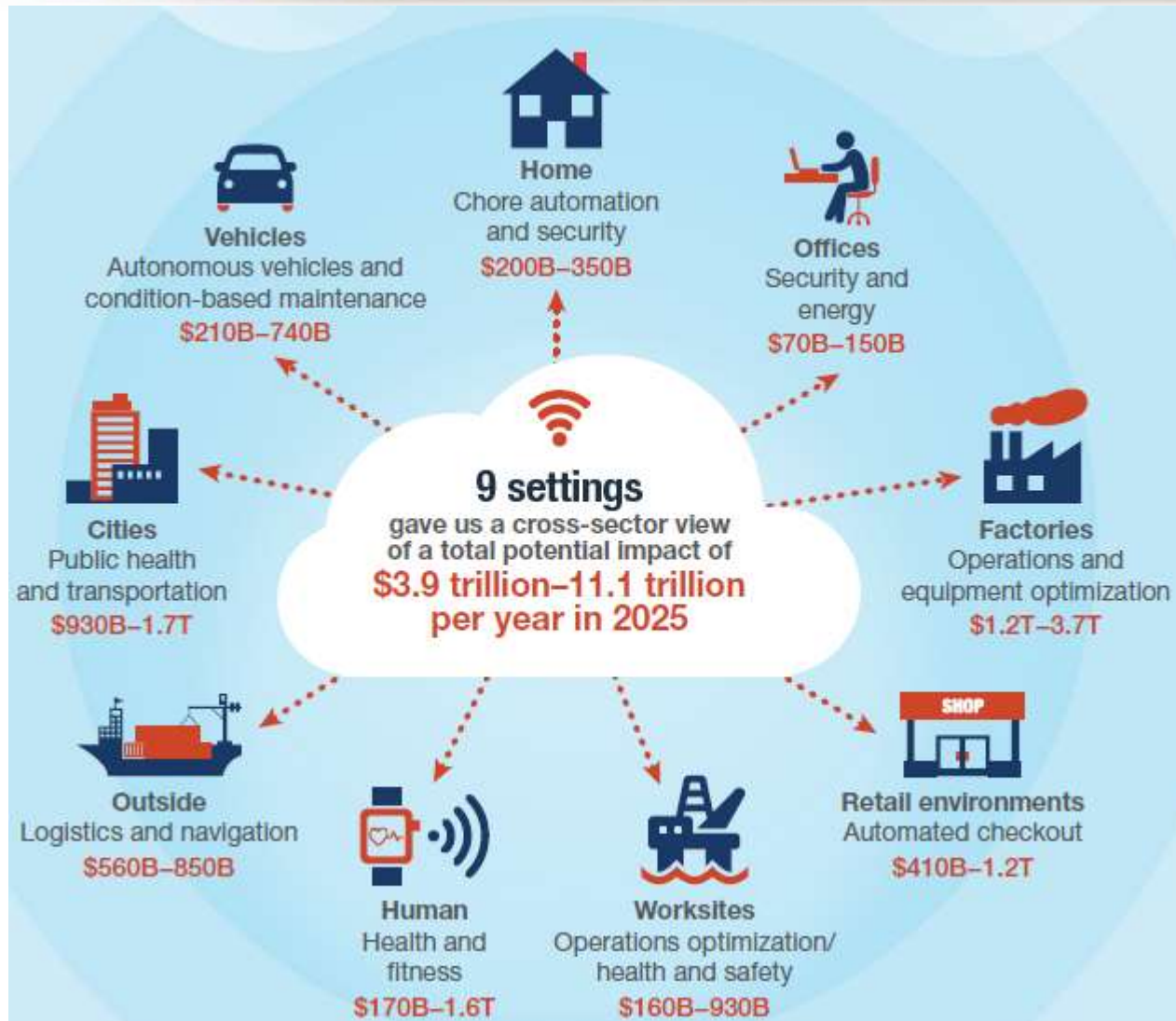
- Drones or Unmanned Aerial Vehicle (UAV) technology is seeing rapid adoption rate in many industries, including insurance
- ~700,000 drones in US by year-end
- FAA granting Section 333 exemptions for commercial use and testing of UAS
- FAA will require most drones to be registered by year-end 2015.
- 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

