

Overview & Outlook for the Commercial P/C Insurance Industry in 2016 & Beyond Trends, Challenges & Opportunities

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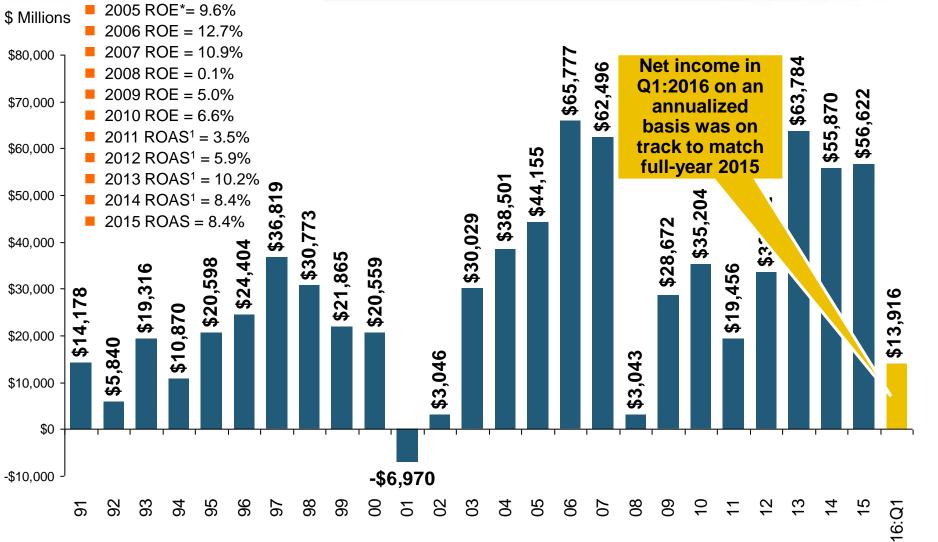


Insurance Industry: Financial Update & Outlook

2015 Was a Reasonably Good Year and Similar to 2014

2016: Could Be Similar to 2015

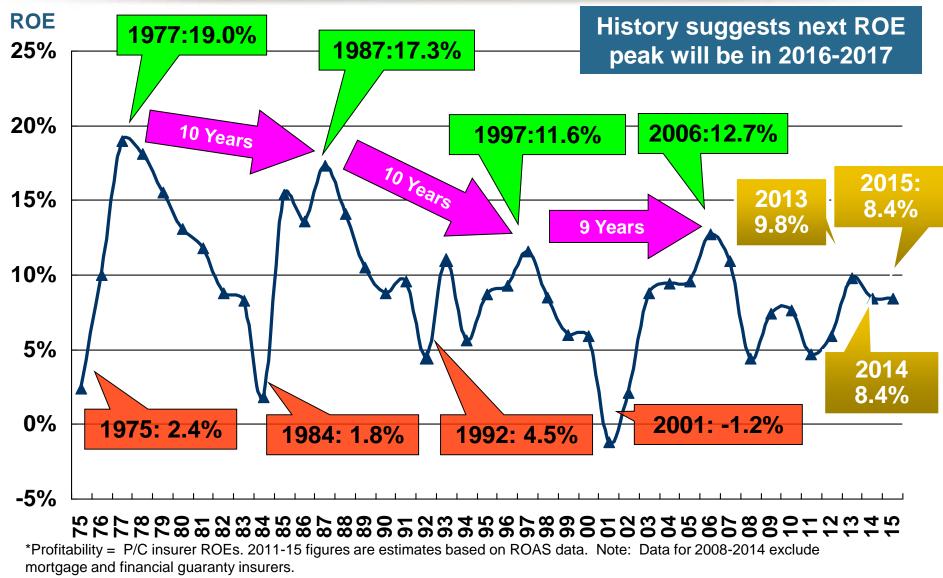
P/C Industry Net Income After Taxes 1991–2016:Q1



•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; 2015E is annualized figure based actual figure through Q3 of \$44.0 Sources: A.M. Best, ISO; Insurance Information Institute

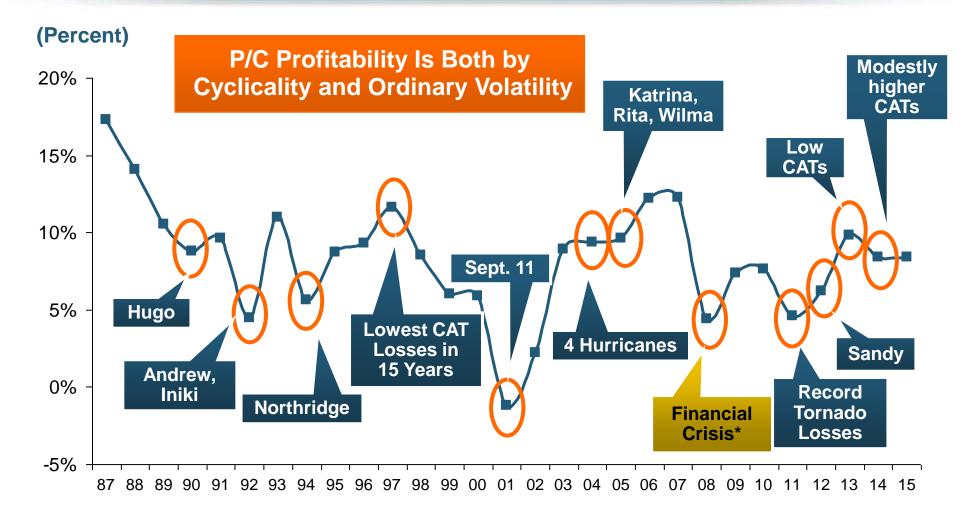
Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2015

INSURANCE



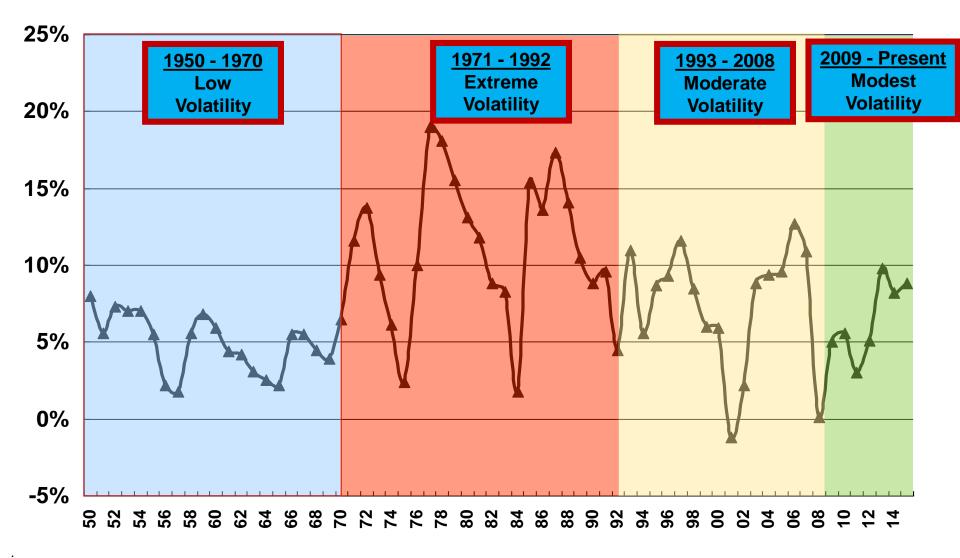
Source: Insurance Information Institute; NAIC, ISO, A.M. Best, Conning

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



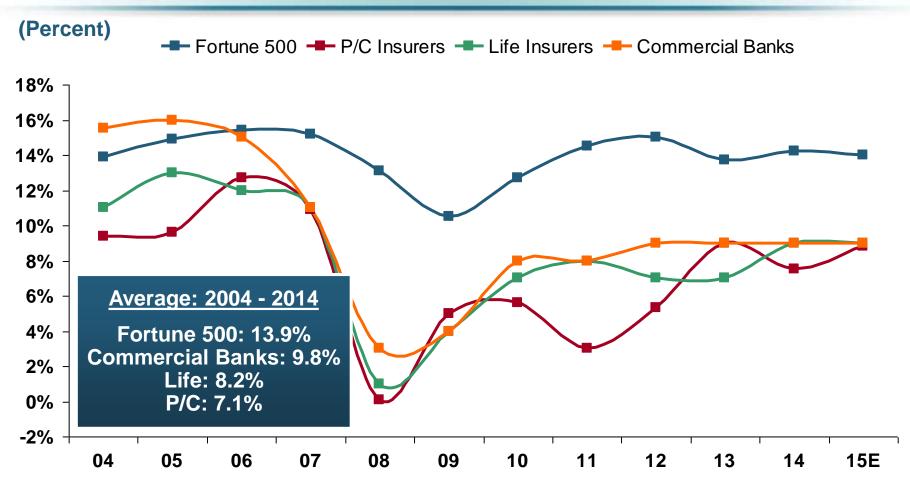
* Excludes Mortgage & Financial Guarantee in 2008 – 2014. Sources: ISO, *Fortune*: Insurance Information Institute. NSURANCE

P/C Insurance Industry ROE: Magnitude of Cyclicality, Volatility Changes Over Time, 1950-2015



Source: Insurance Information Institute

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



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

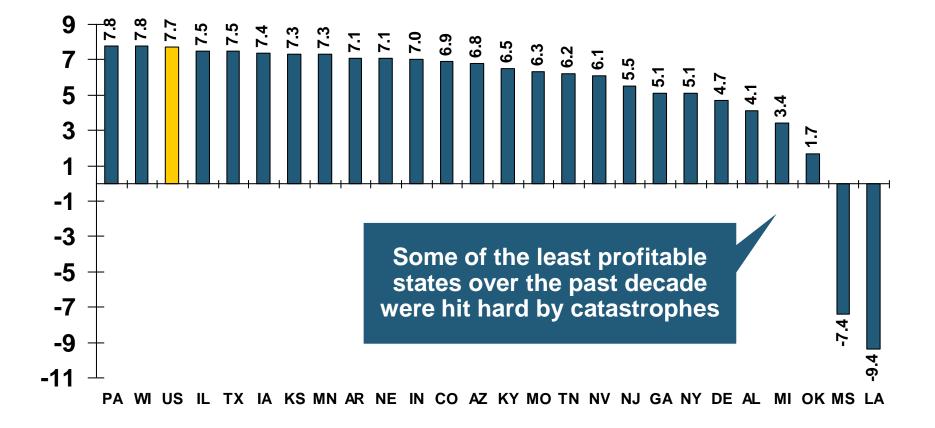
RNW All Lines, 2005-2014 Average: Highest 25 States



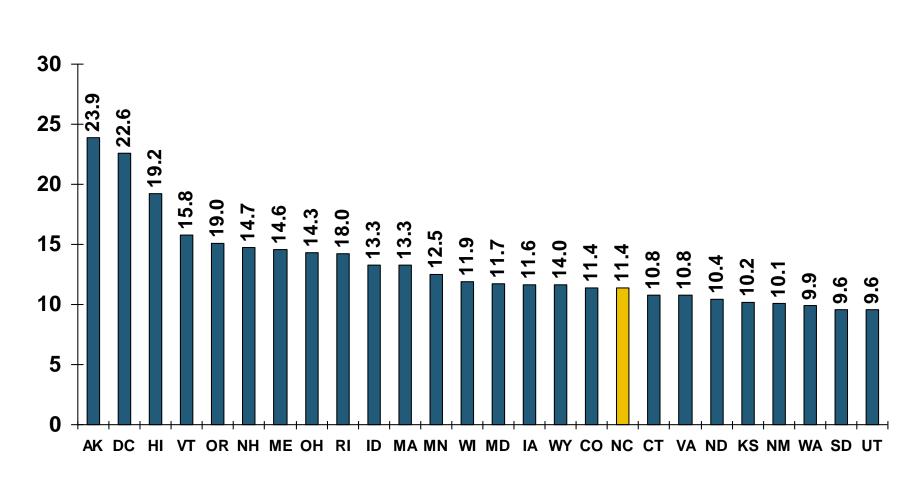
RNW All Lines, 2005-2014 Average: Lowest 25 States



(Percent)



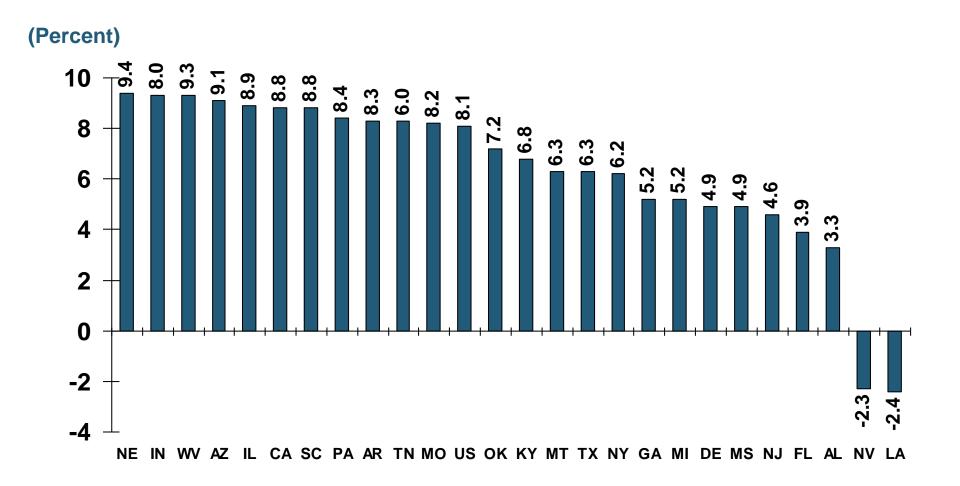
RNW Commercial Auto, 2005-2014 Average: Highest 25 States



Sources: NAIC; Insurance Information Institute

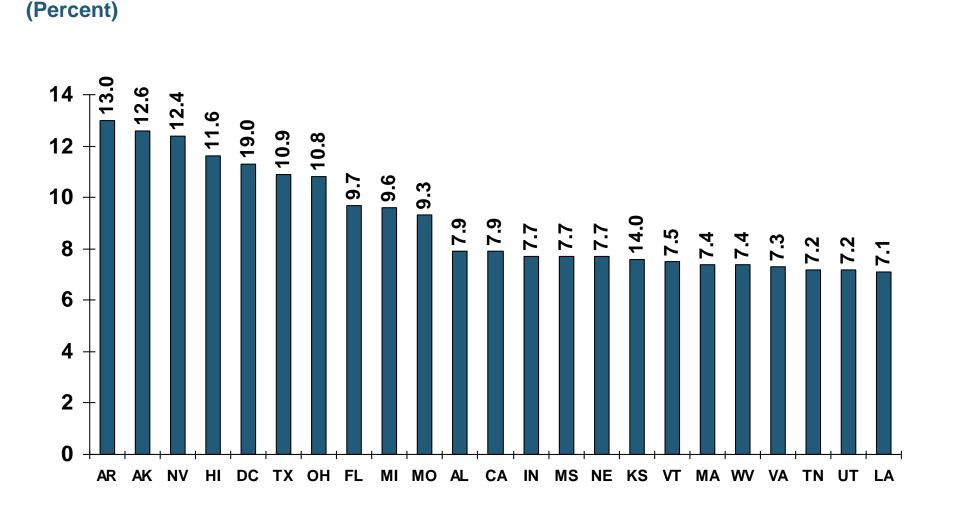
(Percent)

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

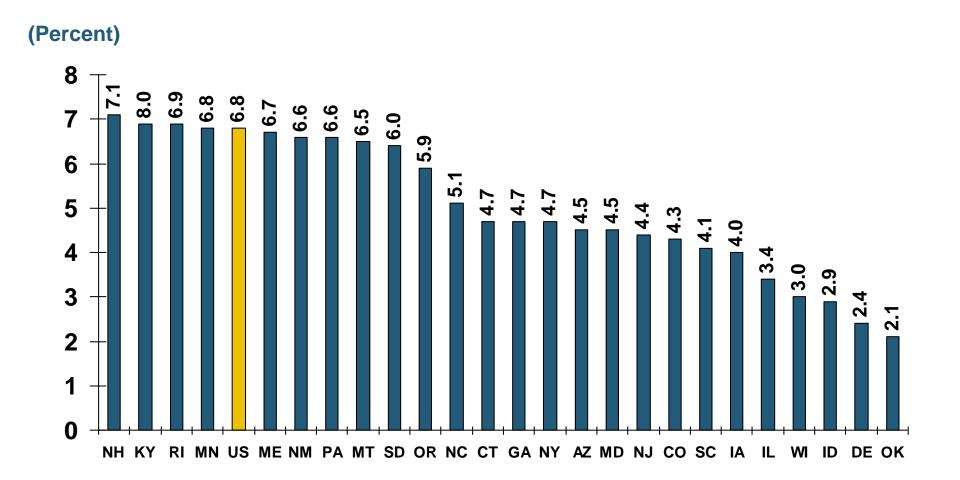


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RNW Workers Compensation, 2005-2014 Average: Highest 25 States



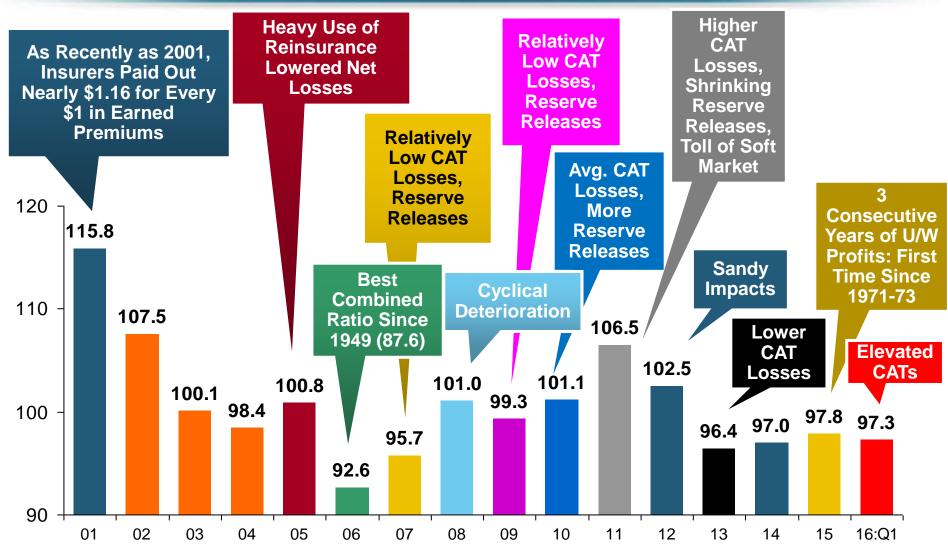
RNW Workers Compensation, 2005-2014 Average: Lowest 25 States



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P/C Insurance Industry Combined Ratio, 2001–2016:Q1*

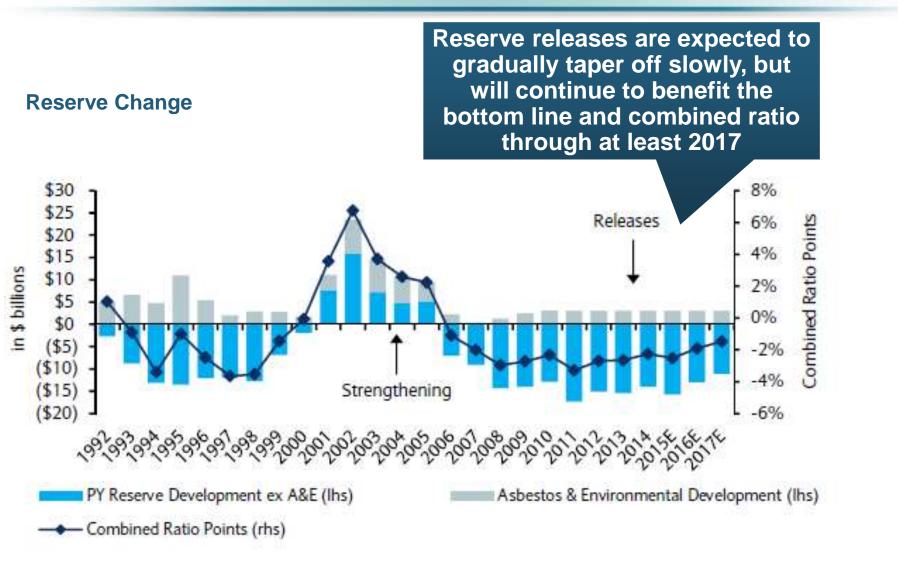




* Excludes Mortgage & Financial Guaranty insurers 2008--2014. Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0.

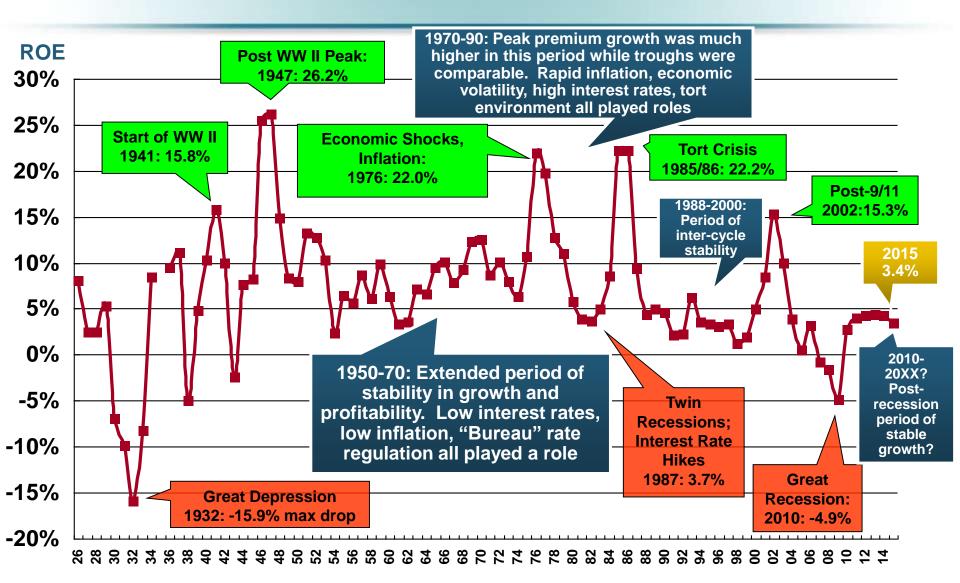
Sources: A.M. Best, ISO (2014-2015); Figure for 2010-2013 is from A.M. Best P&C Review and Preview, Feb. 16, 2016.