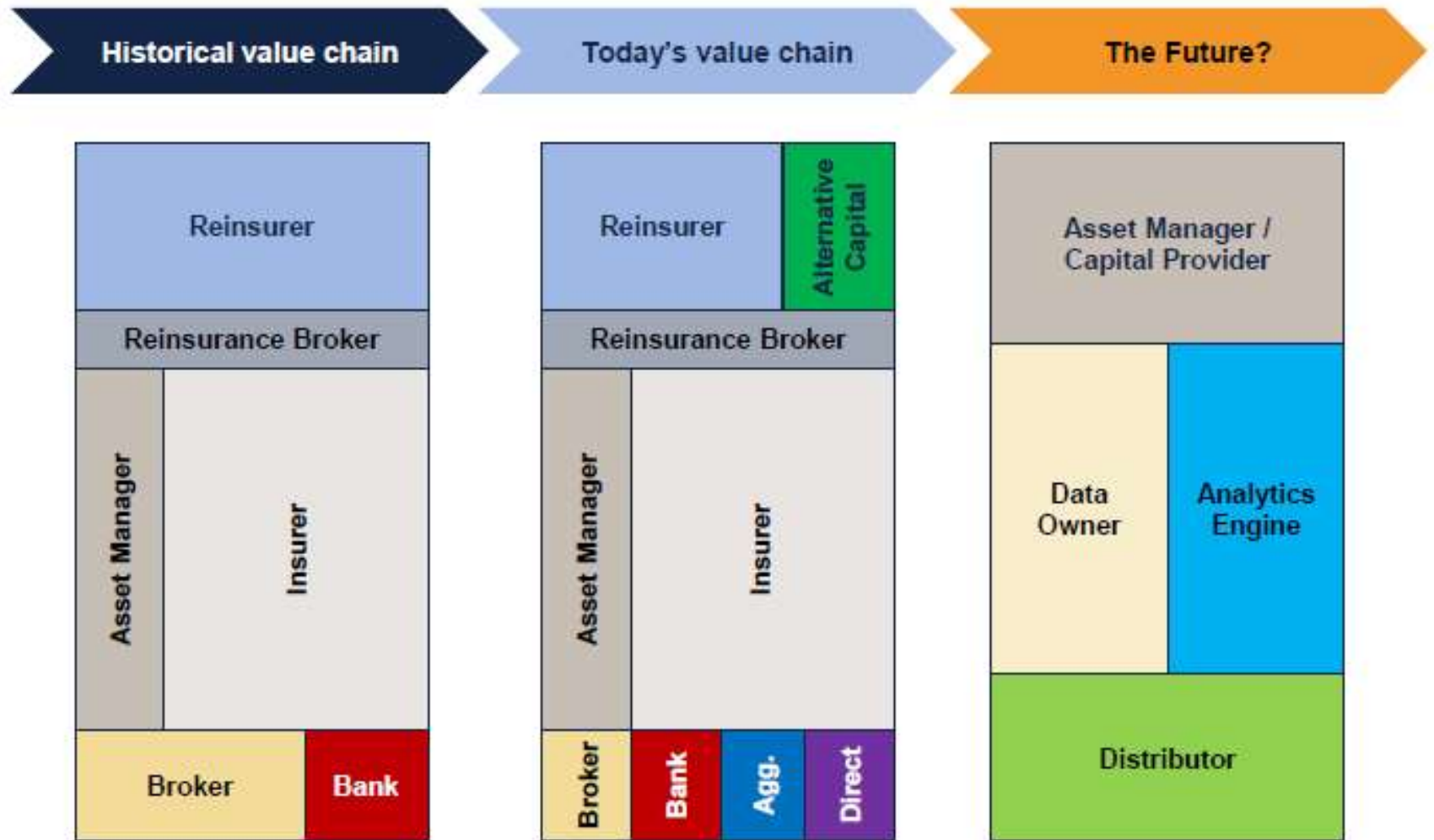
The Internet of Things and the Insurance Industry



- 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”?

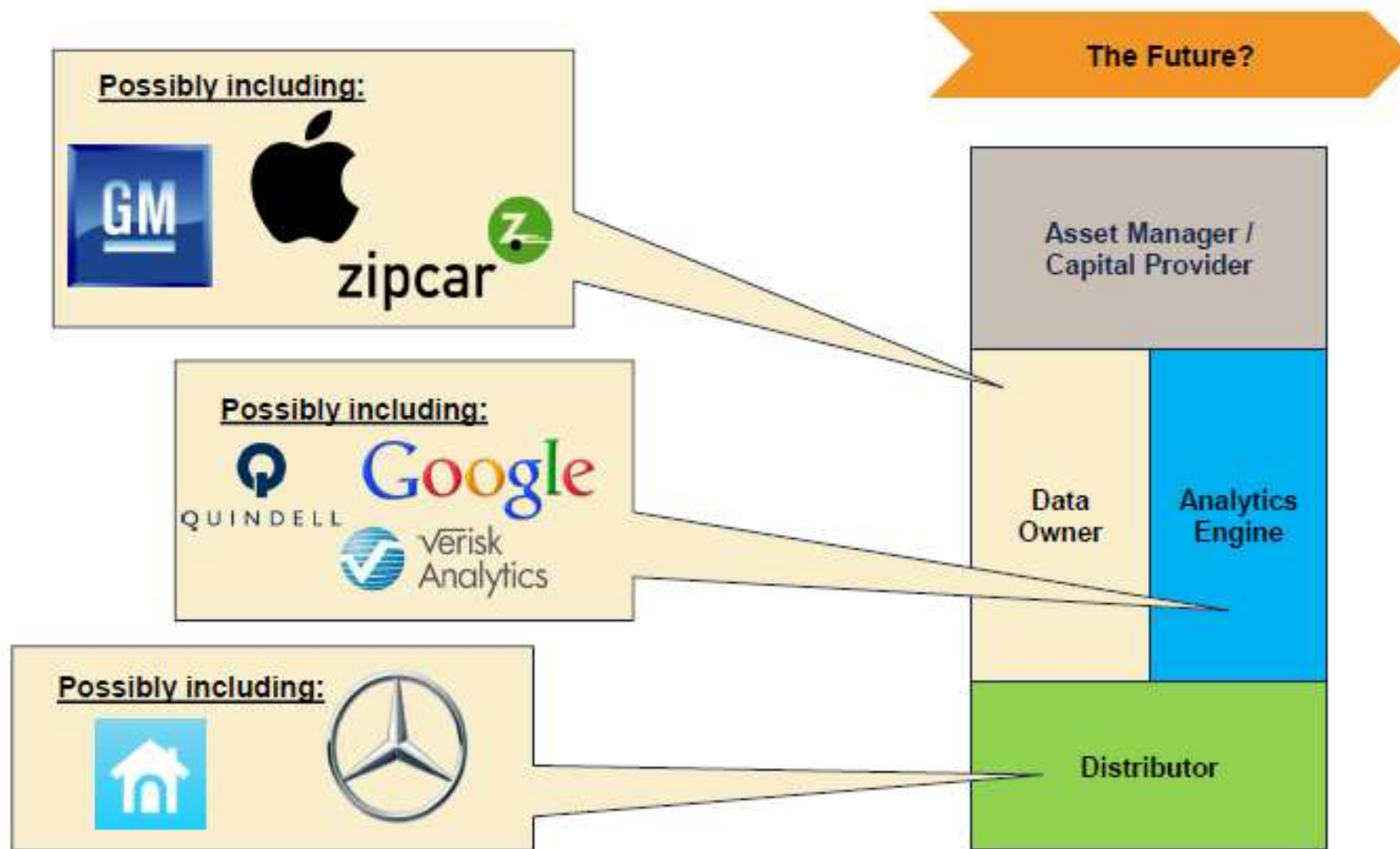
Sources: McKinsey Global Institute, *The Internet of Things: Mapping the Value Beyond the Hype*, June 2015; Insurance Information Institute.

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

Recent Attacks on the Insurance Industry

Why Are Critics Suddenly More Aggressive?