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



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

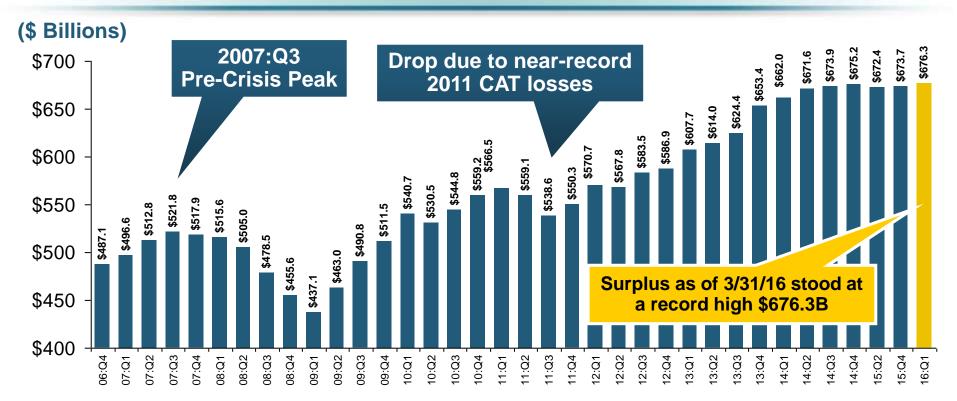
NPW Premium Growth: Peaks & Troughs in the P/C Insurance Industry, 1926 – 2015



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

Policyholder Surplus, 2006:Q4–2016:Q1





The industry now has \$1 of surplus for every \$0.76 of NPW, close to the strongest claims-paying status in its history.

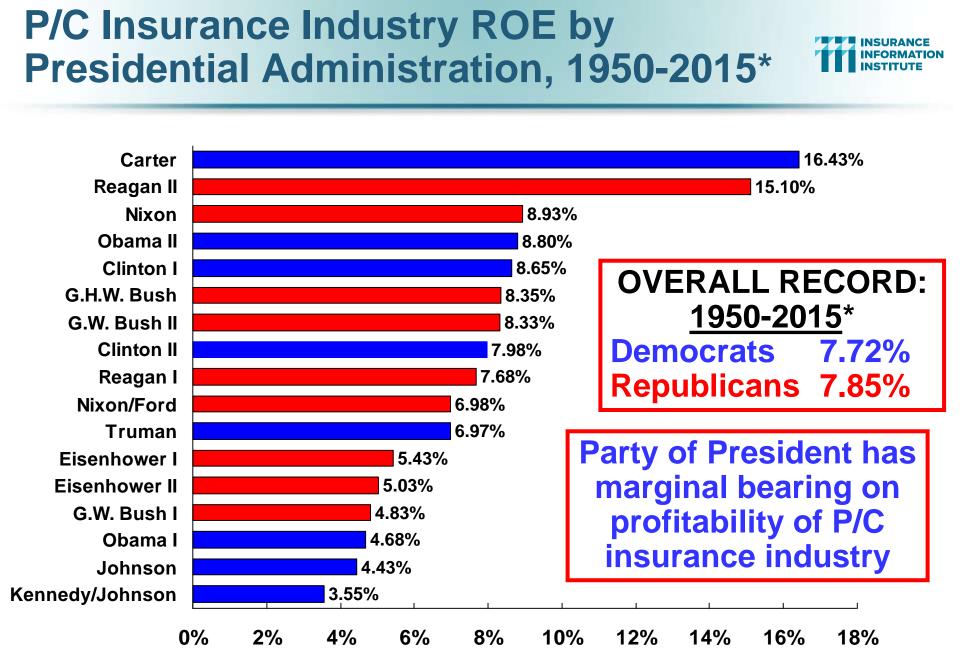
2010:Q1 data includes \$22.5B of paid-in capital from a holding company parent for one insurer's investment in a non-insurance business . Sources: ISO, A.M .Best.

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



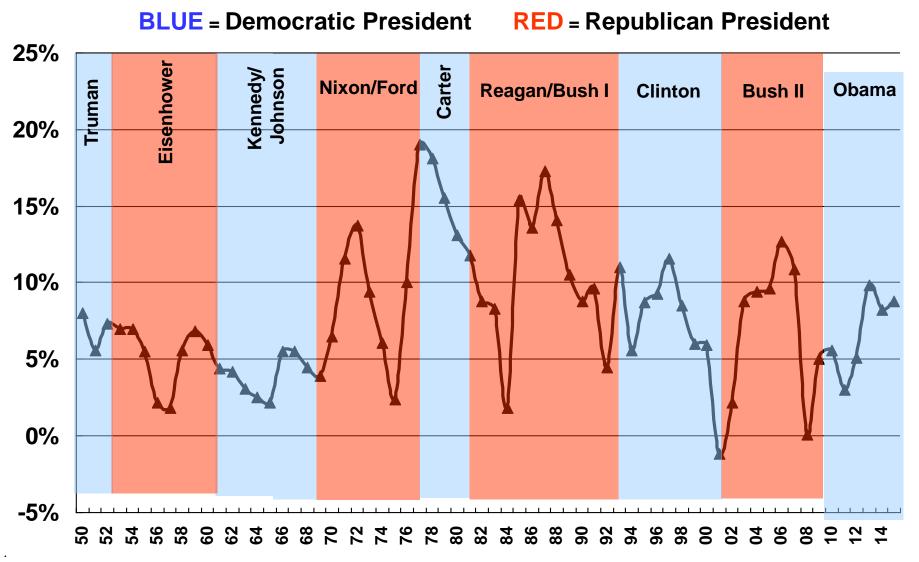
Profitability & Politics

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



*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*



*2015 data is through Q3.

Source: Insurance Information Institute

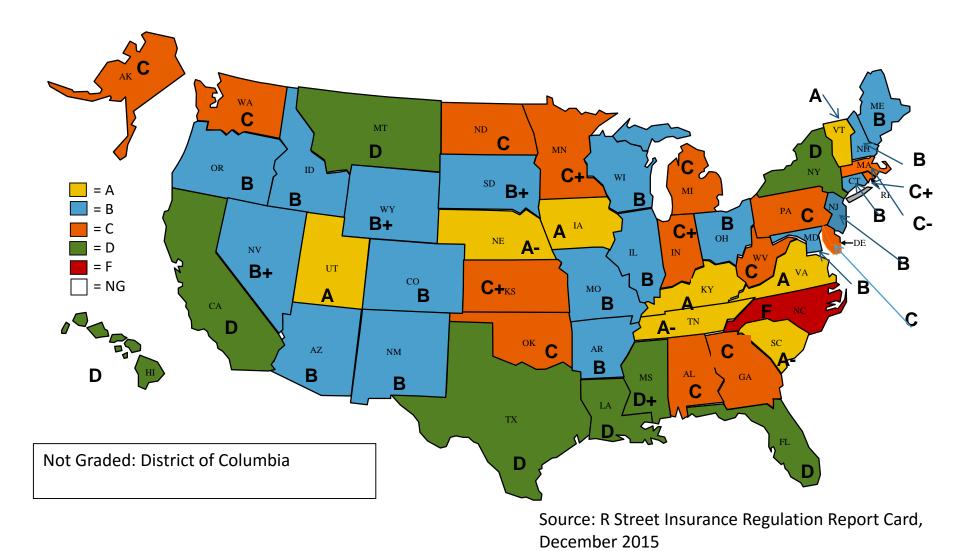
Trump vs. Clinton: Issues that Matter to P/C Insurers



Issue	Trump	Clinton
Economy	Supply Side-Like Philosophy: Lower taxes→Faster real GDP growth; Deficits likely grow as tax cuts are combined with targeted increased spending on Homeland Security, Defense, etc.	Keynesian Philosophy: More government spending on infrastructure, education, social services; Deficits likely increase as tax increases likely difficult to pass
Interest Rates	May trend higher with larger deficits; Shift from monetary policy to fiscal focus (tax cuts, government spending)	Status quo at the Fed; Net impact on interest rates unclear
Taxes	Favors lower tax rates for corporate and personal income tax rates; Tax code overhaul?	Unlikely to reduce taxes or embark on major overhaul of tax code
International Trade	Protectionist Tendencies (appeal primarily to manufacturing sector)	Has criticized Trans-Pacific Partnership but is a realist on international matters
Tort System	Doesn't like trial lawyers but seems to like filing lawsuits	Status Quo
Energy	Laissez-faire; Less "green"	Status Quo

2015 Property and Casualty Insurance Regulatory Report Card

INSURANCE INFORMATION



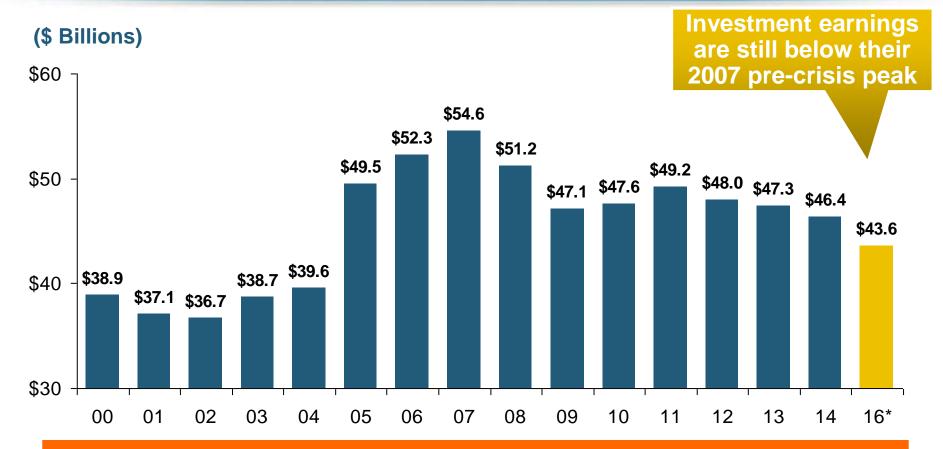


INVESTMENTS: THE NEW REALITY

Investment Performance is a Key Driver of Profitability

Depressed Yields Will Necessarily Influence Underwriting & Pricing

Property/Casualty Insurance Industry Investment Income: 2000–2016:Q1¹

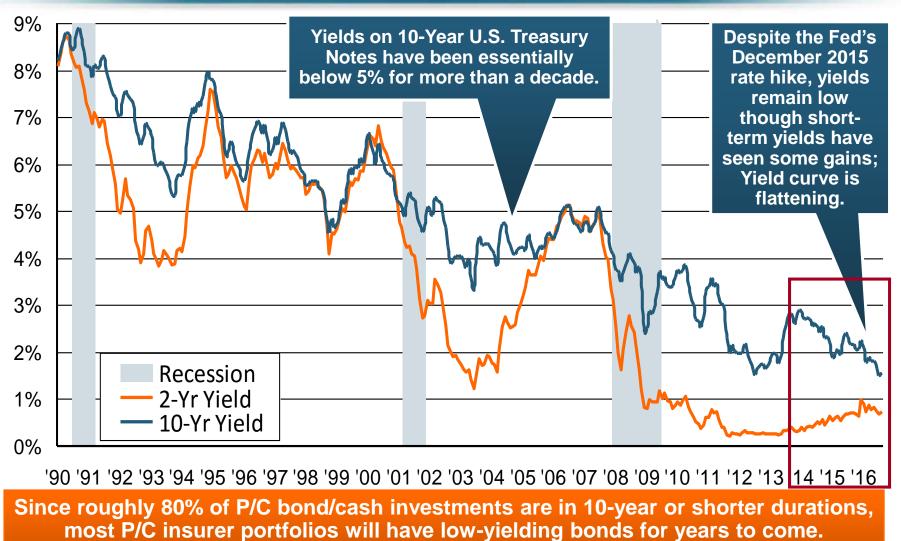


Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014 but showed a small (1.9%) increase in 2015 another drop in 2016 seems likely.

*Annualized figure based on actual Q1:2016 net investment income earned of \$10.893B.

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

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

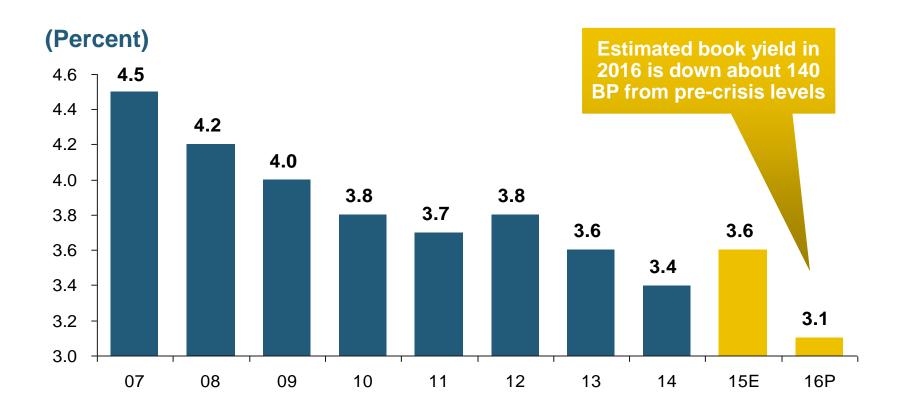


*Monthly, constant maturity, nominal rates, through August 2016.

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

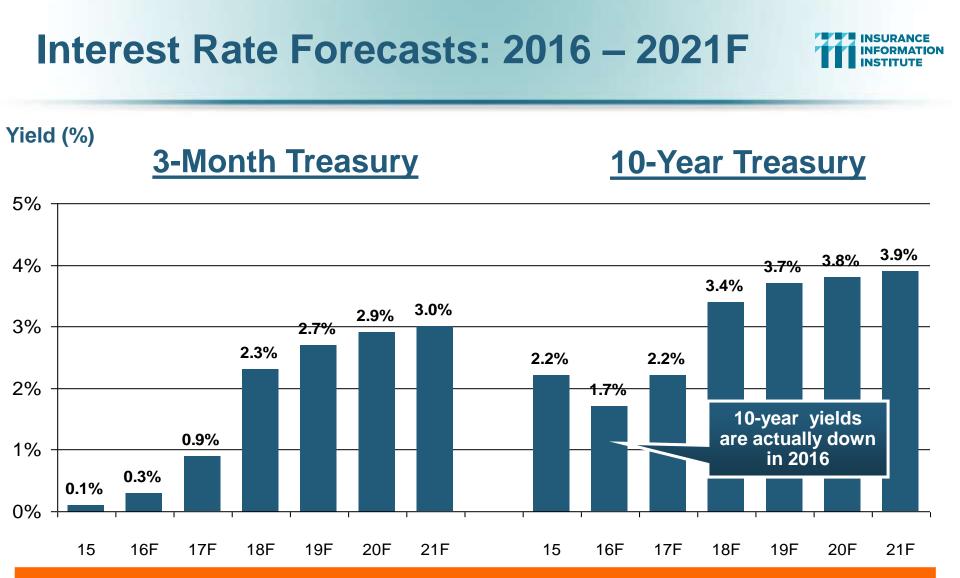
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Net Investment Yield on Property/ Casualty Insurance Invested Assets, 2007–2016P*



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

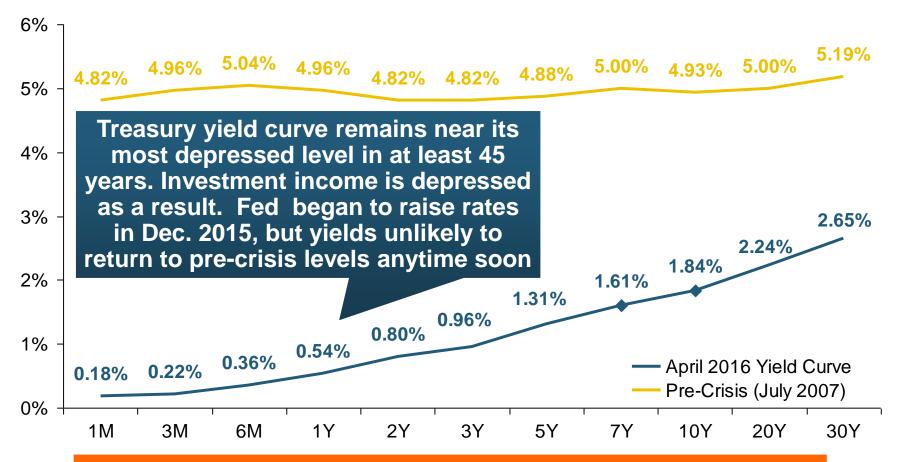
Sources: A.M. Best; 2015E-2016P figures from A.M. Best P/C Review and Preview, Feb. 2016; Insurance Information Institute



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

Sources: Blue Chip Economic Indicators (9/16 for 2016 and 2017; for 2018-2021 3/16 issue); Insurance Info. Institute.

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



The Fed Began to Raise Rates in Dec. 2015 but Market Volatility and Weakness Abroad Have Made Additional Hikes Difficult

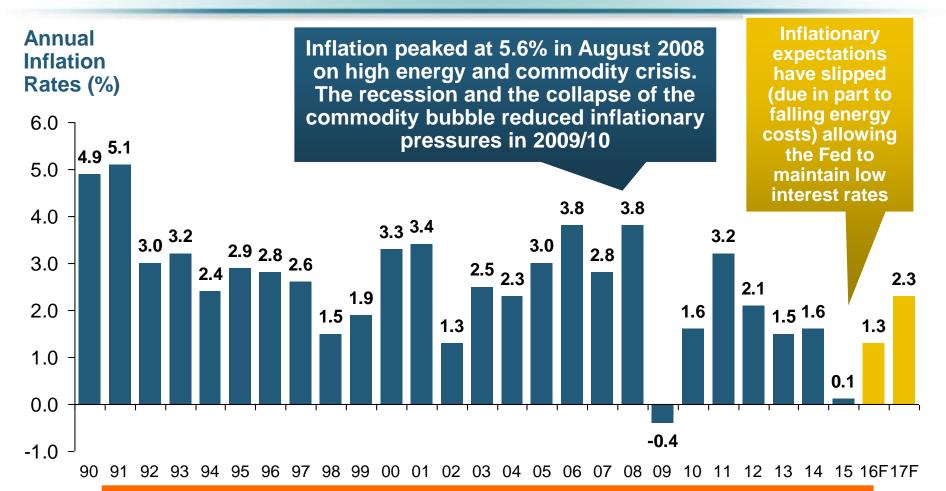
*As of April 22, 2016.

Source: Federal Reserve Board of Governors: <u>http://www.federalreserve.gov/releases/h15/data.htm;</u> Insurance Information Institute.

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Annual Inflation Rates, (CPI-U, %), 1990–2017F

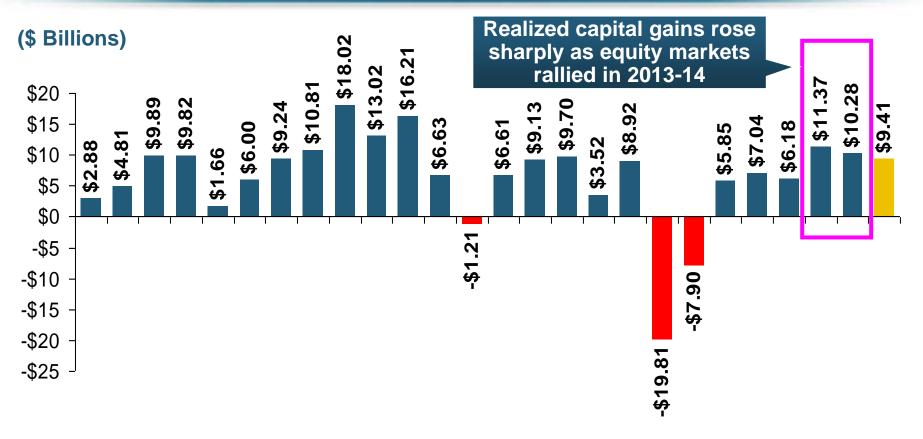
INSURANCE INFORMATION INSTITUTE



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, 4/16 (forecasts).

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



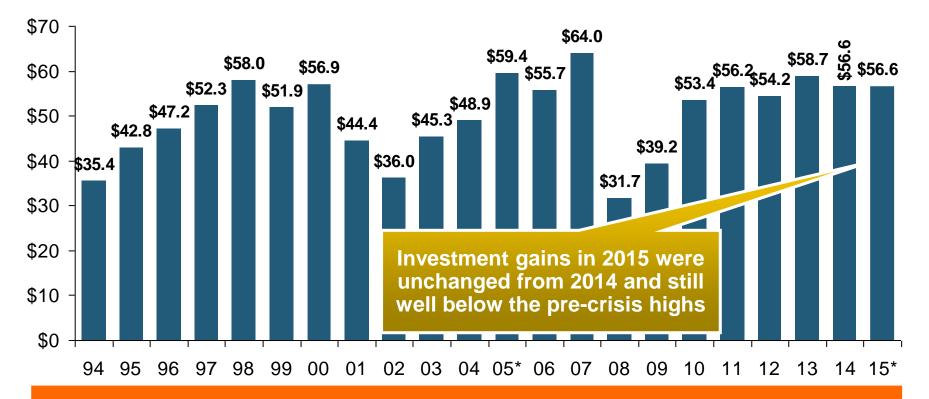
90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15

Insurers Posted Net Realized Capital Gains in 2010 - 2015 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.

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

Property/Casualty Insurance Industry Investment Gain: 1994–2015¹

(\$ Billions)

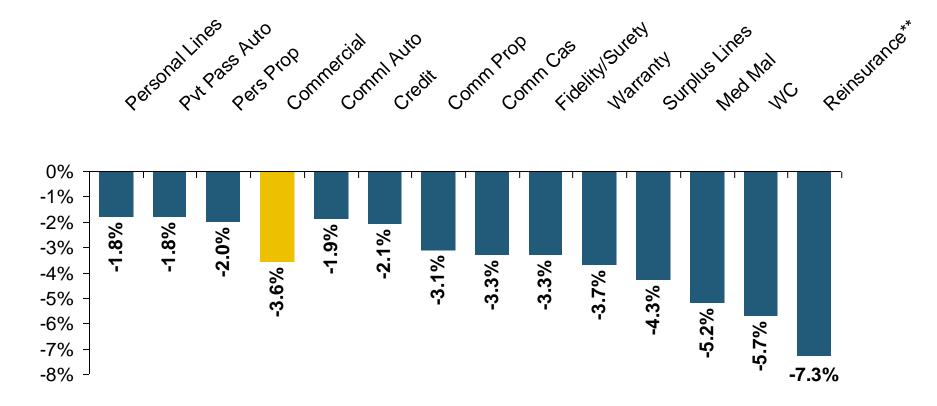


Total Investment Gains Were Flat in 2015 as Investment Income Rose Marginally and Realized Capital Gains Fell Slightly

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.