What's Driving Attacks on the Insurance Industry?

- **Recent Surge in Attacks is Associated with Income Inequality Debate in the United States**
 - ◆ Attacks not confined to auto insurance (e.g., Workers Comp, Health)
 - ◆ Not confined to insurance (banks, lending in general, student loans)
- **Politics, Economics, Regulation & Demographics Are Principal Drivers**
 - ◆ CFA/CR and others (ProPublica) emboldened in current environment
 - ◆ Dodd-Frank Act stuffed with income inequality mandates and studies
 - ◆ FIO now studying auto insurance affordability; Wants to create index.
 - ◆ Definition of “fairness” is shifting
- **CFA Has Been Able to Attack Certain Rating Factors Based on New Perception of Fairness (which is independent of actual risk)**

◆ Education	Occupation	Marital Status	Gender
◆ Age	Credit Profile	Location	<i>“Price Optimization”</i>
- **All of These Are Vulnerable to Attack in the Current Environment**
- **Infinite Number of Quotes Online→CFA Uses to Highlight Perceived Inequities**

Handout for Government Affairs Staff Attending NAIC Meeting



The Truth about Auto Insurance? Driving records alone offer an incomplete picture

Rating factors used by auto insurers to price policies have come under attack in recent months. Consumer Reports (CR) and the Consumer Federation of America (CFA) have made headlines by purporting to demonstrate U.S. auto insurers use certain rating factors unfairly, including a driver's credit-based insurance score, gender and marital status. They have also criticized the practice of "price optimization," a term defined

by the Casualty Actuarial Society (CAS) as "the supplementation of traditional actuarial loss cost models to include quantitative customer demand models for use in determining customer prices."

The CR and CFA analyses were misleading and overlooked the ways in which competition in auto insurance markets is enhanced and consumers benefit when a wide variety of rating factors beyond a person's driving record are used to determine risk.

Key factors include:



Credit

- Regulators in 47 U.S. states allow the use of credit-based insurance scores.
- "Credit scores are effective predictors of risk under automobile policies." (2007 Federal Trade Commission report)
- 76 percent of consumers exhibit good or fair credit management behavior. (FICO)



Gender

- Women drivers tend to get into fewer and less serious accidents than men.
- Men were behind the wheel in nearly three of every four fatal crashes nationwide (2003-2012). (U.S. Department of Transportation's National Highway Traffic Safety Administration)



Marital Status

- Married drivers tend to get into fewer and less serious accidents than unmarried drivers, based on the claims experience U.S. auto insurers have compiled over a period of decades.



Price Optimization

- Price Optimization allows insurers to rely on "more objective, quantitative information about the judgmental aspects of the rate-setting process instead of reliance primarily on anecdotal evidence."
- Consumers benefit because, "Price optimization may improve rate stability and lower an insurer's long-term cost for providing coverage and limit policyholder disruption. If consumers realize more stability through price optimization, policyholder discounts for longevity may increase over time." (National Association of Insurance Commissioners' Casualty Actuarial and Statistical Task Force draft white paper).

Consumers who believe they are being overcharged or underserved by their insurance company can—and should—shop around for a better deal. The U.S. auto insurance industry is highly competitive, precisely because different insurers give different weights to a variety of underwriting criteria.

Resources

III consumer education articles

- What Determines the Price of My Auto Insurance Policy?
www.iii.org/article/what-determines-price-my-auto-insurance-policy
- How Can I Save Money on Auto Insurance?
www.iii.org/article/how-can-i-save-money-auto-insurance

III presentations and research

- Price Optimization in Auto Insurance Markets: Actuarial, Economic and Regulatory Considerations:
www.iii.org/presentation/price-optimization-in-auto-insurance-markets-actuarial-economic-and-regulatory-considerations-071715
- Facts & Statistics: Auto Insurance:
www.iii.org/fact-statistic/auto-insurance
- Issues Update: Credit Scoring and Insurance:
www.iii.org/issue-update/credit-scoring

III video

The Ps on Insurance—Auto Coverage: You're in the Driver's Seat:
www.iii.org/Video/the-ps-on-insurance-auto-coverage-youre-in-the-drivers-seat

III subject matter experts

- Dr. Robert Hartwig, president & economist: bobh@iii.org
- James Lynch, FCAS MAAA, chief actuary and director of Information Services: jamesl@iii.org

III media contact:

- Michael Barry, vice president, Media Relations: michaelb@iii.org

For more information about insurance: www.iii.org

PRICE OPTIMIZATION

Price Optimization Was the Sharpest Area of Attack the Industry Faced in 2015

Price Optimization: What Is It?