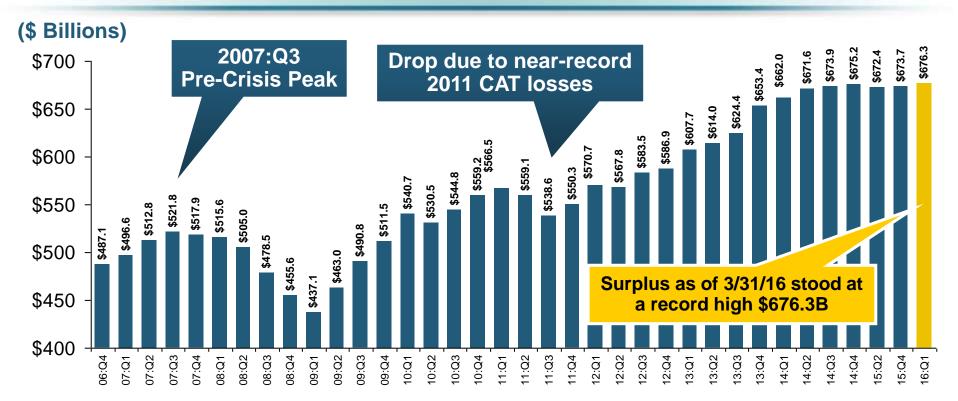


CAPITAL/CAPACITY

Capital Accumulation Has Multiple Impacts Alternative Capital Impacts?

Policyholder Surplus, 2006:Q4–2016:Q1





The industry now has \$1 of surplus for every \$0.76 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.

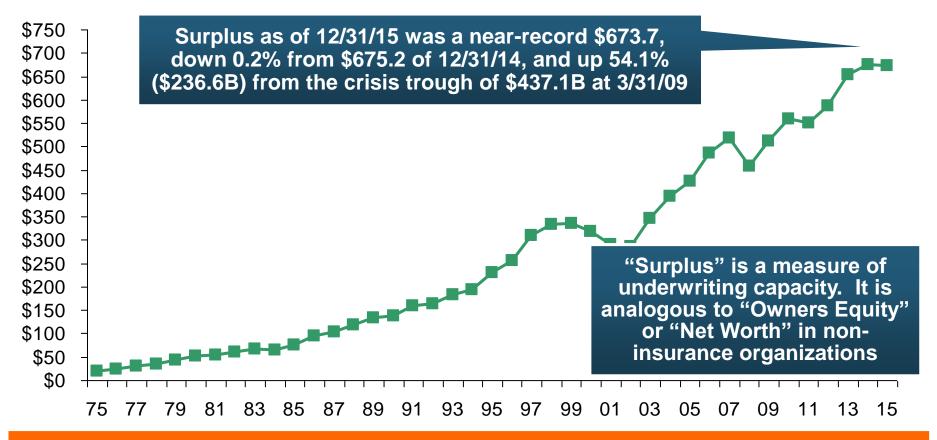
The P/C insurance industry entered 2016 in very strong financial condition.

Sources: ISO, A.M .Best.

US Policyholder Surplus: 1975–2015*



(\$ Billions)



The Premium-to-Surplus Ratio Stood at \$0.76:\$1 as of 12/31/15, a Near Record Low (at Least in Recent History)

* As of 12/31/15.

Source: A.M. Best, ISO, Insurance Information Institute.



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.



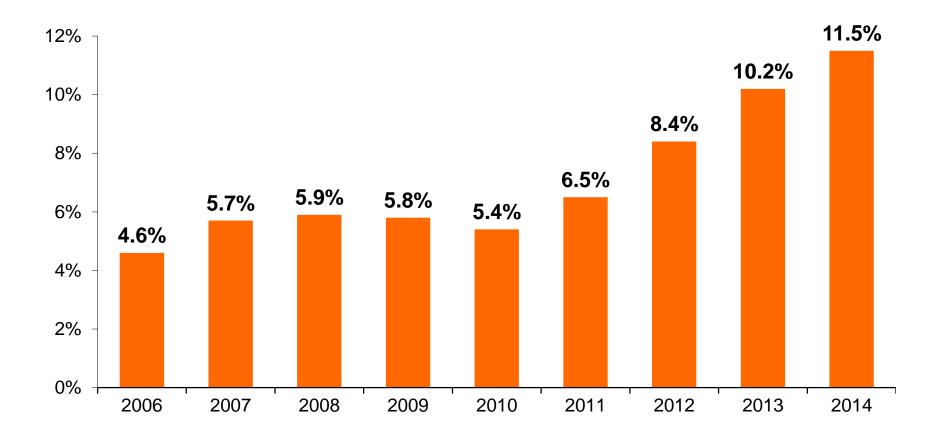
But alternative capacity has grown 210% since 2008, to \$50B. It has more than doubled in the past three years.

2014 data is as of June 30, 2014.

(Billions of USD)

Source: Aon Benfield Analytics; Insurance Information Institute.

Alternative Capital as a Percentage of Traditional Global Reinsurance Capital



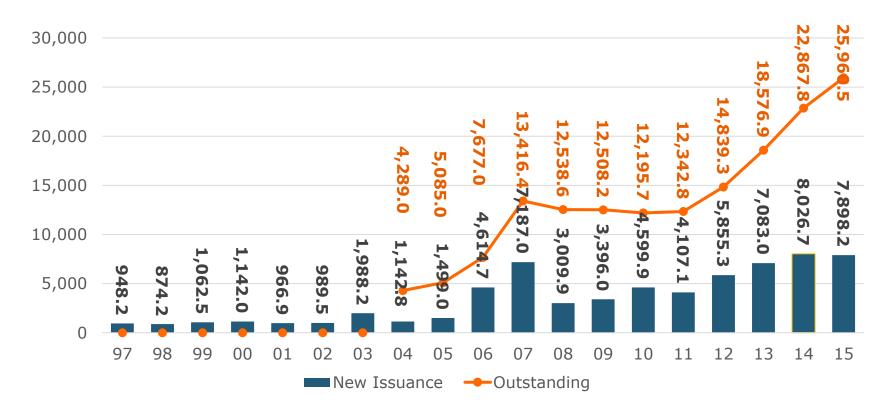
Alternative Capital's Share of Global Reinsurance Capital Has More Than Doubled Since 2010.

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.

Catastrophe Bond Issuance and Outstanding: 1997-2015





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

Source: Guy Carpenter, Artemis accessed at http://www.artemis.bm/deal_directory/cat_bonds_ils_issued_outstanding.html .

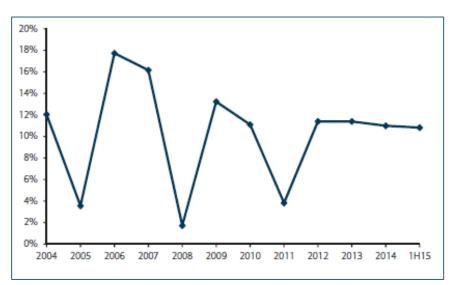
US Property CAT Rate on Line Index & Global Reinsurance ROE



US Property CAT ROL



Global Reinsurance ROE



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

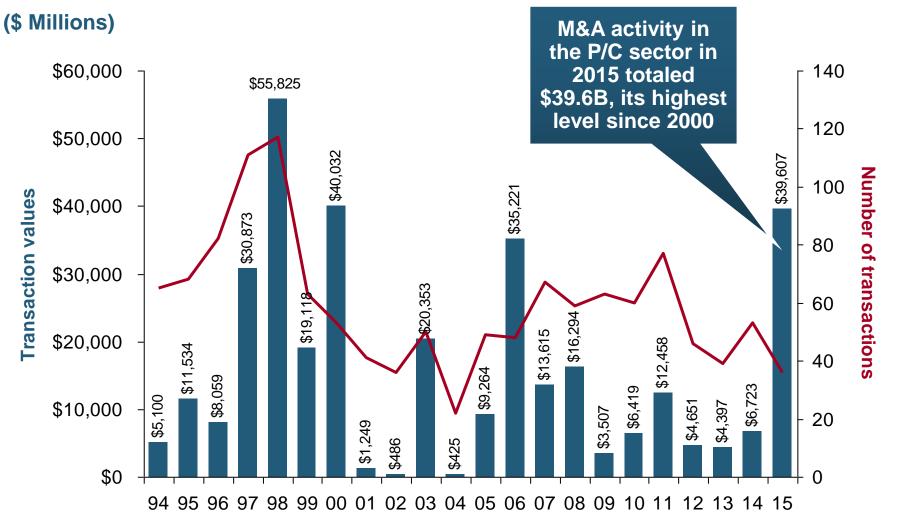
Source: Barclays PLC from Guy Carpenter; Insurance Information Institute.



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, 7 P/C SECTOR, 1994-2015 (1)

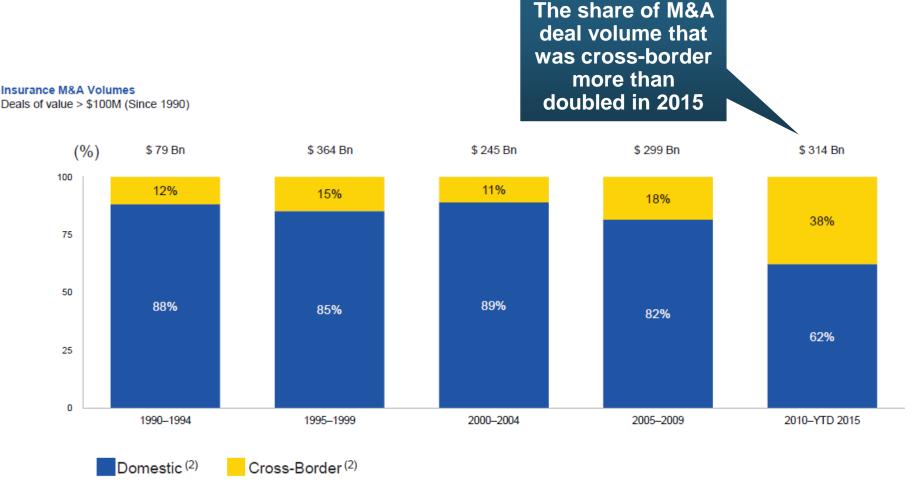


(1) Includes transactions where a U.S. company was the acquirer and/or the target.

Source: Conning proprietary database.

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





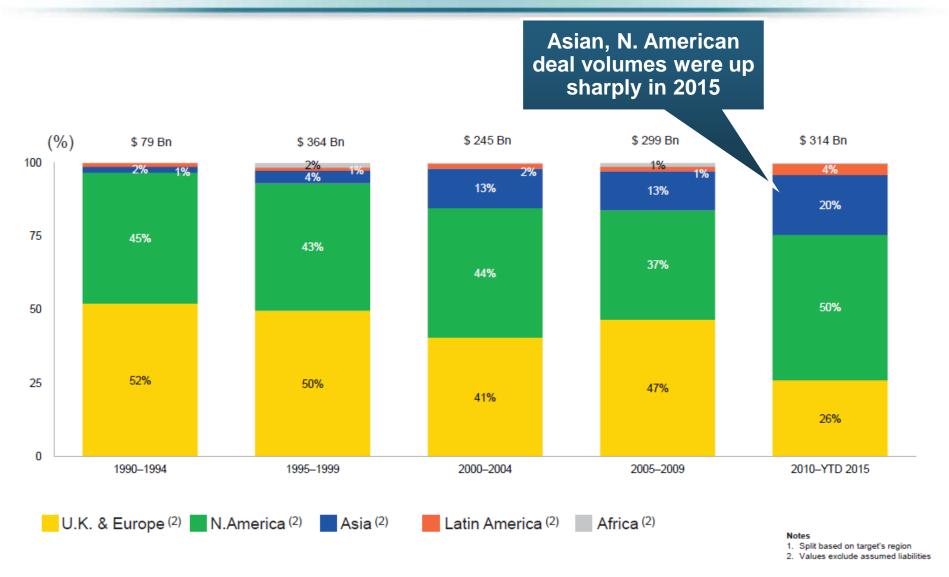
Notes

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



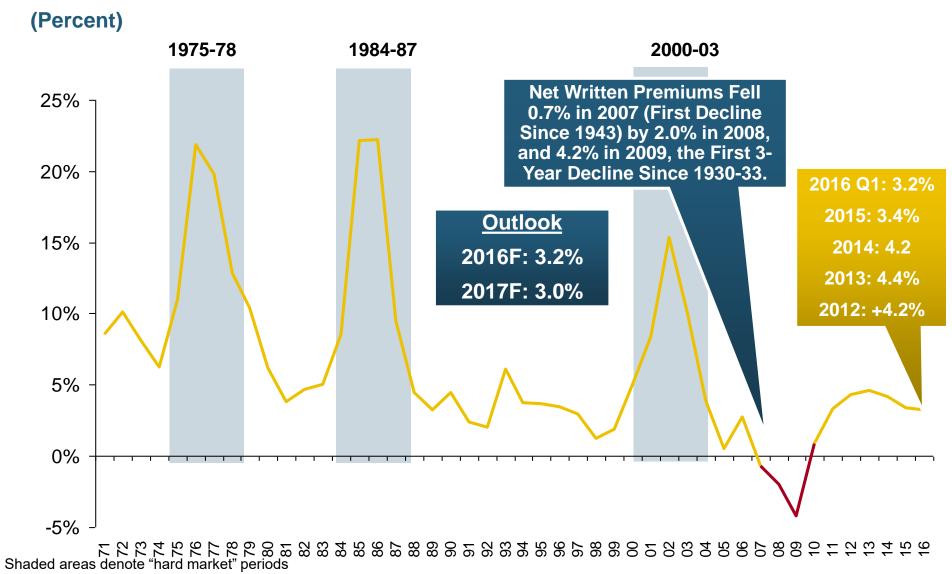
Source: Thomson Reuters as of Oct. 2015 from Geneva Association Newsletter Insurance and Finance, Jan. 2016, presentation "Facts vs. Sentiment: Deals in the Insurance Sector," by Aviva CEO Mark Wilson.



Growth

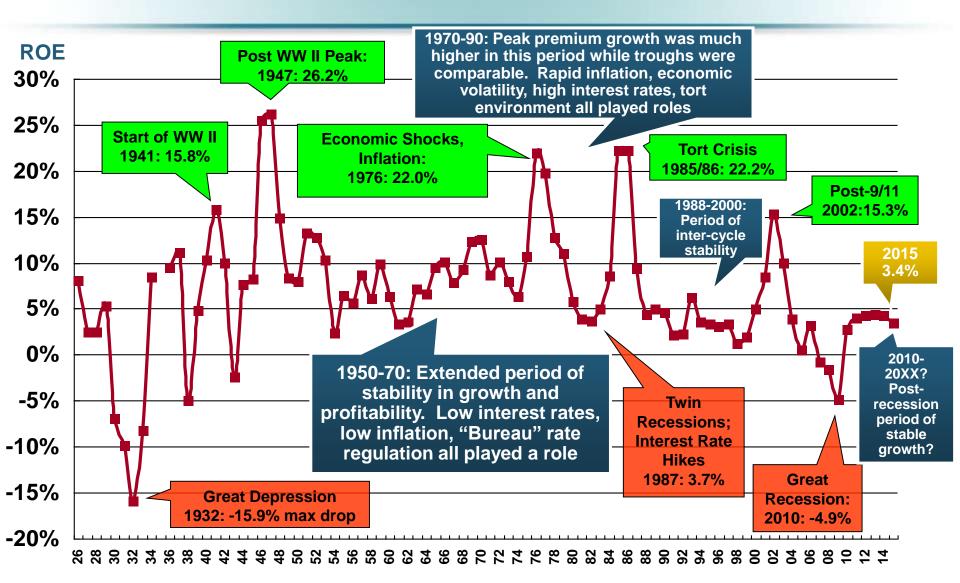
Premium Growth Rates Vary Tremendously by State and Over Time, But...

Net Premium Growth (All P/C Lines): Annual Change, 1971—2016:Q1



Sources: A.M. Best (1971-2013), ISO (2014-16).

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

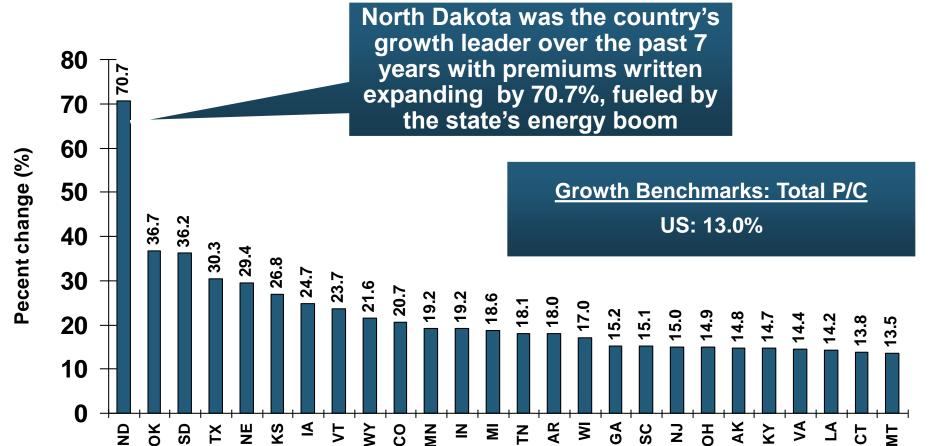


Note: Data through 1934 are based on stock companies only. Data include state funds beginning in 1998. Source: A.M. Best; Insurance Information Institute.

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



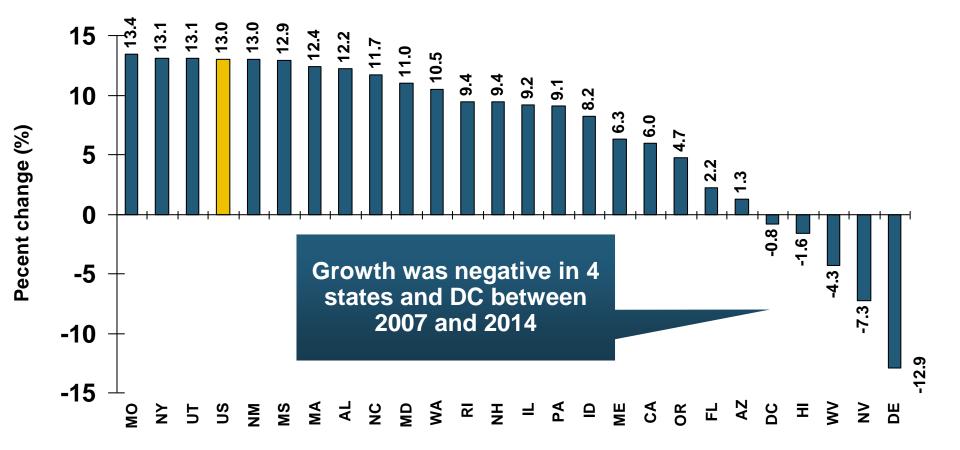




Direct Premiums Written: Total P/C Percent Change by State, 2007-2014



Bottom 25 States



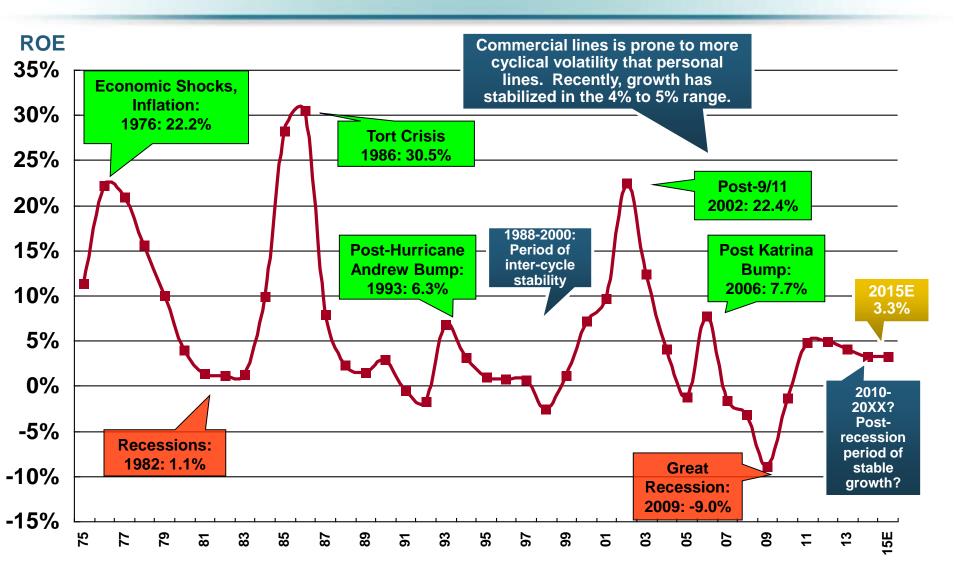


Commercial Lines Growth and Pricing Trends

Survey Results Suggest Commercial Pricing Has Flattened Out, with Impacts on Growth

Commercial Lines NPW Premium Growth: 1975 – 2015E



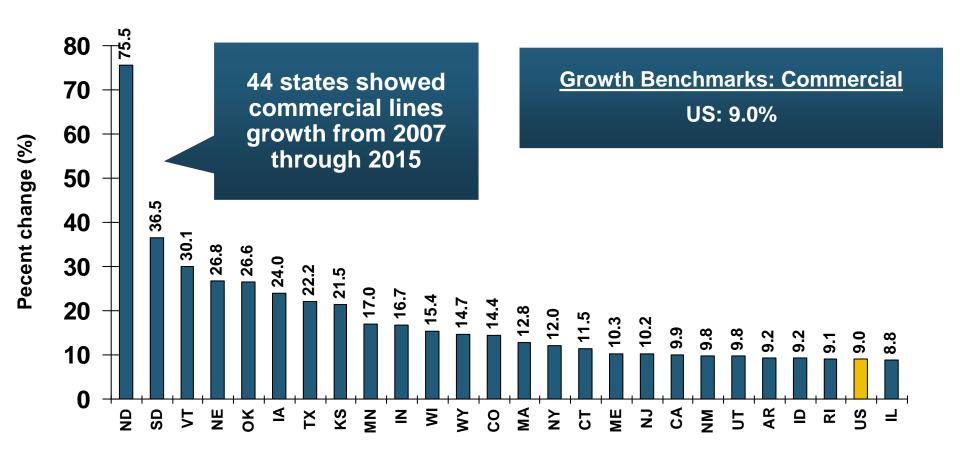


Note: Data include state funds beginning in 1998. Source: A.M. Best; Insurance Information Institute.

Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2015



Top 25 States

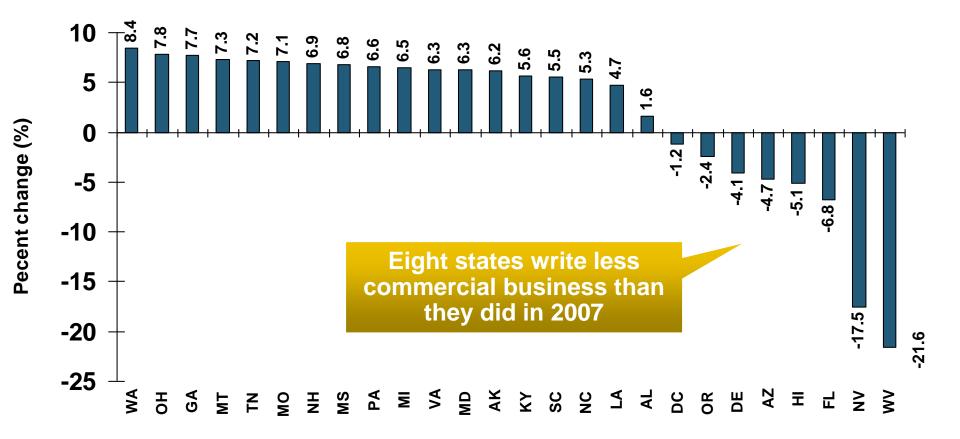


Sources: NAIC via SNL Financial; Insurance Information Institute.

Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2015



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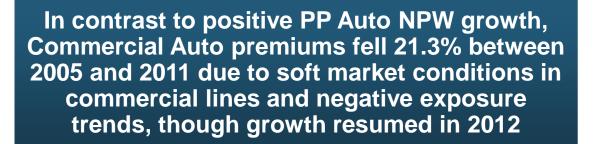


Sources: NAIC via SNL Financial; Insurance Information Institute.

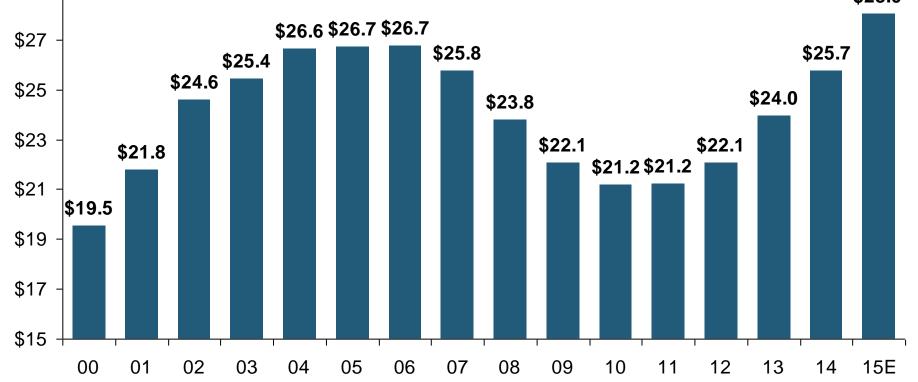
Commercial Auto Insurance Net Written Premium, 2000–2015F

\$ Billion

\$29



\$28.0



Sources: A.M. Best (2000-2014); Conning (2015F); Insurance Information Institute.

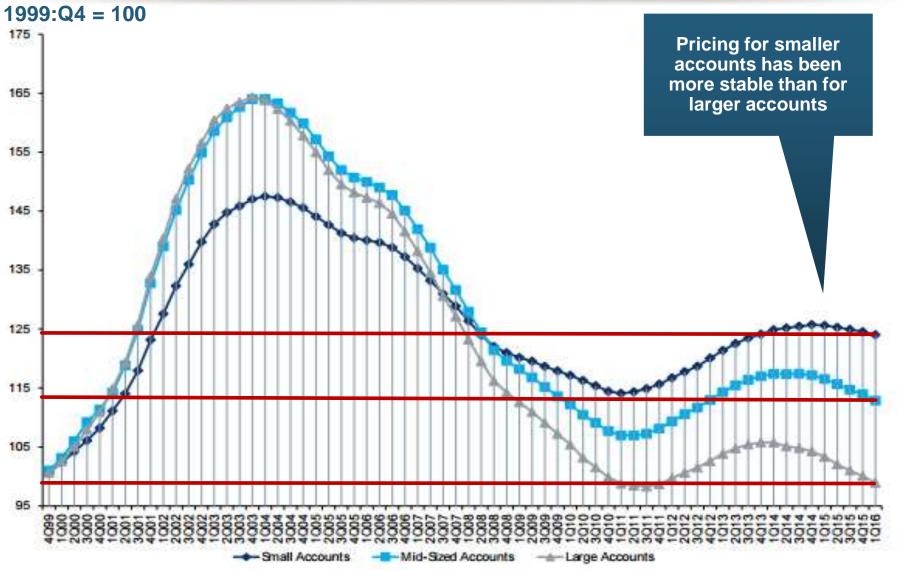
Change in Commercial Rate Renewals, by Account Size: 1999:Q4 to 2016:Q1



Percentage Change (%) Peak = 2001:Q4+28.5% 30% Pricing turned positive in Q3:2011, the first inrease in nearly 8 years; Q1:2015 **Pricing Turned** renewals were down 2.8%; **Negative in Early** 20% Some insurers posted 2004 and stronger numbers. **Remained that** way for 7 $\frac{1}{2}$ years 10% 0% -10% KRW : No Trough = 2007:Q3Lasting -13.6% Impact -20% UUUUUUUU444

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.

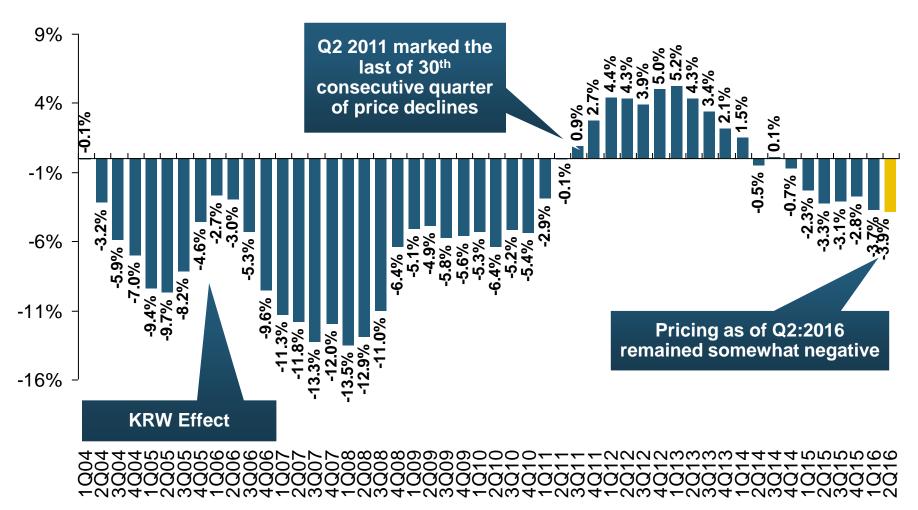
Cumulative Qtrly. Commercial Rate Changes, **TRANCE** by Account Size: 1999:Q4 to 2016:Q1



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.

CIAB: Average Commercial Rate Change, All Lines, (1Q:2004–2Q:2016)

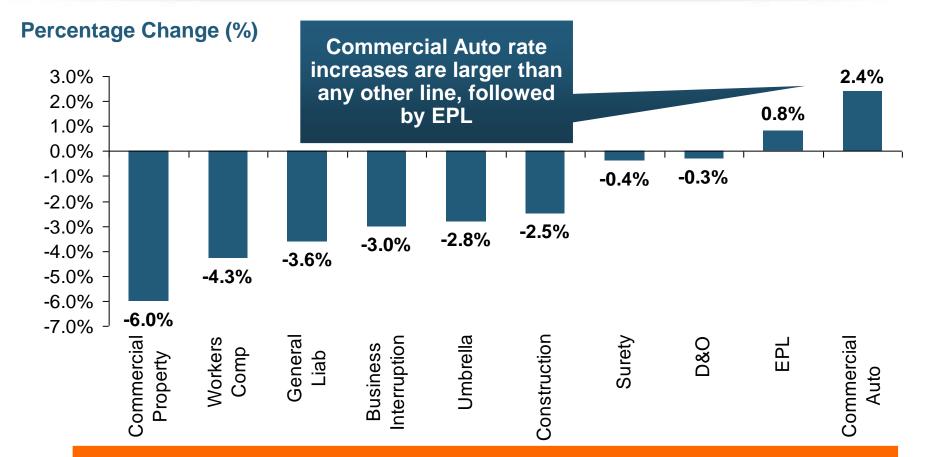




Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents & Brokers; Insurance Information Institute

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Change in Commercial Rate Renewals, by Line: 2016:Q2



Major Commercial Lines Renewals Were Mixed to Down in Q2:2016; EPL 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.

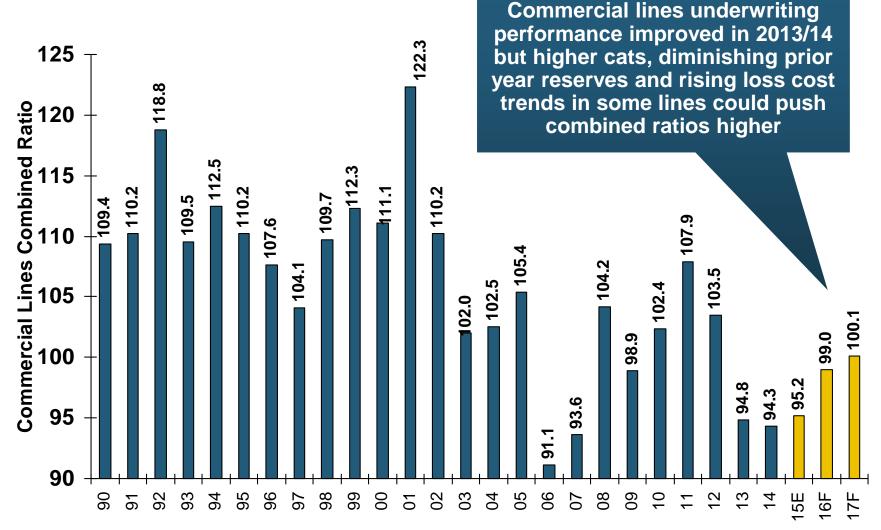
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Underwriting Performance

Commercial Lines Combined Ratio, 1990-2017F*

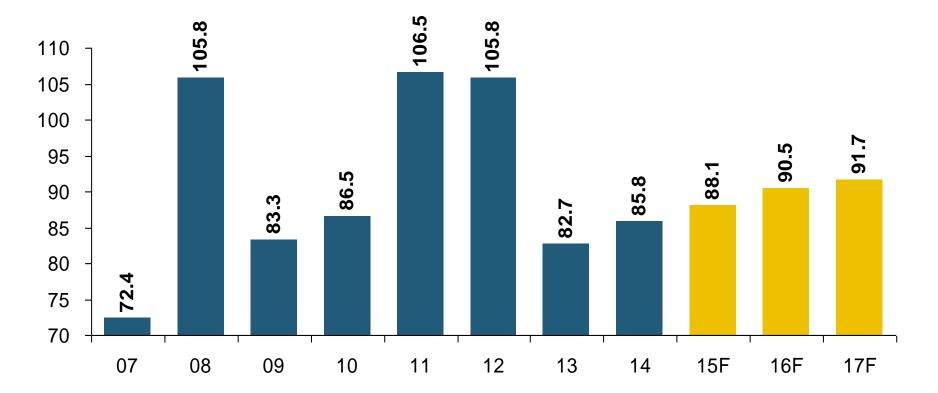
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*2007-2012 figures exclude mortgage and financial guaranty segments. Source: A.M. Best (1990-2014); Conning (2015E-17F) Insurance Information Institute.

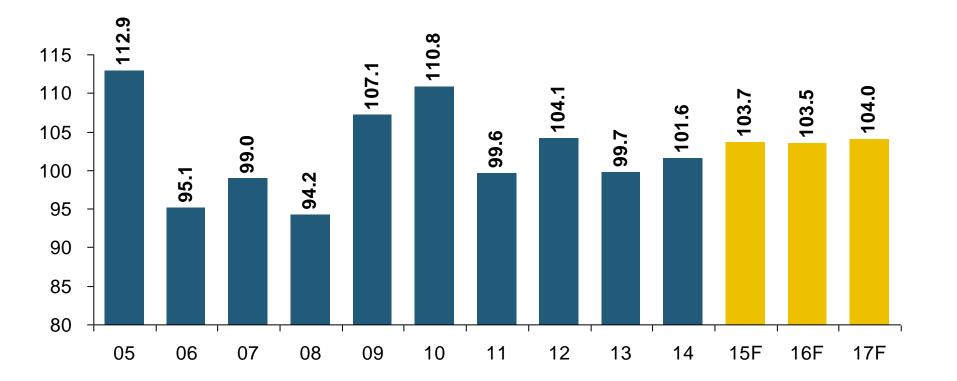
Commercial Property Combined Ratio: 2007–2017F





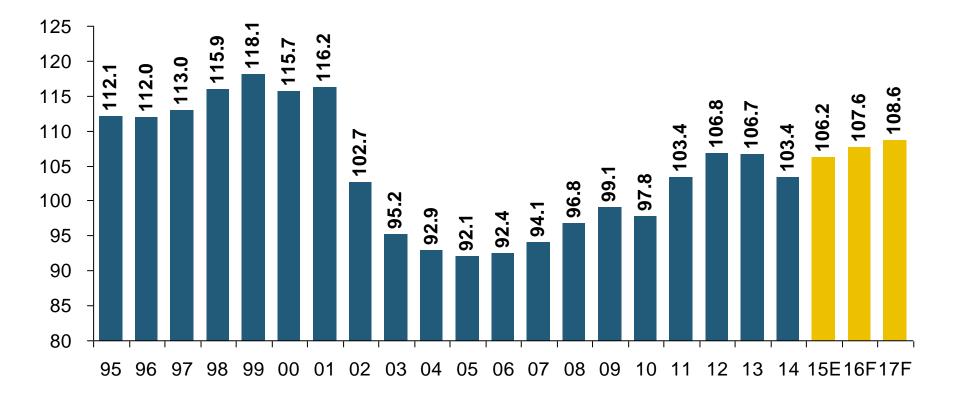
Commercial Property Underwriting Performance Has Improved in Recent Years, Largely Due to Diminished CAT Activity

General Liability Combined Ratio: 2005–2017F



Commercial General Liability Underwriting Performance Has Been Volatile in Recent Years

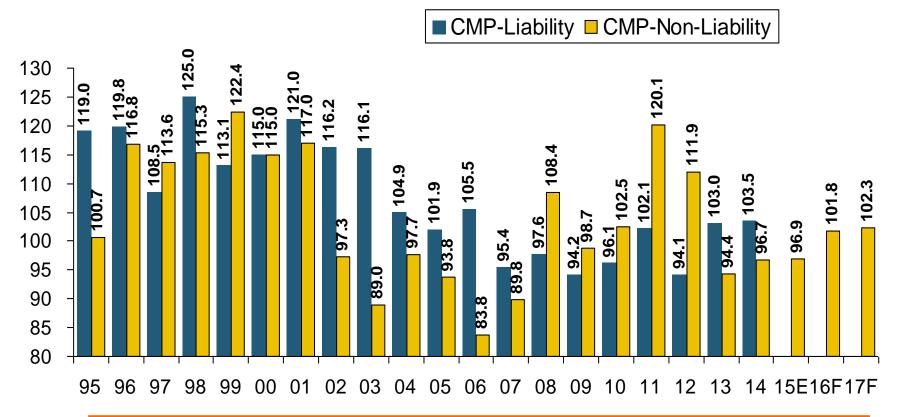
Commercial Auto Combined Ratio: 1993–2017F



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

Sources: A.M. Best (1990-2014); Conning (2015E-2017F); Insurance Information Institute.

Commercial Multi-Peril Combined Ratio: 1995–2017F

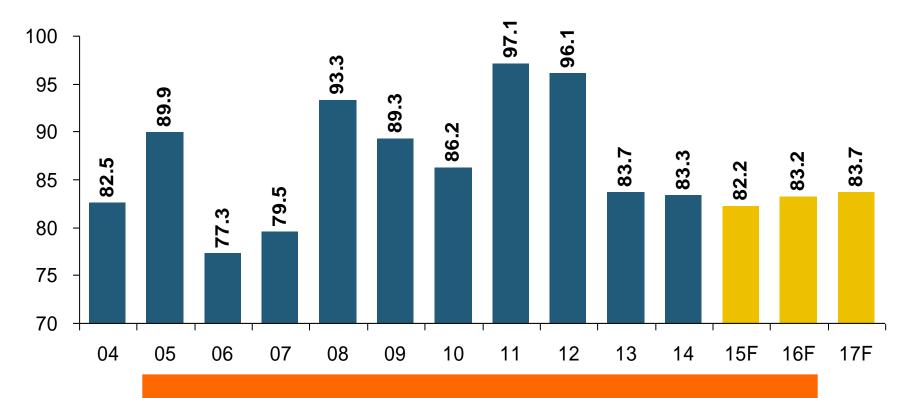


Commercial Multi-Peril Underwriting Performance is Expected to Deteriorate Slightly in the 2015 - 2017 Period Assuming Normal Catastrophe Loss Activity

*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



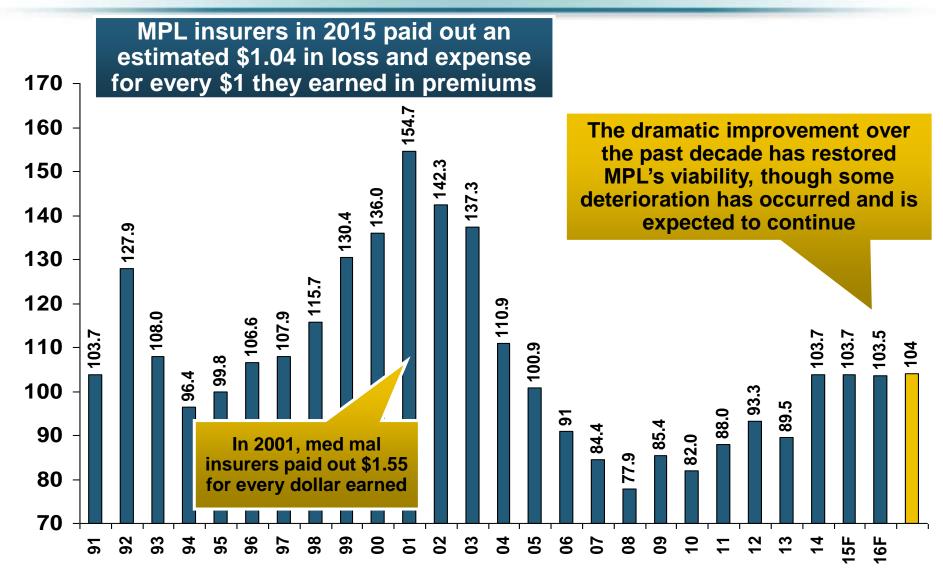


Inland Marine Underwriting Performance Has Been Consistently Strong for Many Years

Source: A.M. Best (2004-2014); Conning Research and Consulting (2015F-2017F).

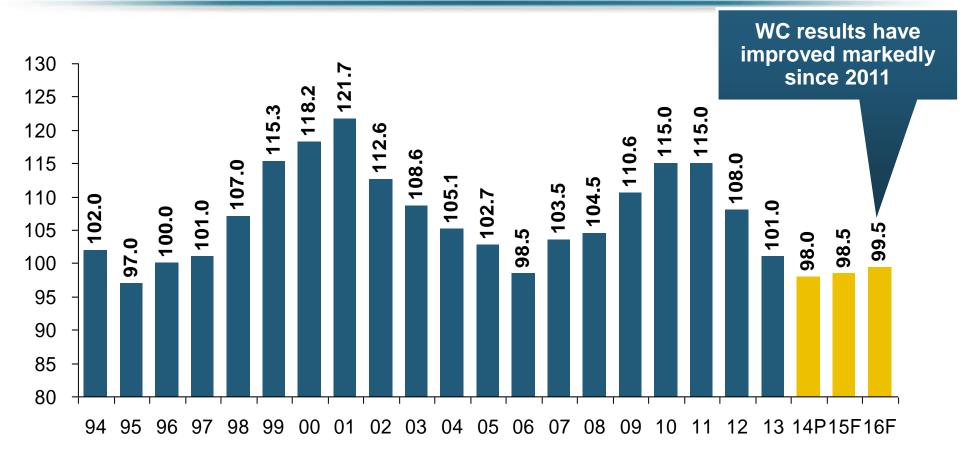
Medical Malpractice Combined Ratio vs. All Lines Combined Ratio, 1991-2017F





Source: AM Best (1991-2014); Conning (2015-17F) Insurance Information Institute.

Workers Compensation Combined Ratio: 1994–2016F



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).