1.4 Cents
Per Ounce
(\$5.49 for
24 Bottles)



U.S. Insurers Don't Do This!!!

5.9 Cents
Per Ounce
(\$23.76 for
24 Bottles)



320% Price Difference! Does It Cost \$18.25 to Unpack the Bottles and Keep Them Cold?

■ Who Knows?

- ◆ No One Has Successfully Defined It
- ◆ At Least Seven Definitions From States, Vendors, NAIC, Others
- ◆ Some Have Talked About
 - Price Elasticity of Demand
 - ‘Loyalty Penalty’
- ◆ Use of ‘Sophisticated Tools and Models to Quantify Other Business Considerations’ (profitability/retention) (NAIC/I.I.I.)

Price Optimization: What Is The Objection?

- What Is the Objection? Detractors Say
 - ◆ ‘Systematic Component to Rate Setting Unrelated to Expected Losses or Expenses’ (It’s a Rating Variable, and It’s Not Based on Likelihood of Loss, So It’s Illegal.)
 - ◆ ‘Price Gouging’
 - Poor Get Overcharged
 - Most Loyal Customers Get Mistreated



FOUR FACTS ABOUT PRICE OPTIMIZATION

1. Insurers Have Always 'Optimized' – With Regulator Knowledge & Approval

**Regulators
Have
Approved
of the
Practice
for
Decades**

Disposition

Disposition Date: 03/11/2015
Effective Date (New): 05/01/2015
Effective Date (Renewal): 05/01/2015
Status: Approved

Comment:

Company Name:	Overall % Indicated Change:	Overall % Rate Impact:	Written Premium Change for this Program:	Number of Policy Holders Affected for this Program:	Written Premium for this Program:
REDACTED	5.700%	2.600%	\$169,000	632	\$6,483,000
	17.400%	2.600%	\$898,000	3,649	\$34,492,000
	-3.800%	3.400%	\$1,859,000	15,942	\$54,331,000
	-6.300%	3.200%	\$170,000	1,071	\$5,284,000
	7.500%	2.700%	\$955,000	5,793	\$35,290,000

Overall Rate Information for Multiple Company Filings

Overall Percentage Rate Indicated For This Filing

Overall Percentage Rate Impact For This Filing

Effect of Rate Filing-Written Premium Change For This Program

Effect of Rate Filing - Number of Policyholders Affected

4.500%
3.000%
\$4,051,000
27,087

**Companies
Temper
Increases
Based on
'Market
Judgment'**

Sources: System for Electronic Rate and Form Filing (SERFF) via SNL Financial; Insurance Information Institute.