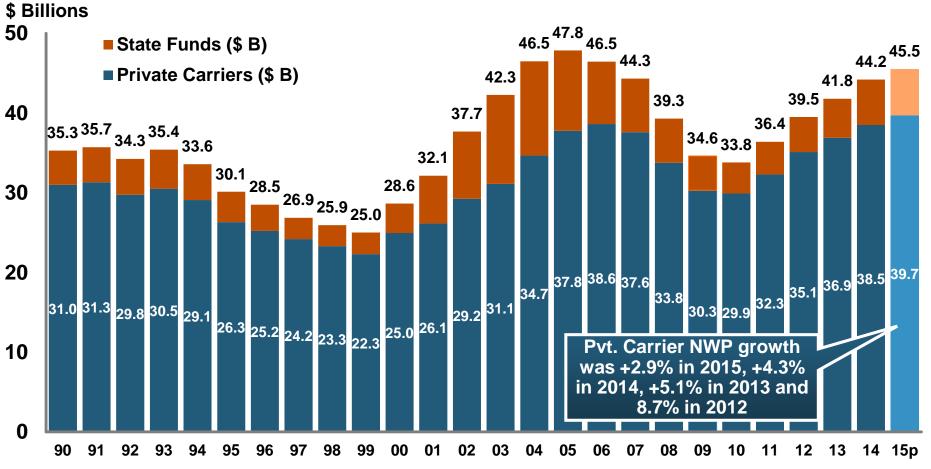


Workers Compensation Operating Environment

Workers Comp Results Have Improved Substantially in Recent Years

Workers Compensation Premium: Fifth Consecutive Year of Increase

Net Written Premium



p Preliminary

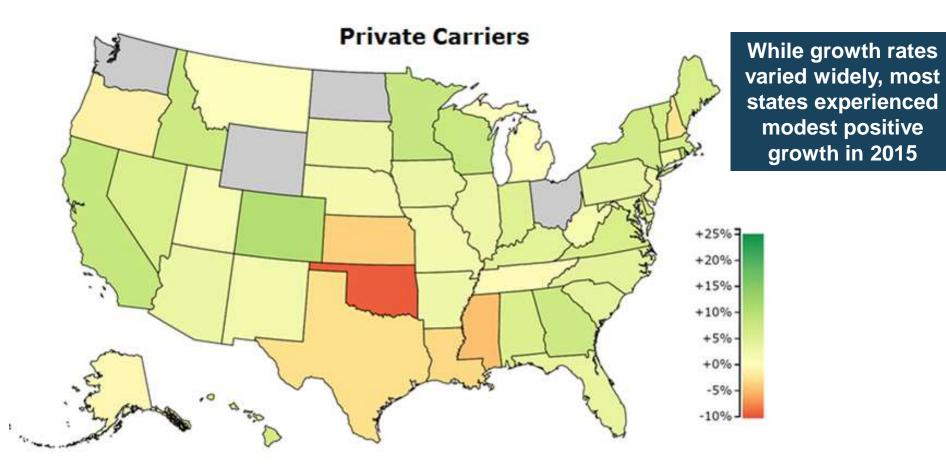
Source: NCCI from Annual Statement Data.

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.

2015 Workers Compensation Direct Written Premium Growth, by State*



PRIVATE CARRIERS: Overall 2015 Growth = +4.3%

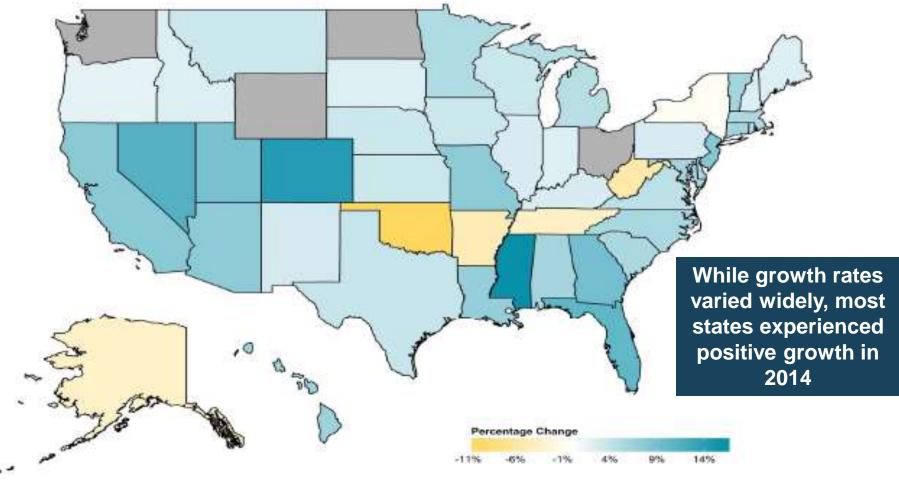


*Excludes monopolistic fund states (in gray): OH, ND, WA and WY. Source: NCCI.

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.

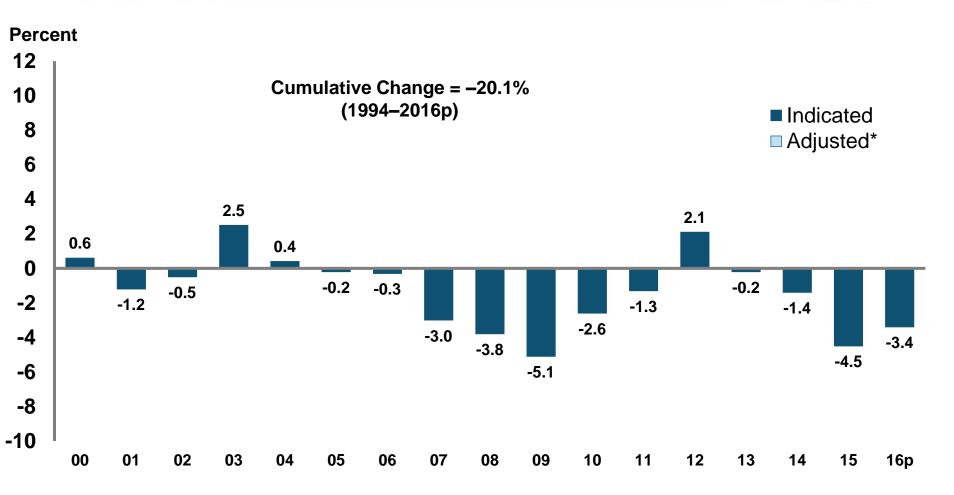
Workers Compensation Components of Written Premium Change, 2014 to 2015



Written Premium Change from 2014 to 2	2015
Net Written Premium—Countrywide	+2.9%
Direct Written Premium—Countrywide	+4.3%
Direct Written Premium—NCCI States	+2.5%
Components of DWP Change for NCCI States	
Change in Carrier Estimated Payroll	+4.5%
Change in Bureau Loss Costs and Mix	-4.0%
Change in Carrier Discounting	-0.3%
Change in Other Factors	+2.2%
Combined Effect	+2.5%

Sources: Countrywide: Annual Statement data. NCCI States: Annual Statement Statutory Page 14 for all states where NCCI provides ratemaking services. Components: NCCI Policy data.

Workers Comp Approved Changes in Bureau Premium Level, 2000-2016p

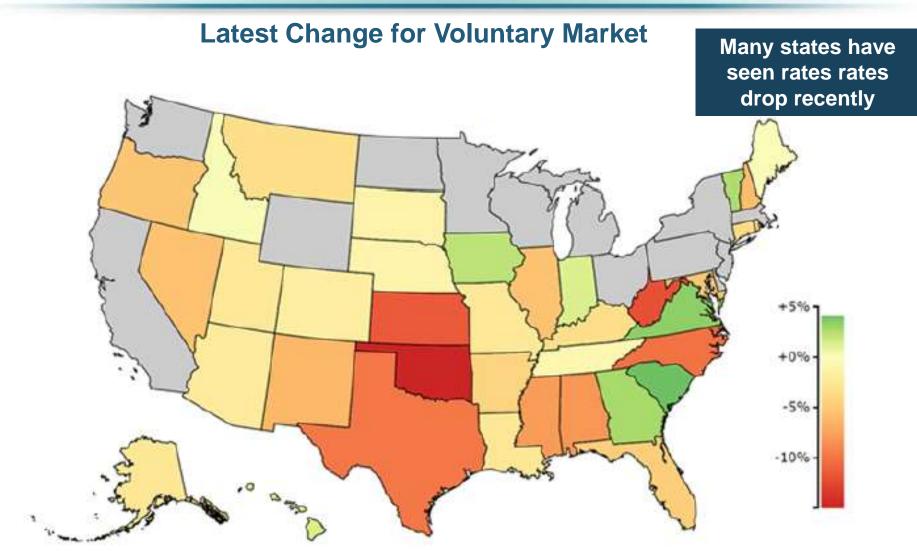


Accident Year

Note: Bureau premium level charges reflect approved changes in advisory rates, loss costs, assigned risk rates relative to those approved in NCCI states only IN and NC are filed in cooperation with state rating bureaus. 2016p: Preliminary based on data valued as of 4/15/2015. Source: NCCI

INSURANCE INFORMATION

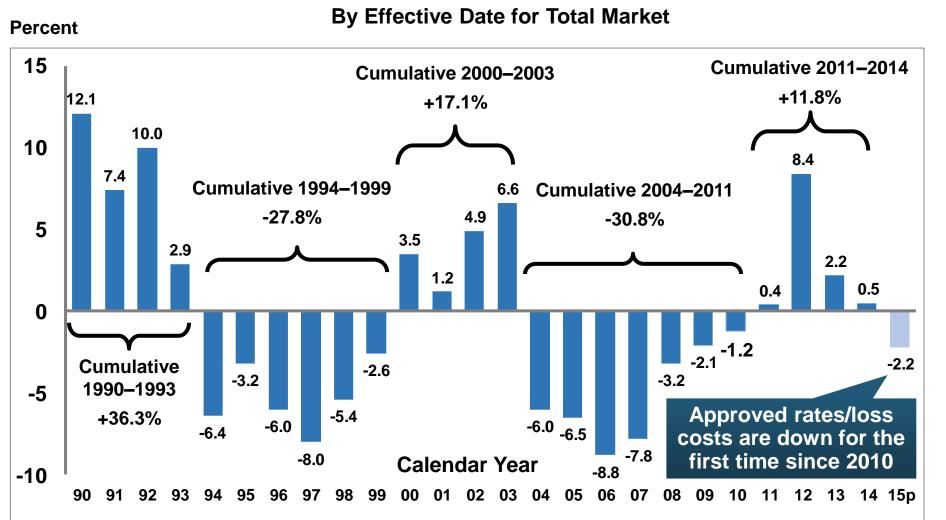
WC Approved or Filed and Pending Change in NCCI Premium Level by State*



*As of 4/15/16. Excludes monopolistic fund states (in gray): OH, ND, WA and WY. Source: NCCI.

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

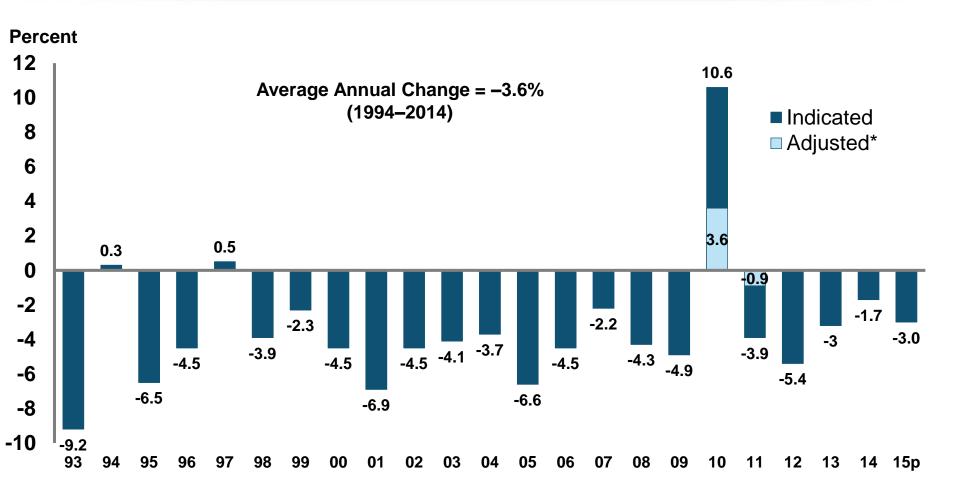




*States approved through 4/24/15.

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.

Workers Compensation Lost-Time Claim Frequency Declined in 2015



Accident Year

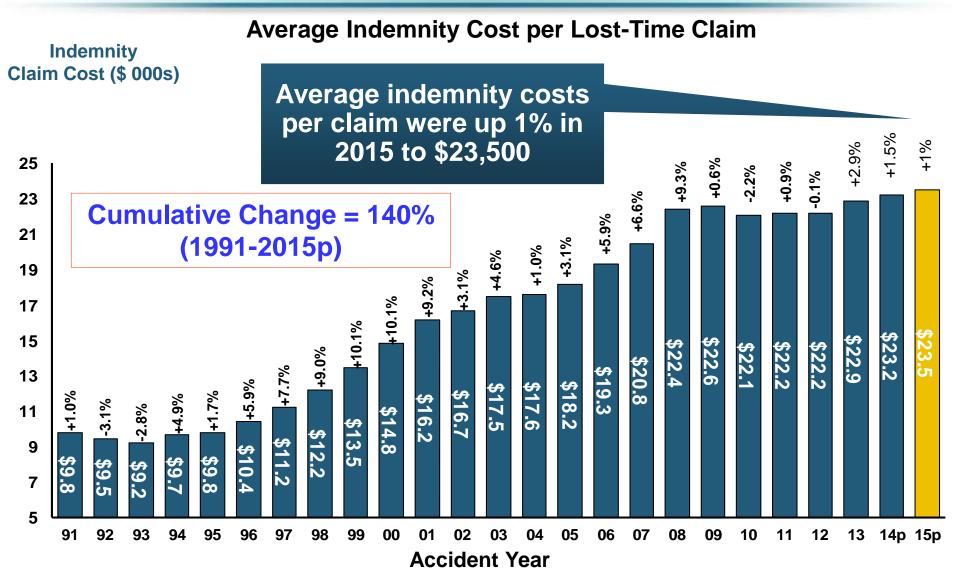
*Adjustments primarily due to significant audit activity. 2015p: Preliminary based on data valued as of 12/31/2015.

Source: NCCI Financial Call data, developed to ultimate and adjusted to current wage an voluntary loss cost level; Excludes high deductible policies; 1994-2014: Based on data through 12/31/14. 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

INSURANCE

Workers Comp Indemnity Claim Costs: Slight Increase in 2015

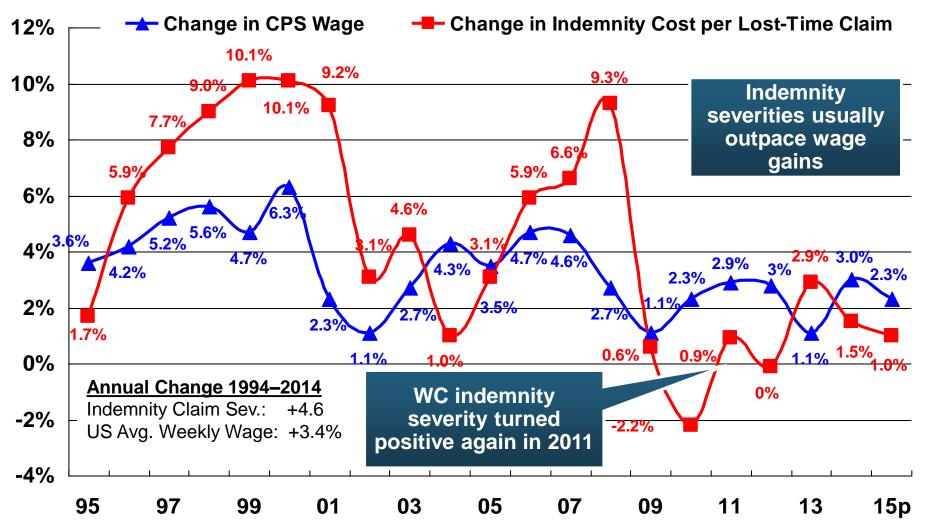




2014p: Preliminary based on data valued as of 12/31/2014.

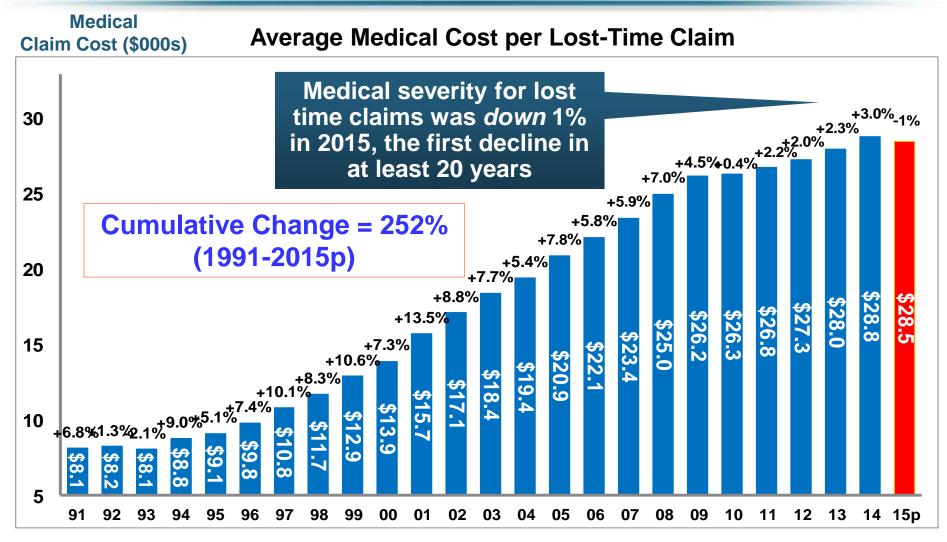
291-2013: Based on data through 12/31/2013, developed to ultimate

WC Indemnity Severity vs. Wage Inflation, **TRESTRUCT** 1995 -2015p



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; Insurance Information Institute

Workers Compensation Medical Severity: Small Decrease in 2015



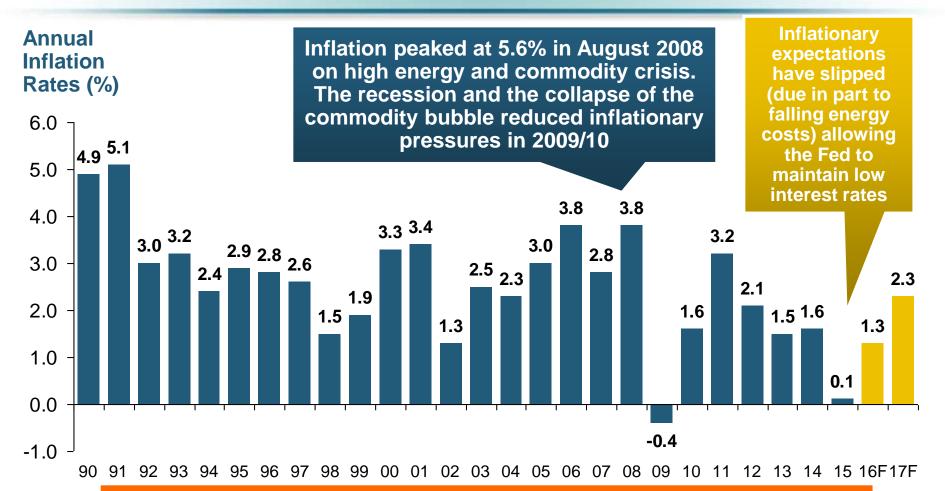
Accident Year

2015p: Preliminary based on data valued as of 12/31/2015. 1991-2013: Based on data through 12/31/2014, developed to ultimate

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

Annual Inflation Rates, (CPI-U, %), 1990–2017F

INSURANCE INFORMATION INSTITUTE



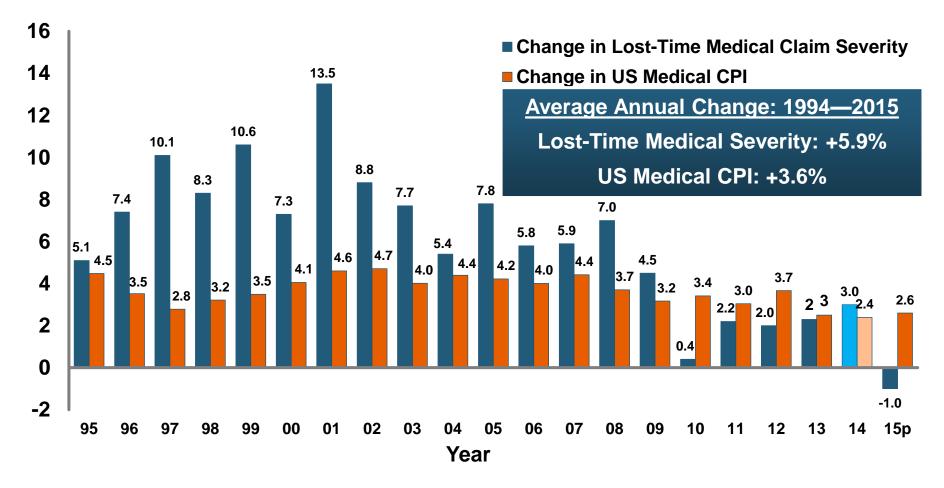
Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators, 4/16 (forecasts).

Workers Compensation Change in Medical Severity

Comparison to Change in Medical Consumer Price Index (CPI)

Percent Change



2015p: Preliminary based on data valued as of 12/31/2015.

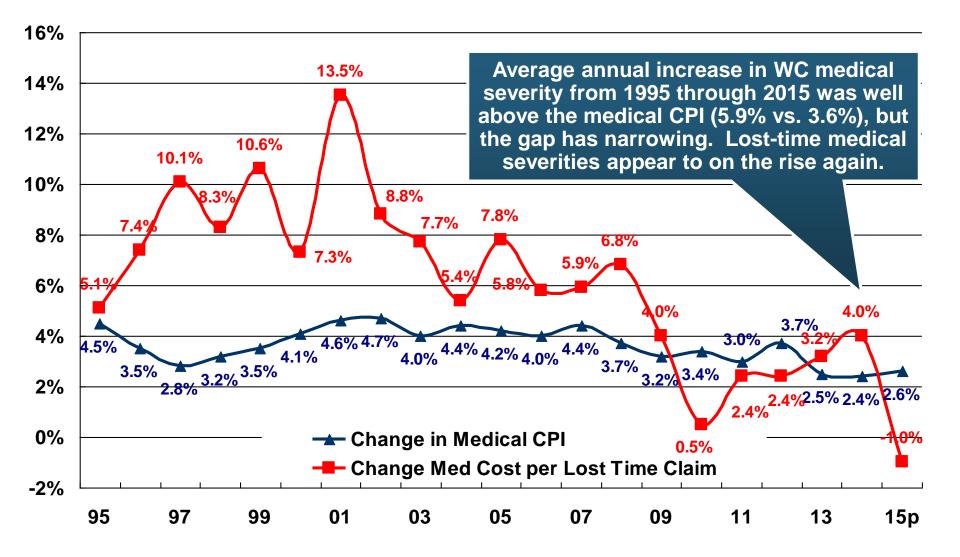
Sources: Severity: 995-2013: Based on data through 12/31/2014, developed to ultimate

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.



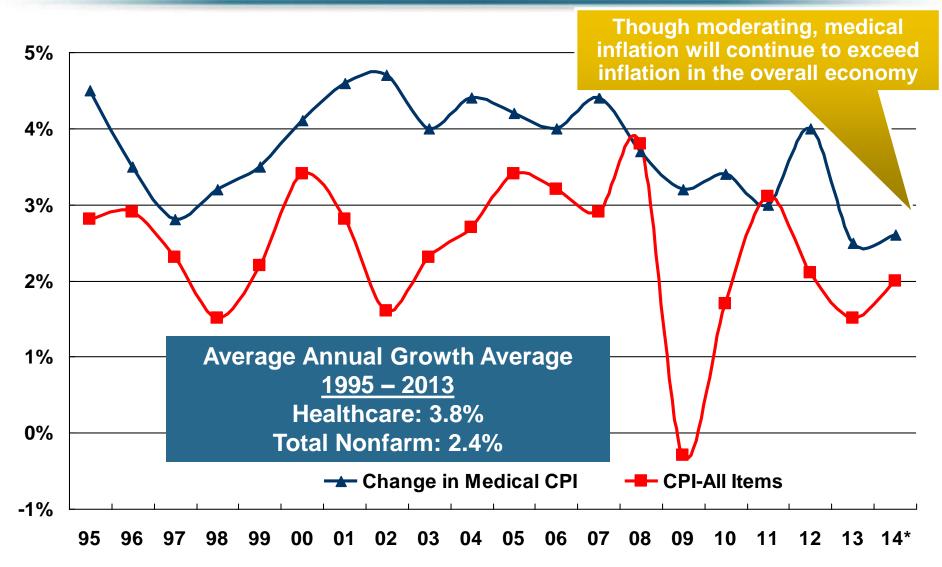
WC Medical Severity Generally Outpaces the Medical CPI Rate



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

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



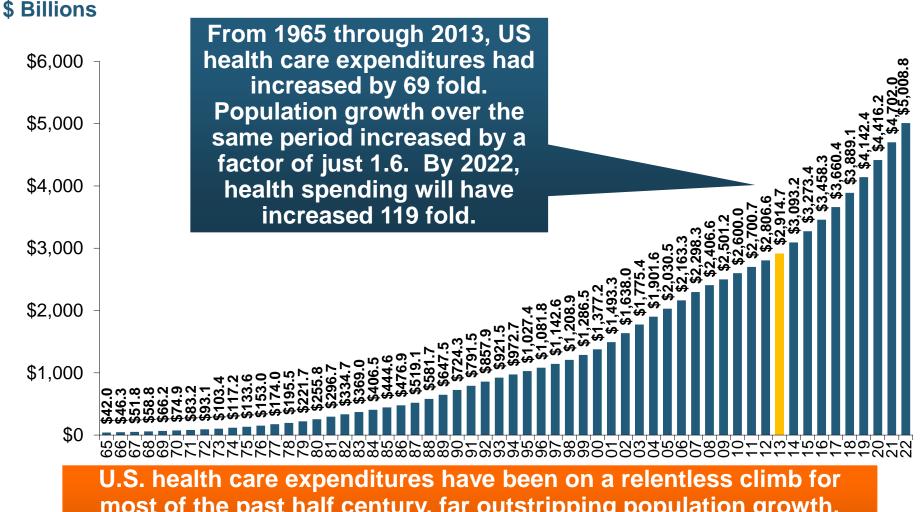


*July 2014 compared to July 2013.

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



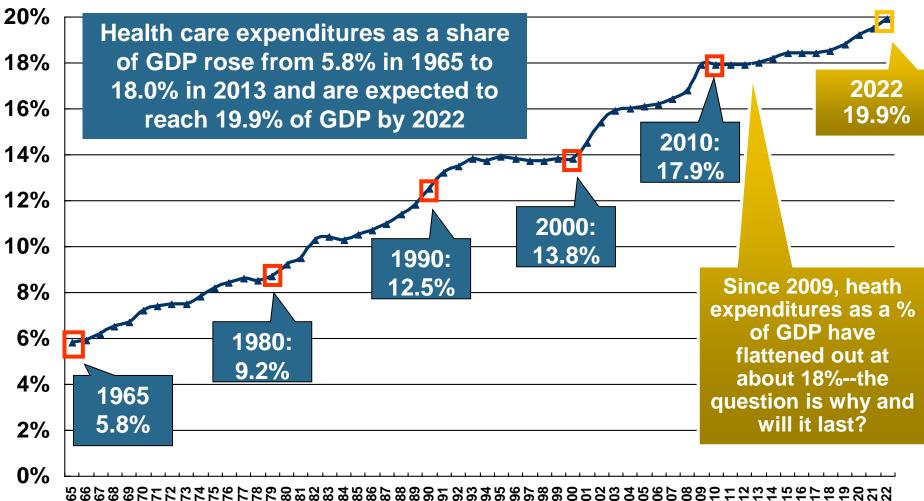


most of the past half century, far outstripping population growth, inflation of GDP growth

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

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





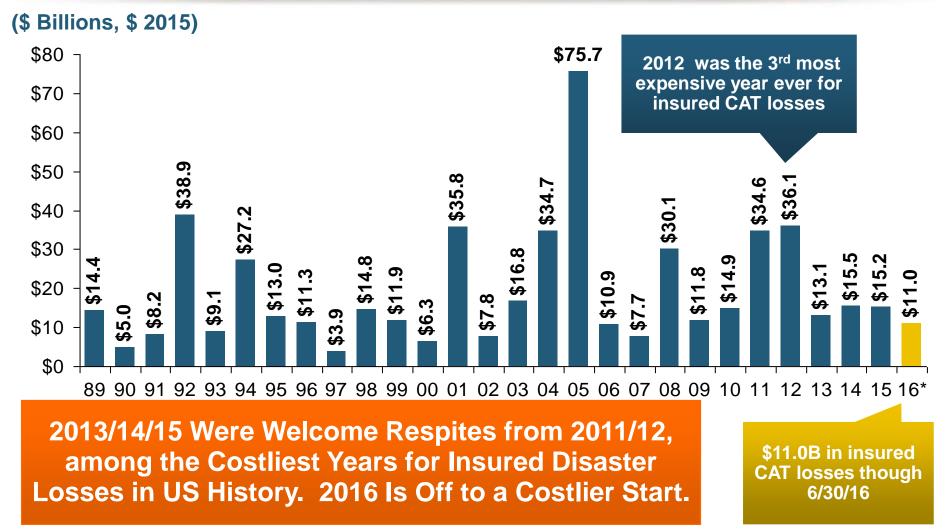
Sources: Centers for Medicare & Medicaid Services, Office of the Actuary at http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Data-And-Systems/Statistics-Data-And-Systems/Statistics-Data-And-Systems/Statistics-Data-And-



Insured Catastrophe Losses

2013-2015 Experienced Below Average CAT Activity After Very High CAT Losses in 2011/12 2016 Is On Track to Surpass Recent Years

U.S. Insured Catastrophe Losses

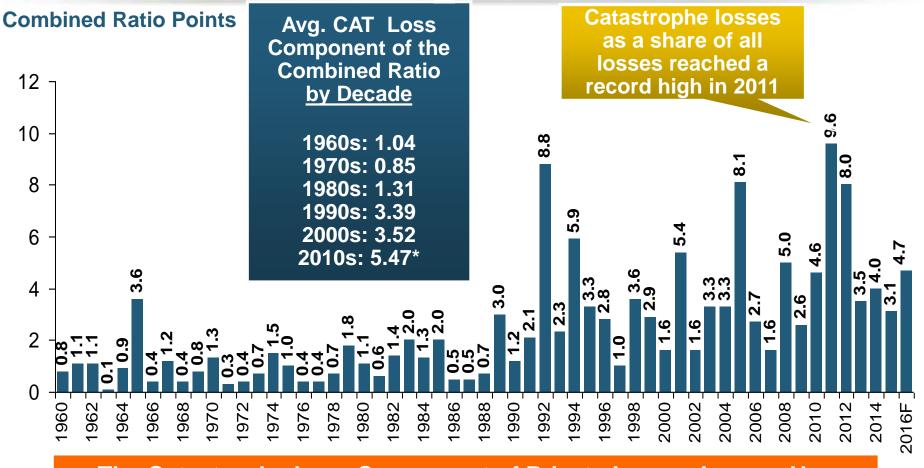


*Through 6/30/16. 2016 figure stated in 2016 dollars.

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 – 2016F*



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

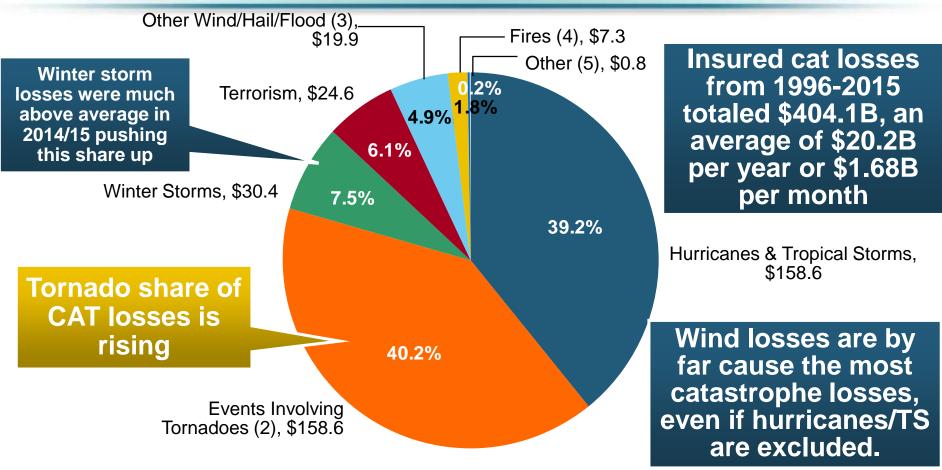
*2010s represent 2010-2015.

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 (1960-2009); A.M. Best (2010-16E) Insurance Information Institute.

INSURANCE

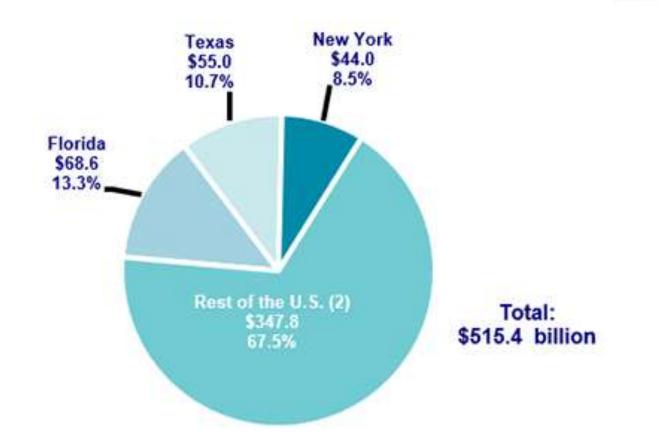
Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1996–2015¹



- 1. Catastrophes are defined as events causing direct insured losses to property of \$25 million or more in 2015 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 3 States for Insured Catastrophe Losses, 1996-2005 (in 2015 Dollars)



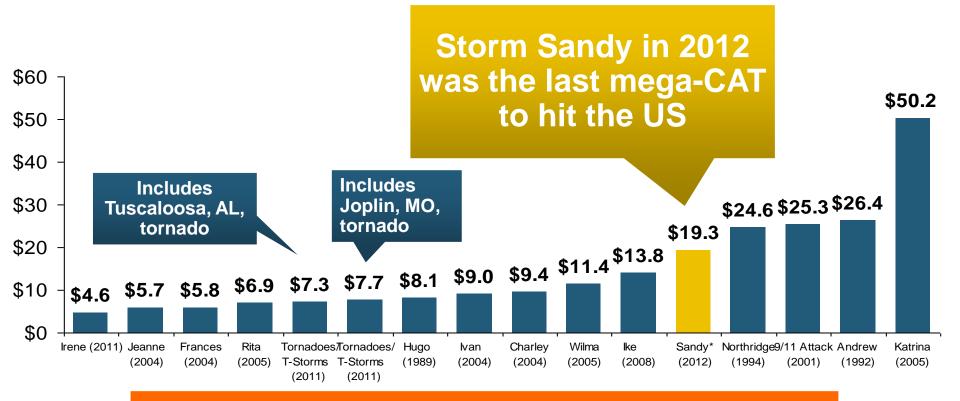
Texas, Florida and New York lead the country in insured catastrophe losses over the past 20 years. These 3 states accounted for nearly 1/3 of all insured catastrophe losses over the past two decades

Source: PCS/Verisk for 2016 Insurance Fact Book, Insurance Information Institute.

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



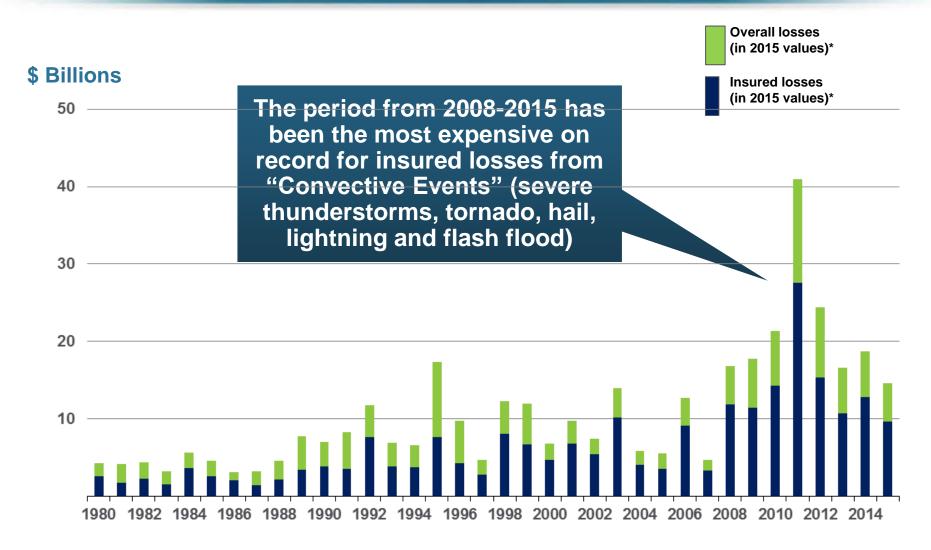
(Insured Losses, 2014 Dollars, \$ Billions)



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

Sources: PCS; Insurance Information Institute inflation adjustments to 2014 dollars using the CPI.

Convective Loss Events in the US Overall and insured losses, 1980 – 2015



*Losses adjusted to inflation based on CPI

Source: Geo Risks Research, NatCatSERVICE

Analysis contains:

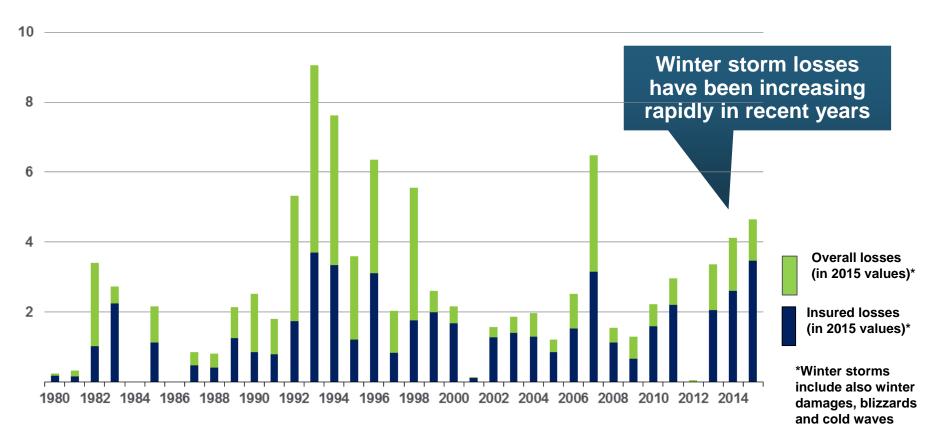
severe storm, tornado, hail, flash flood and lightning

INSURANCE

Winter Storm Losses in the US 1980 – 2015 (Overall and Insured Losses)*



\$ Billions



93

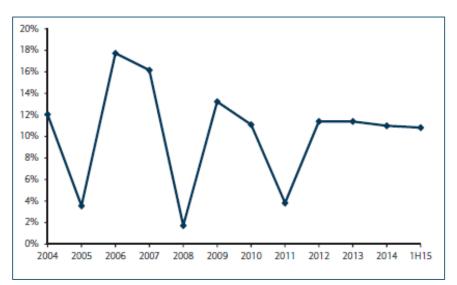
US Property CAT Rate on Line Index & Global Reinsurance ROE



US Property CAT ROL



Global Reinsurance ROE



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

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

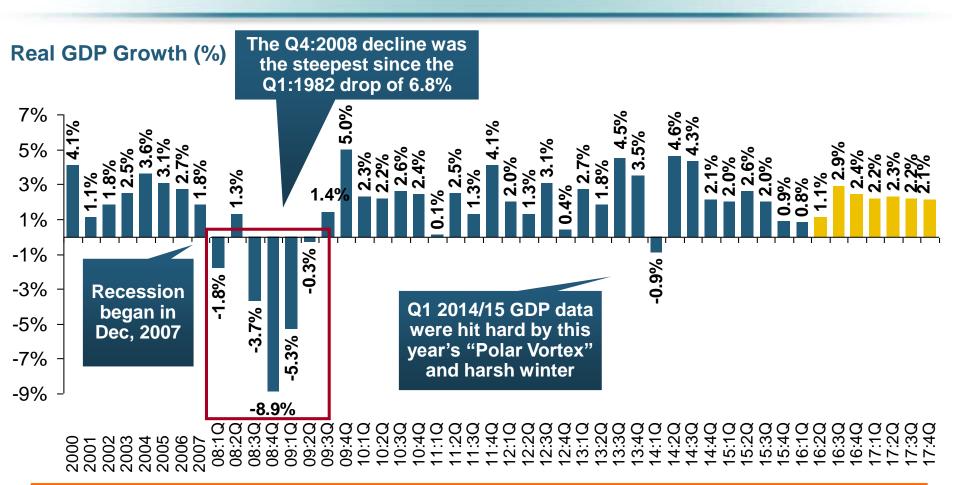


THE ECONOMY

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

US Real GDP Growth*





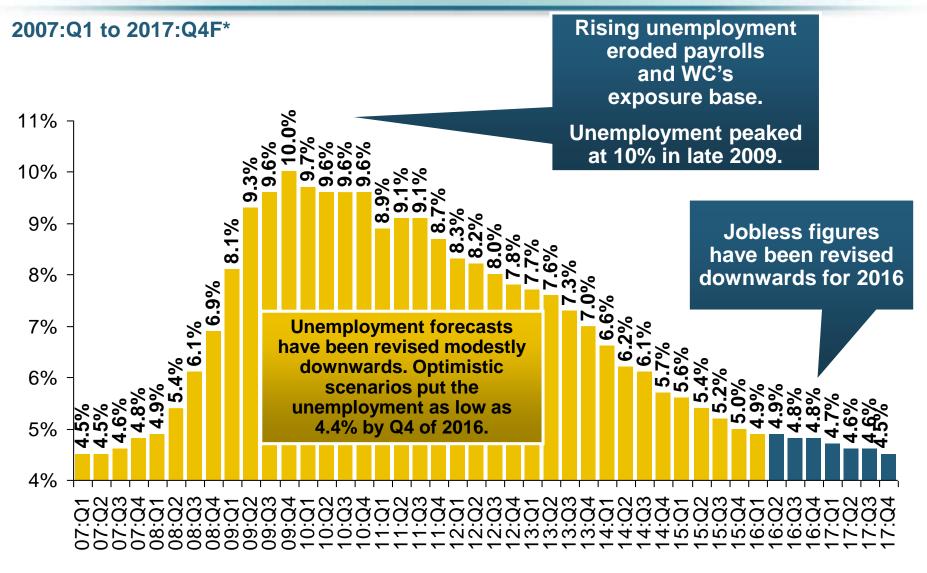
Demand for Energy Should Increase in 2016-17 as GDP Growth Continues at a Steady, Albeit Moderate Pace and Gradually Benefits the Economy Broadly

* Estimates/Forecasts from Blue Chip Economic Indicators.

Source: US Department of Commerce, Blue Economic Indicators 9/16; Insurance Information Institute.

US Unemployment Rate Forecast

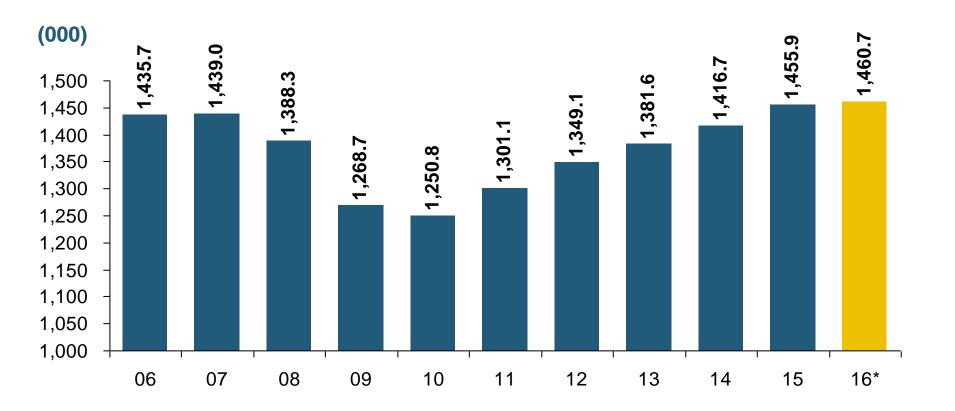




= actual; = forecasts

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (9/16 edition); Insurance Information Institute.