Other Examples: Rate Capping, Teen Drivers

2. Optimization Is Not Price Gouging

■ Traditional Practice

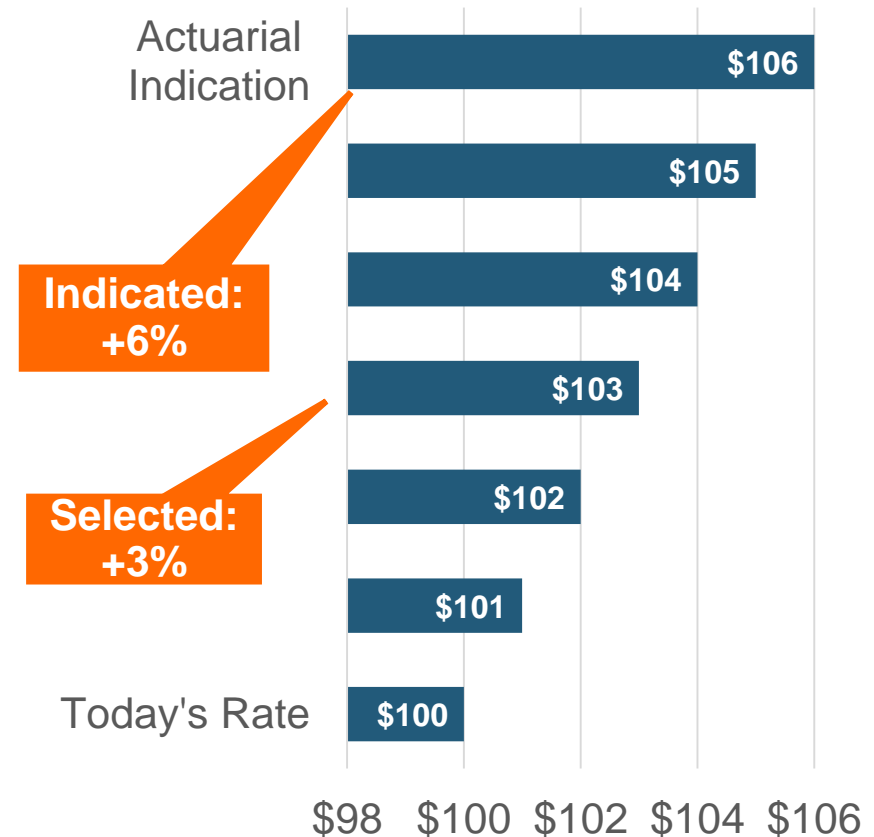
- ◆ Used 'Seat-of-the-Pants' Judgment to Discount Off Indication

■ What's New

- ◆ Software Informs the Judgment

■ Never Exceeds Actuarial Indication

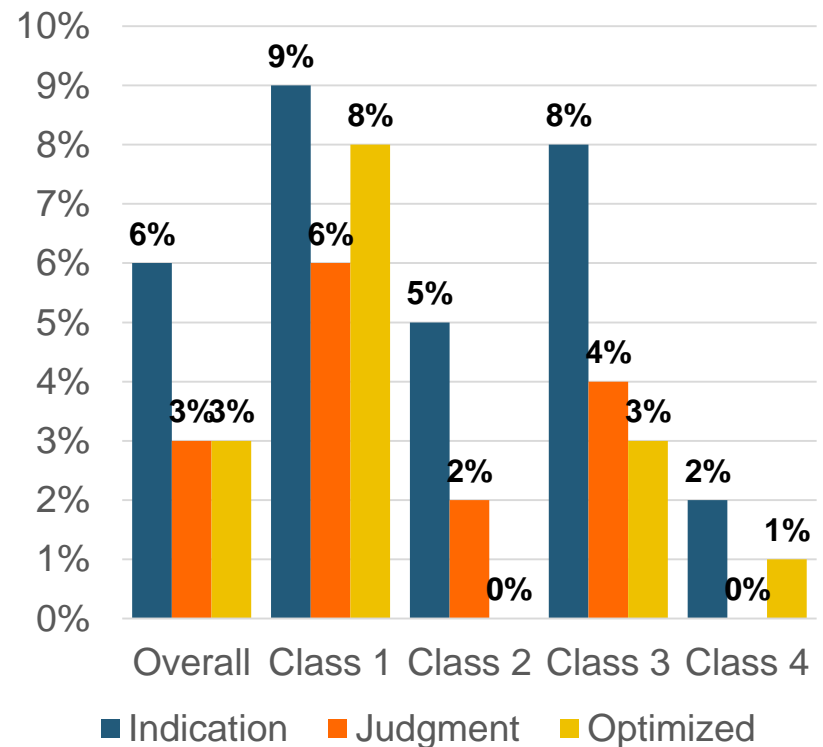
An Example



3. Optimization Doesn't Raise Rates; It Distributes the Rate Change

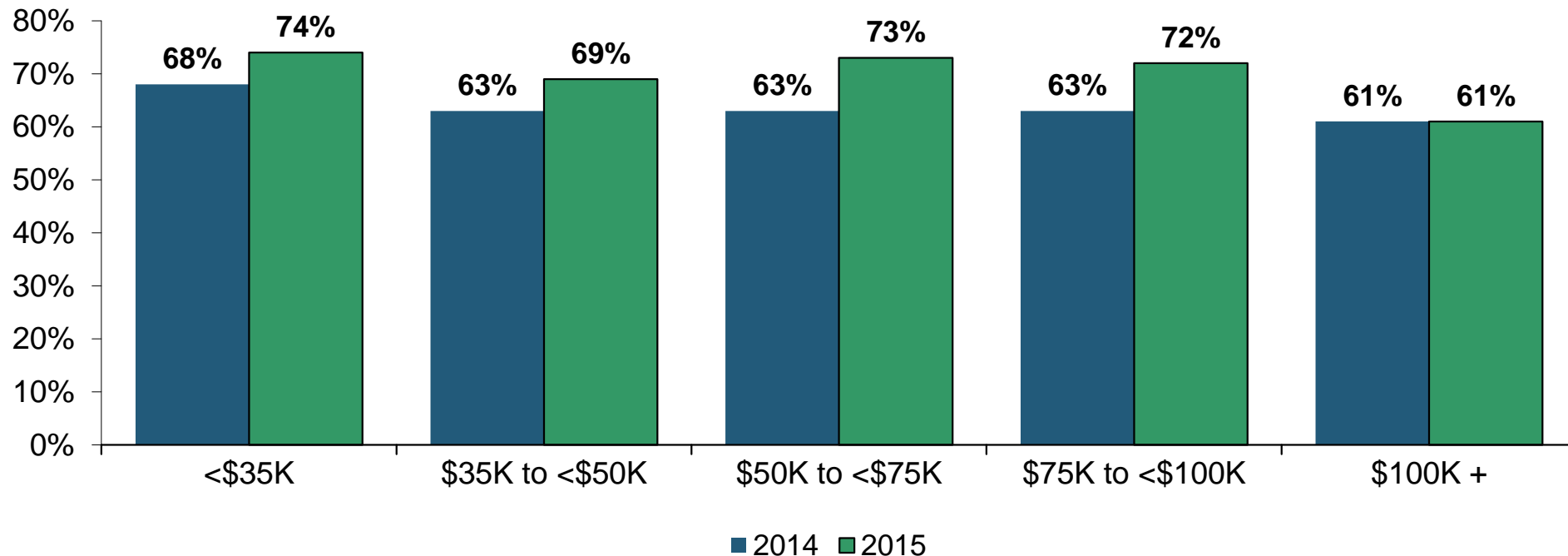
- As Practiced in U.S.
 - ◆ Remains True to Cost-Based Price
 - ◆ Applied to Classes, Not Individuals
- Rates Don't Exceed Actuarial Indication

Example (cont'd): There Are Many Reasonable Ways to Achieve Reasonable Rates.



4. Low Income Drivers Are Just as Likely to Shop As Anyone Else

Percent of Those With Auto Insurance Who Said They Compared Prices on Renewal, by Income, 2014-2015



Low- to Moderate-Income Respondents Were More Likely to Say They Compare Prices.

NAIC Task Force Concluded (November)

Force believes the following practices , at a minimum, are inconsistent with statutory requirements that “rates shall not be ... unfairly discriminatory:”

- a. Price elasticity of demand.
- b. Propensity to shop for insurance.
- c. Retention adjustment at an individual level.
- d. A policyholder’s propensity to ask questions or file complaints.

**Focus Appears
to Be On
Potential Use of
Tool on
Individuals**

■ Restrictions/bans in 16 States, D.C.