Trucking Employment: 2006–2016*

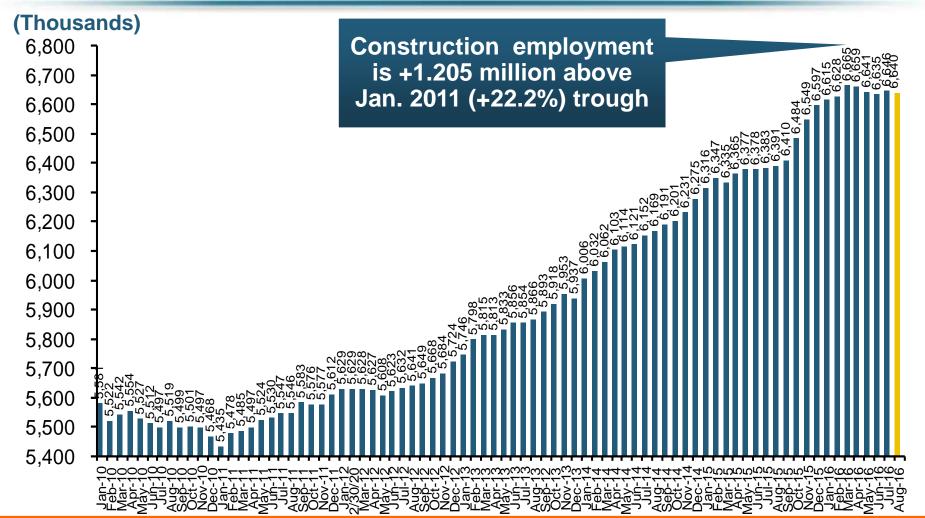


Trucking employment is up by more than 200,000 or 16.8% since 2010

*Seasonally-adjusted monthly average through Aug 2016 Source: US Census Bureau; Insurance Information Institute. INSURANCE

Construction Employment, Jan. 2010—Aug. 2016*





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

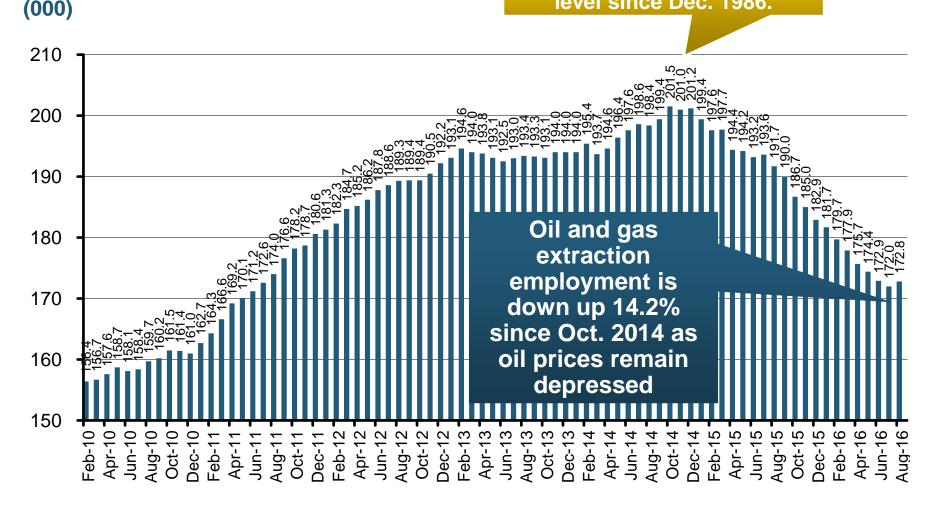
*Seasonally adjusted.

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

Employment in Oil & Gas Extraction, Jan. 2010—Aug. 2016*



Employment peaked in Oct. 2014 at 201,500—its highest level since Dec. 1986.



*Seasonally adjusted

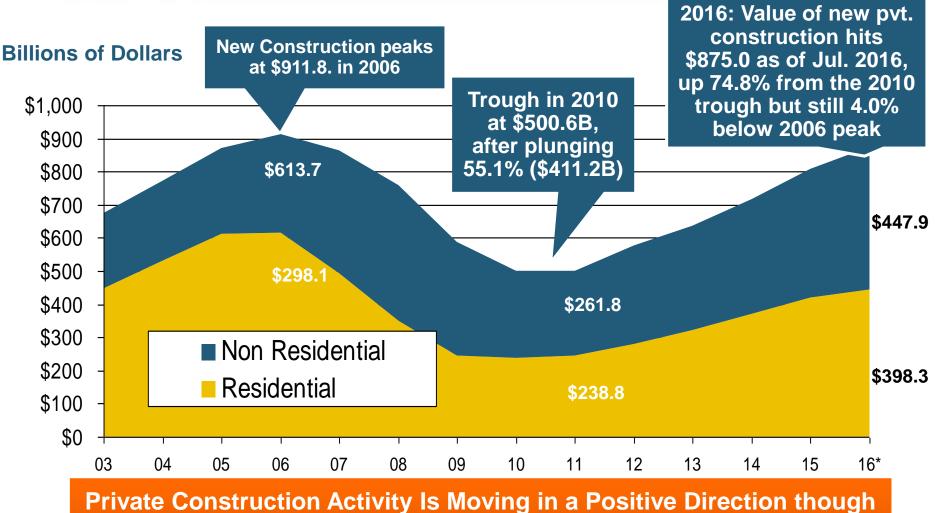
Sources: US Bureau of Labor Statistics at http://data.bls.gov; Insurance Information Institute.



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, 2003-2016*



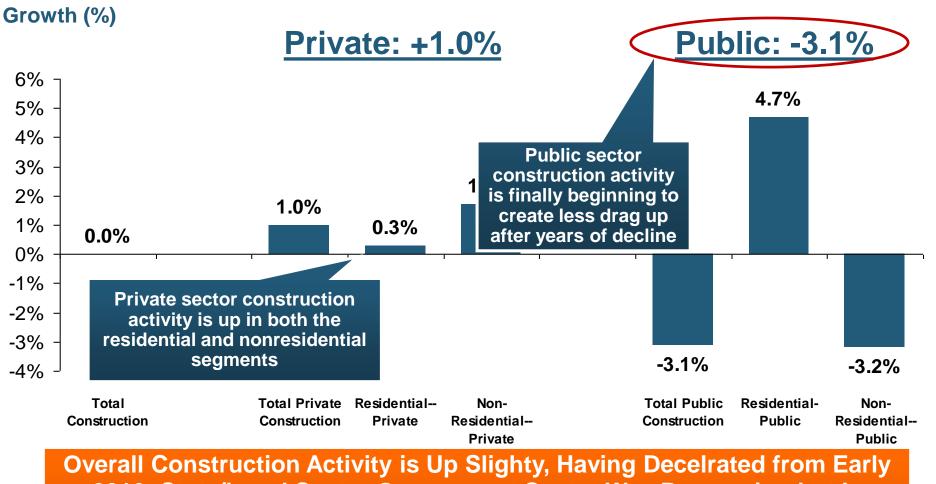
Remains Well Below Pre-Crisis Peak; Residential Dominates

*2016 figure is a seasonally adjusted annual rate as of July.

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

Value of Construction Put in Place, 2016 vs. 2015*

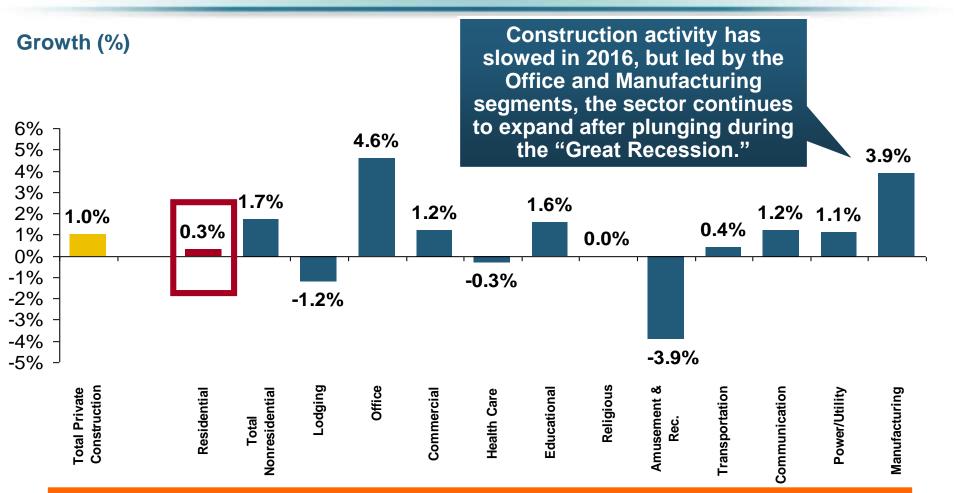




2016; State/Local Sector Government Sector Was Recovering but Is Experienced Renewed Weakness

*seasonally adjusted data through July 2016. Source: U.S. Census Bureau, <u>http://www.census.gov/construction/c30/c30index.html</u>; Insurance Information Institute.

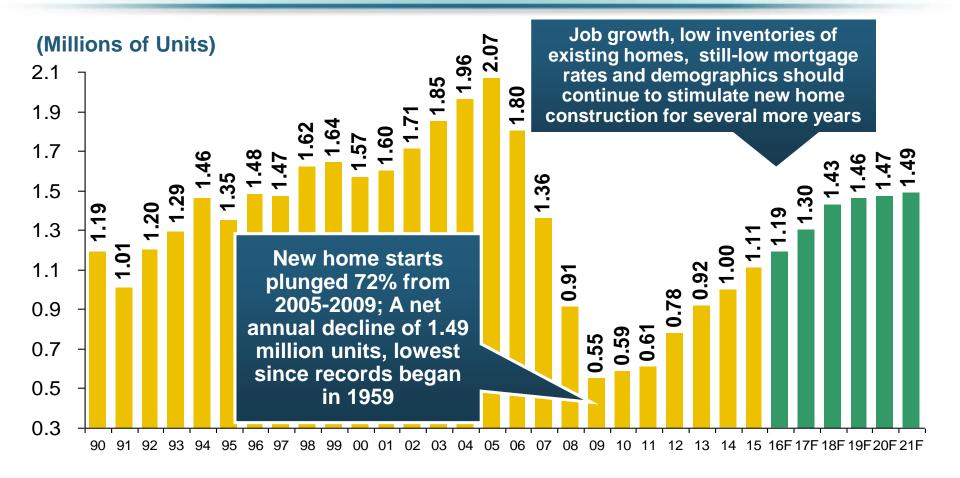
Value of Private Construction Put in Place, by Segment, 2016 vs. 2015*



Private Construction Activity is Up in Most Segments in the Second Half of 2016; Expansion Should Continue

*seasonally adjusted through Jul. 2016. Source: U.S. Census Bureau, <u>http://www.census.gov/construction/c30/c30index.html</u>; Insurance Information Institute.

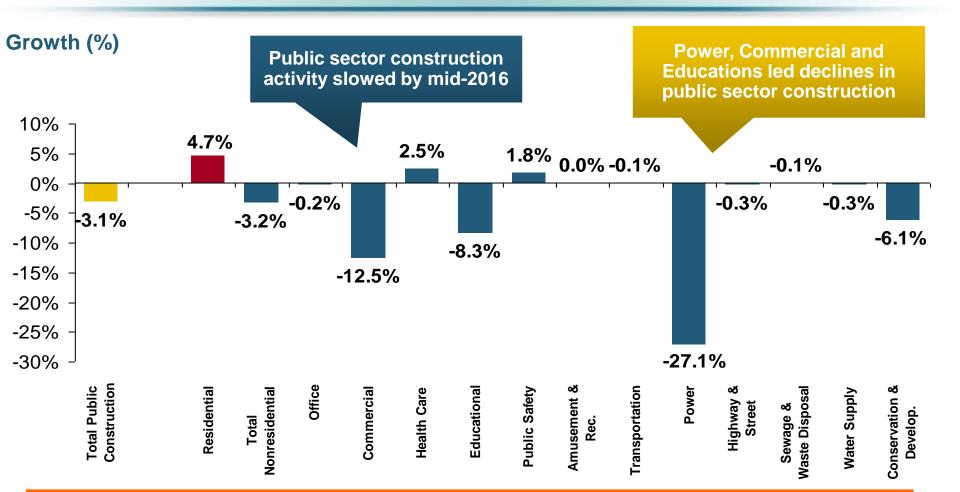
New Private Housing Starts, 1990-2021F



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 (9/16 for 2016-17; 3/16 for 2018-21F; Insurance Information Institute.

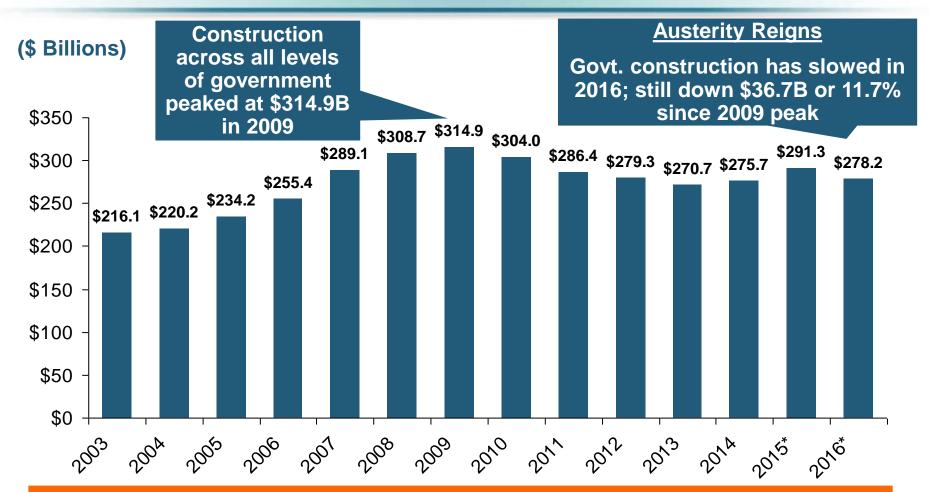
Value of Public Construction Put in Place, by Segment, 2015 vs. 2016*



Public Construction Activity Surged in Early 2016 but Contracted Again by Mid-Year. A Resumption of the Recovery is Likely which Will Help Drive Demand in Many Commercial Insurance Lines

*seasonally adjusted through July 2016. Source: U.S. Census Bureau, <u>http://www.census.gov/construction/c30/c30index.html</u>; Insurance Information Institute.

Value of New Federal, State and Local Government Construction: 2003-2016*

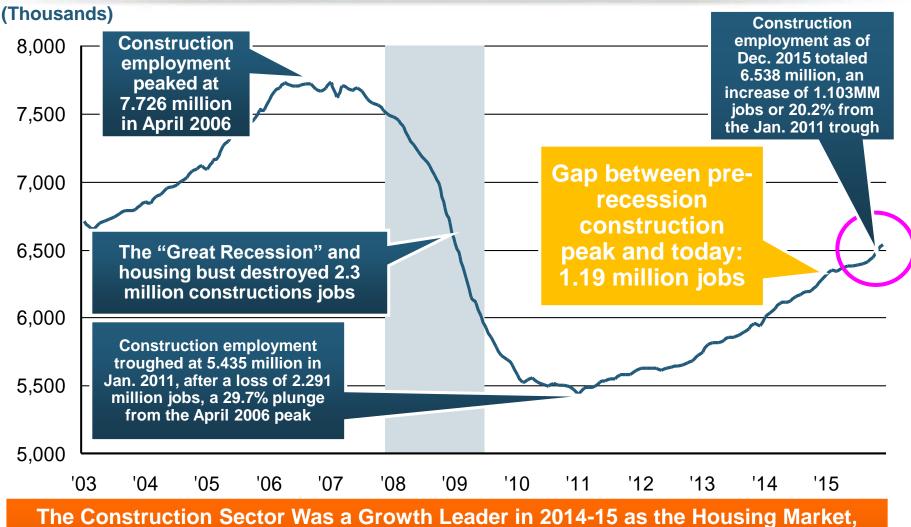


Government Construction Spending Peaked in 2009, Helped by Stimulus Spending, but Contracted As State/Local Governments Grappled with Deficits and Federal Sequestration; Only Now Recovering

*2016 figure is a seasonally adjusted annual rate as of July; <u>http://www.census.gov/construction/c30/historical_data.html</u> Sources: US Department of Commerce; Insurance Information Institute.

Construction Employment, Jan. 2003–Dec. 2015





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.

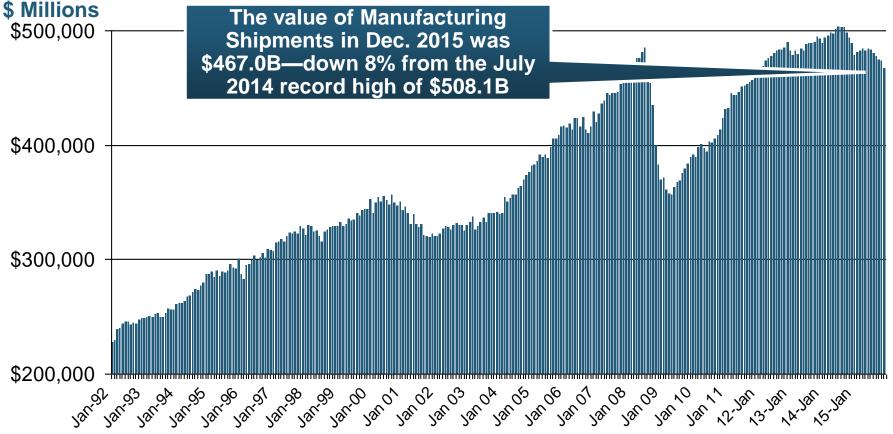


MANUFACTURING SECTOR OVERVIEW & OUTLOOK

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



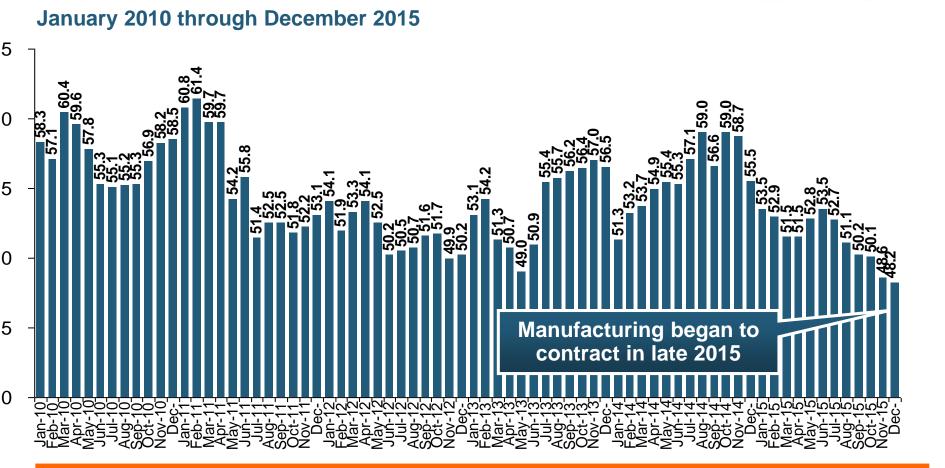


Monthly shipments in Nov. 2014 exceeded the pre-crisis (July 2008) peak but has declined in recent months. Weakness abroad, falling energy prices and a strong dollar are hurting the sector, especially exports. Manufacturing growth leads to gains in many commercial exposures: WC, Commercial Auto, Marine, 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/ 110

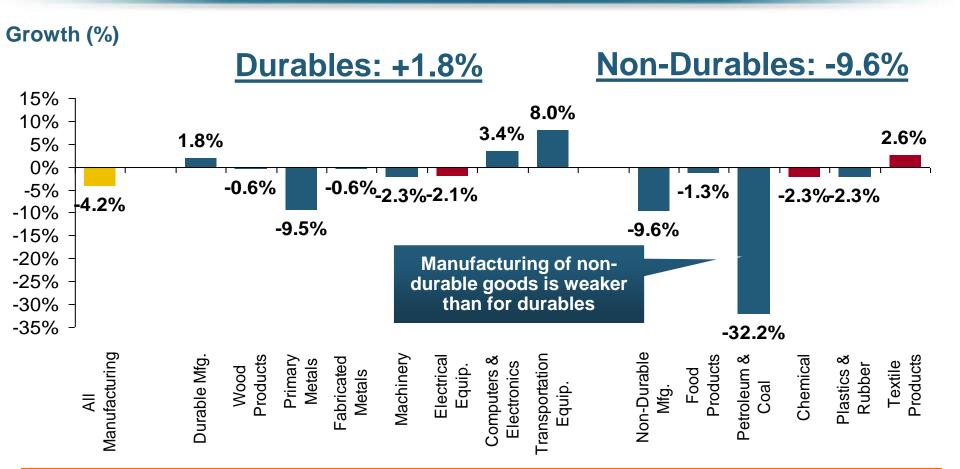
ISM Manufacturing Index (Values > 50 Indicate Expansion)



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

Source: Institute for Supply Management at <u>http://www.ism.ws/ismreport/mfgrob.cfm</u>; Insurance Information Institute.

Manufacturing Growth for Selected Sectors, 2015 vs. 2014*



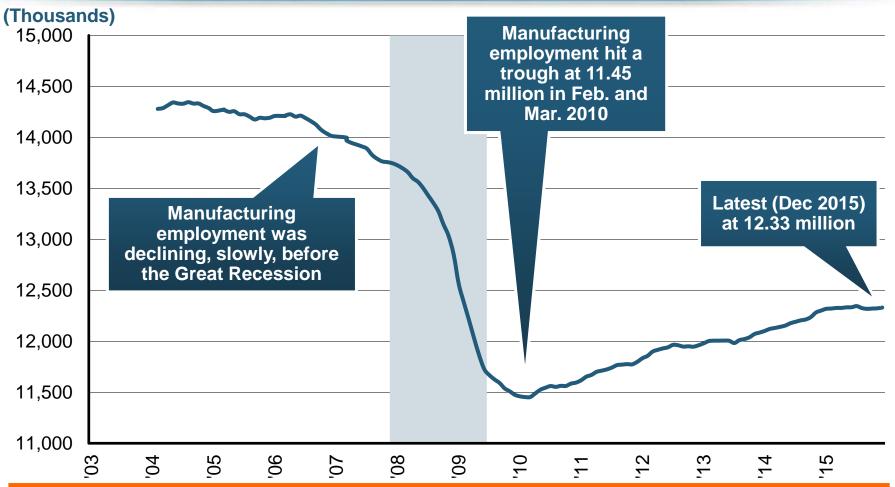
NSURANCE

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/* 112

Manufacturing Employment, Jan. 2003–December 2015

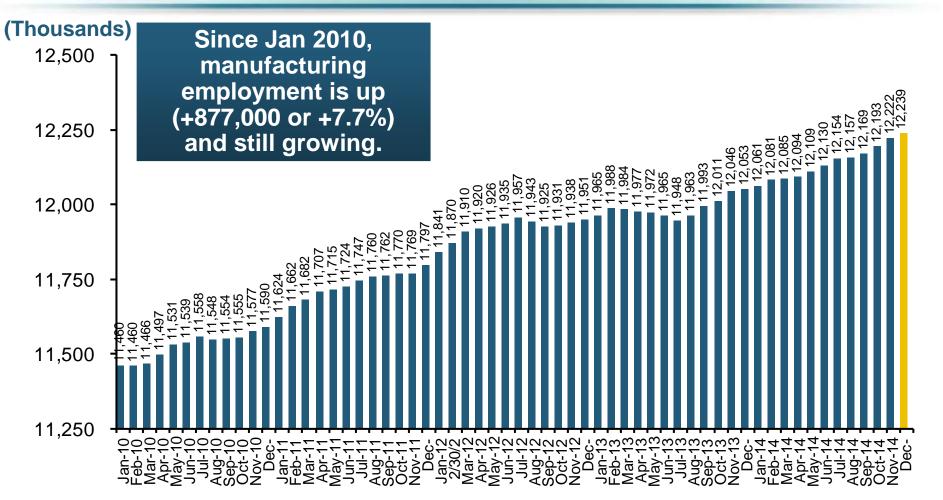




Manufacturing employment was growing slowly but steadily from 2010 through 2014 but has been flat in 2015. Automation, a slowing world economy, the strong dollar and other factors have held the growth rate down.