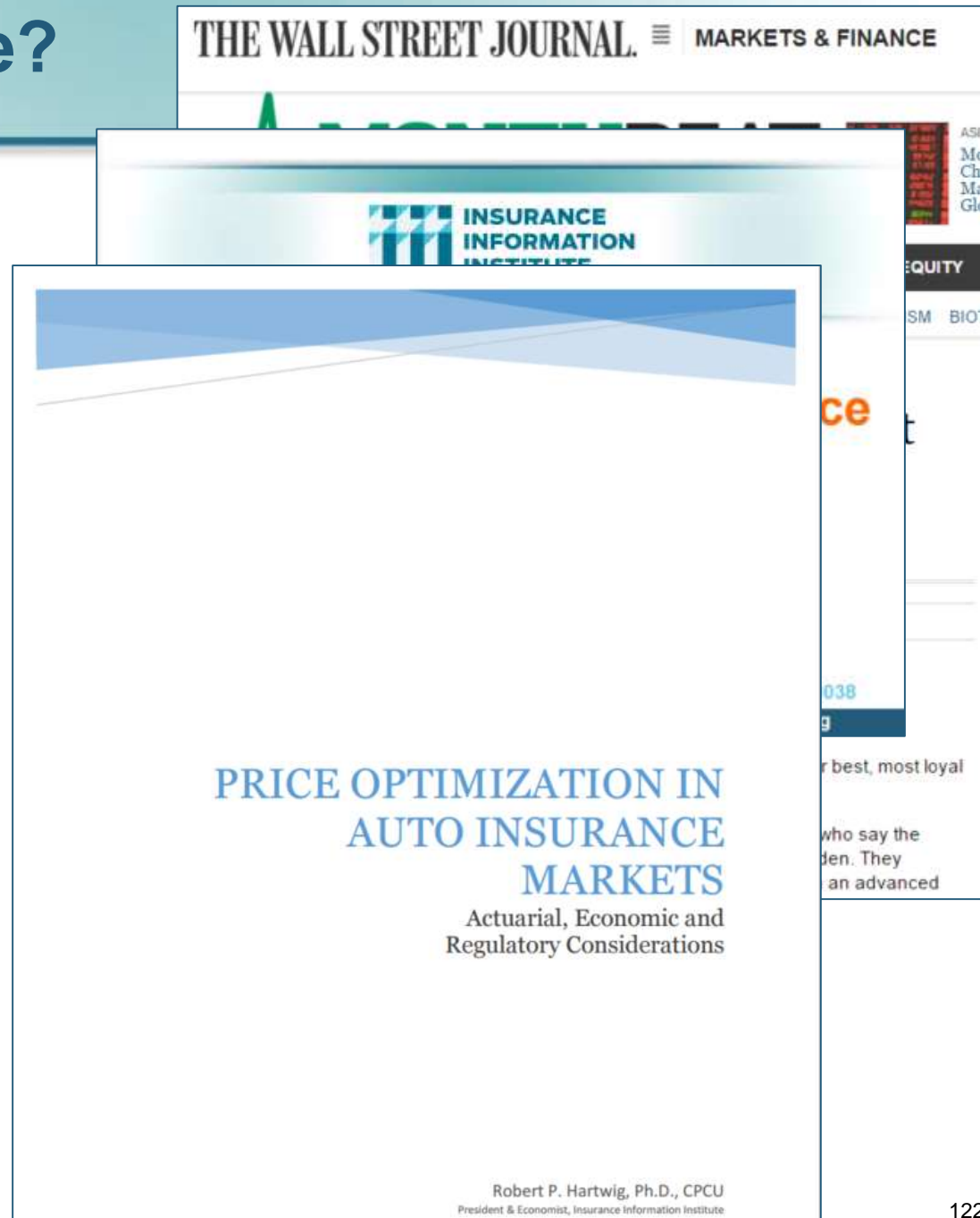
■ Illinois Declined to Issue Regulation

‘Illinois has a highly competitive auto and homeowners’ insurance market ... I would be delighted to host any members of ... consumer organizations to visit with me, in person, to share the data they cite as it is inconsistent with what I have reviewed.’

- Acting Insurance Director Anne Melissa Dowling
January 2016

What Has I.I.I. Done?

- Media
- Industry
- Policymakers
- The Message:
 - ◆ 'the optimal way ... is not through prohibitions but through observation, learning and studying the impacts on insurance markets and consumers and only then making recommendations as necessary.'
 - Robert Hartwig,
NCOIL, July 17, 2015



Insurance Information Institute Online:

www.iii.org

*Thank you for your time
and your attention!*

Twitter: twitter.com/bob_Hartwig