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.

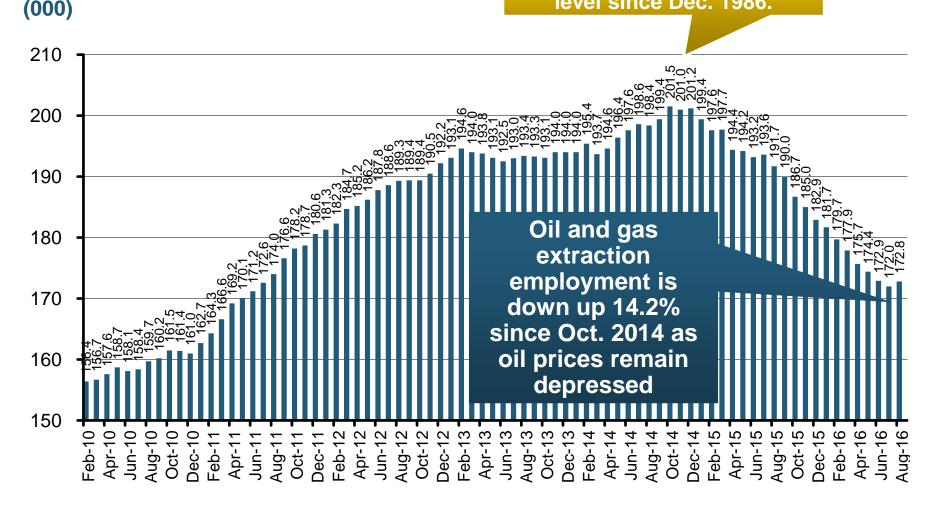
*Seasonally adjusted.

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

Employment in Oil & Gas Extraction, Jan. 2010—Aug. 2016*



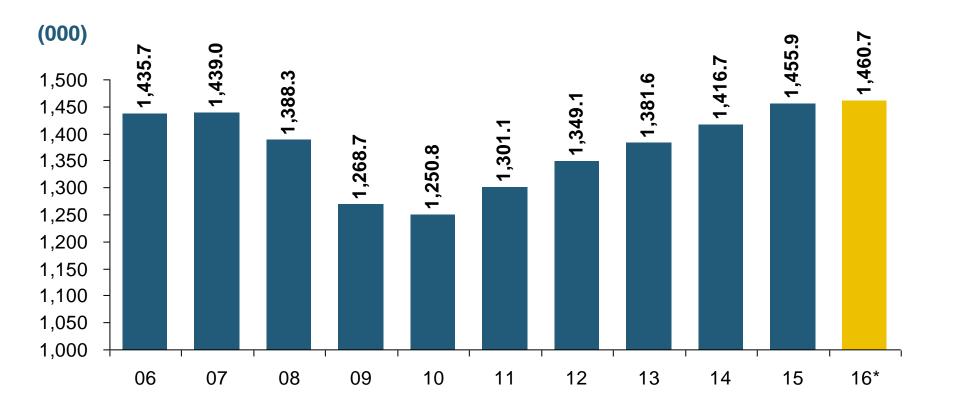
Employment peaked in Oct. 2014 at 201,500—its highest level since Dec. 1986.



*Seasonally adjusted

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

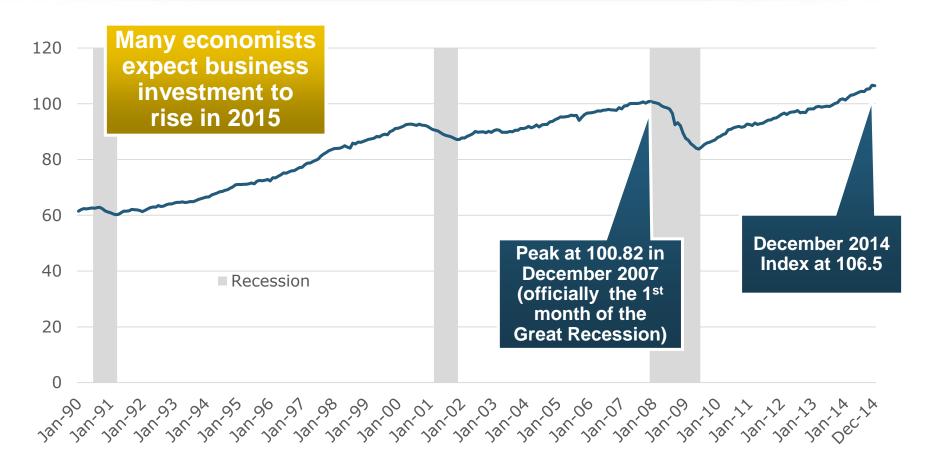
Trucking Employment: 2006–2016*



Trucking employment is up by more than 200,000 or 16.8% since 2010

*Seasonally-adjusted monthly average through Aug 2016 Source: US Census Bureau; Insurance Information Institute. INSURANCE

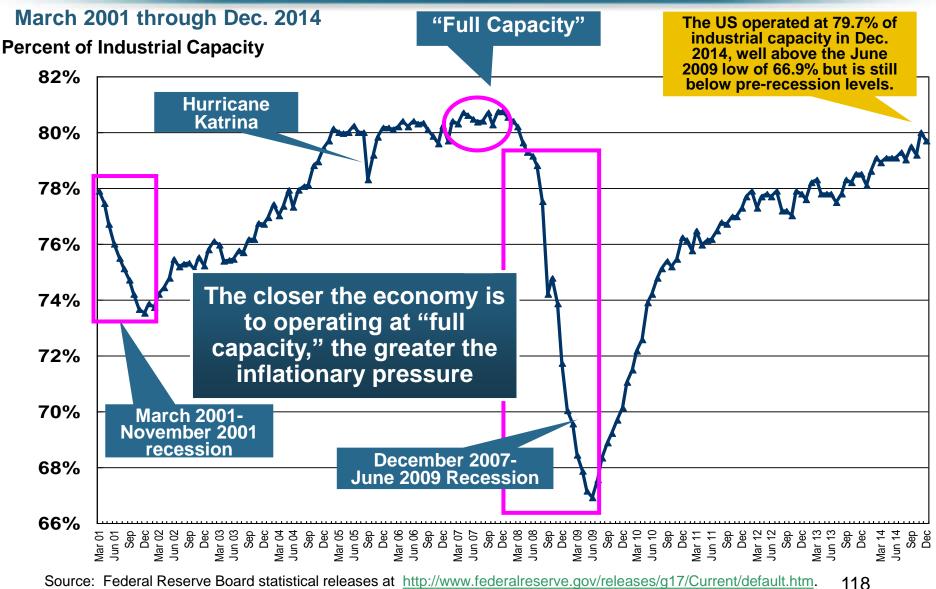
Index of Total Industrial Production:* A Near Peak as of December 2014



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 <u>http://www.federalreserve.gov/releases/g17/ipdisk/ip_sa.txt</u>. National Bureau of Economic Research (recession dates); Insurance Information Institute. ISUDANCE

Recovery in Capacity Utilization is a Positive Sign for Commercial Exposures



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

INSURANCE

INFORMATION



TECHNOLOGY, DISRPTORS 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

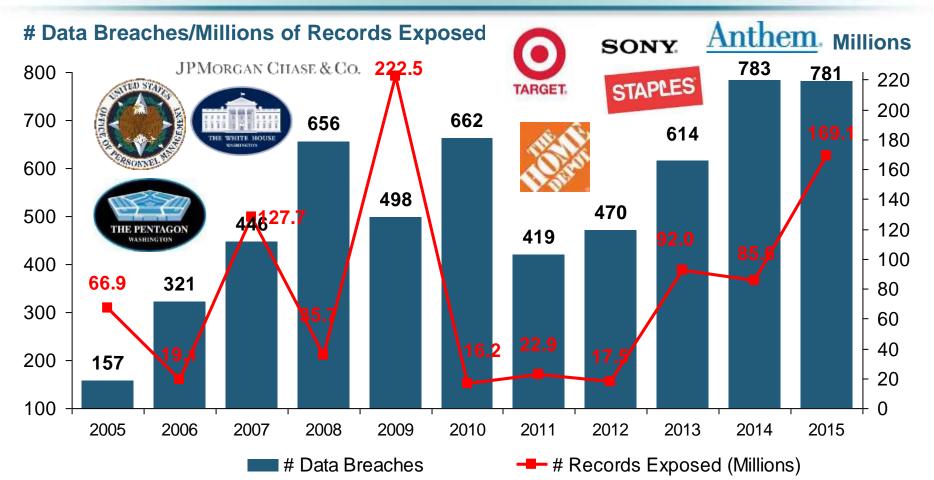
- Insurers are at the intersection of many of the most important technological innovations of the early 21st century
 - ◆ Problem → Solution → Opportunity
- Industry is too often depicted as a technology laggard
- I.I.I. is highlighting the industry as being on the technological cutting edge—an innovative, 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

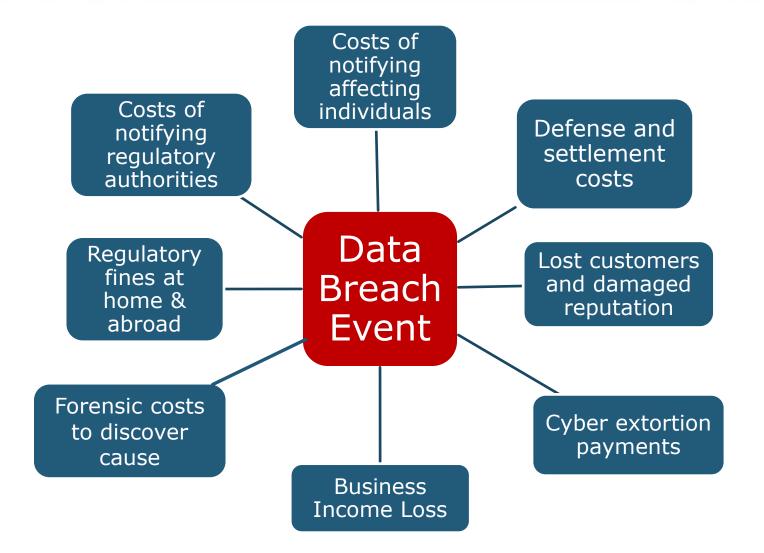
Data Breaches 2005-2015, by Number of Breaches and Records Exposed



The 781 reported data breaches in 2015 was virtually unchanged form 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

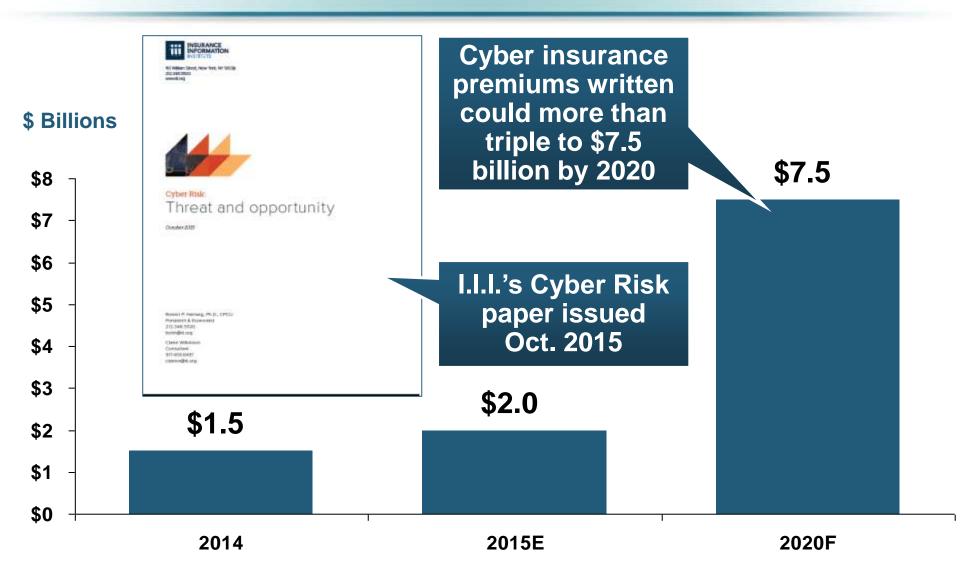
Data/Privacy Breach: Many Potential Costs Can Be Insured



INSURANCE

Estimated Cyber Insurance Premiums Written, 2014 – 2020F





Source: Advisen (2014 est.); PwC (2015, 2020); Insurance Information Institute.



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



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



INSURANCE

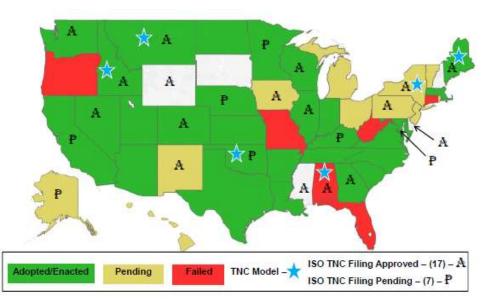
Ridesharing Regulation/Legislation and Status of ISO Filings as of 9/30/15

INSURANCE INFORMATION INSTITUTE

Status Ride Sharing Legislation/Regulation



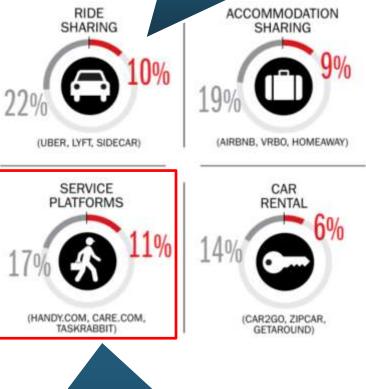
Status of ISO Filings



Percent of Americans Who Have Engaged in the "Gig/Sharing Economy" by Transaction



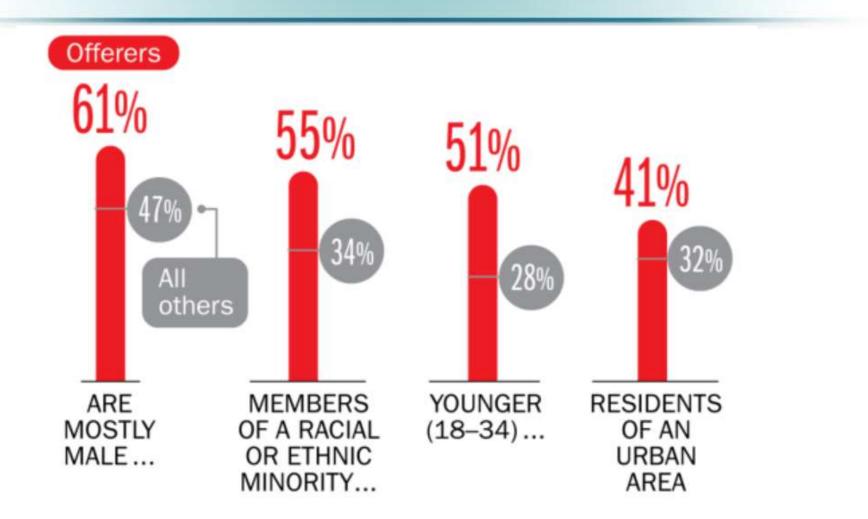
Drivers have significant WC exposures



Service platforms have the most direct link to WC; 11% of Americans have offered their services

Sources: The SelfEmployed.com accessed at <u>https://www.theselfemployed.com/gig-economy/infographic-inside-the-new-economy/</u> based on a poll by Time magazine, Bursten-Marsteller and The Aspen Institute; Insurance Information Institute.

Americans Who Offer Services in the Sharing/Gig Economy Are Statistically More Prone to Workplace Injury



Young, Urban Minority Males Are the Most Likely to Offer their Services in the Sharing Economy

Sources: The SelfEmployed.com accessed at <u>https://www.theselfemployed.com/gig-economy/infographic-inside-the-new-economy/</u> based on a poll by Time magazine, Bursten-Marsteller and The Aspen Institute; Insurance Information Institute.

The Sharing Economy Can't Escape Politics and Regulation





Political Skepticism About the 'Gig' Economy





"Many Americans are making extra money renting out a spare room, designing a website ... even driving their own car. This on demand or so called 'gig' economy is creating exciting opportunities and unleashing innovation, but it's also raising hard questions about workplace protections and what a good job will look like in the future."

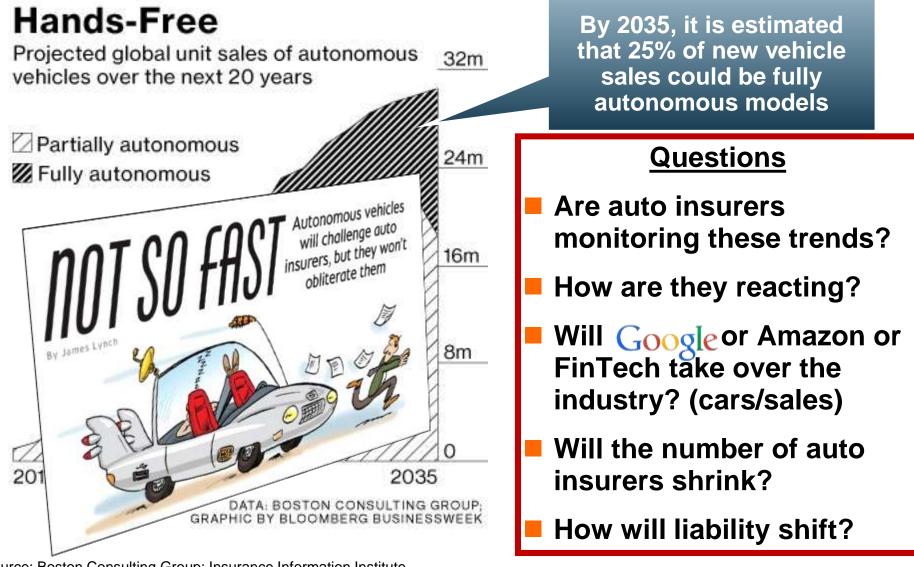
--Hillary Clinton, July 13, 2015



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

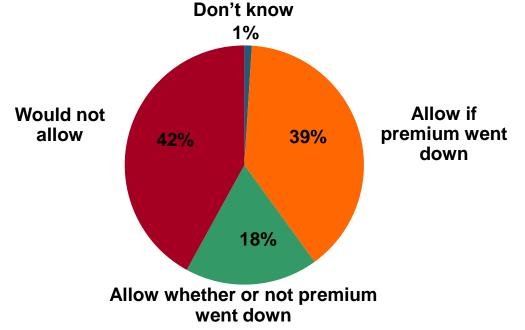
Media is Obsessed with Driverless Vehicles: Often Predicting the Demise of Auto Insurance



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.

Source: Insurance Information Institute Annual Pulse Survey.

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

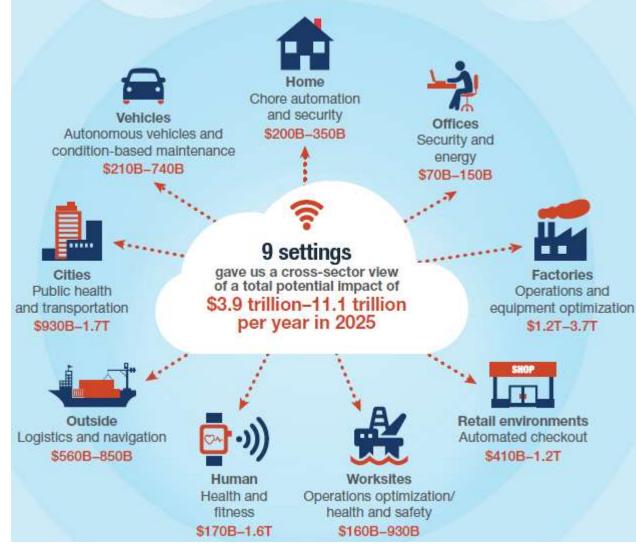


THE 'INTERNET OF THINGS'

Capturing Economic Value Amid a Shifting Insurer Value Chain

The Internet of Things and the Insurance Industry

INSURANCE INFORMATION INSTITUTE



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

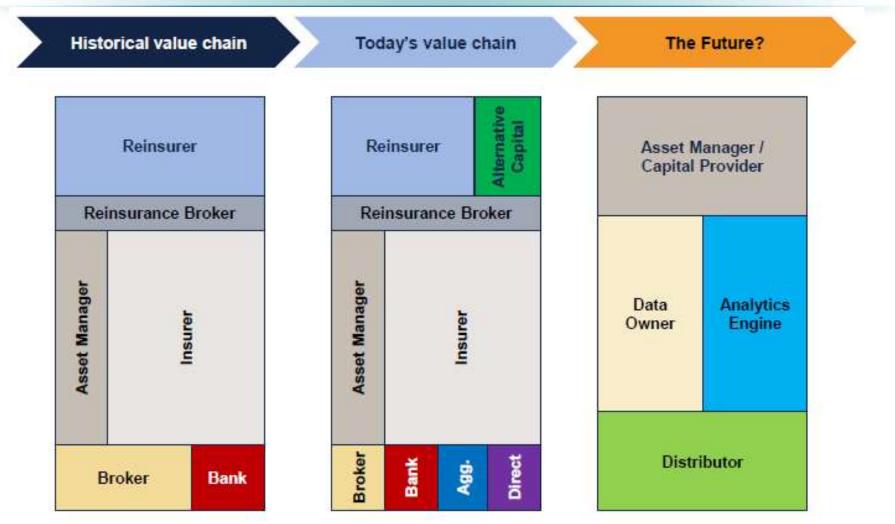
The "Internet of Things" will create trillions in economic value throughout the global economy by 2025

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



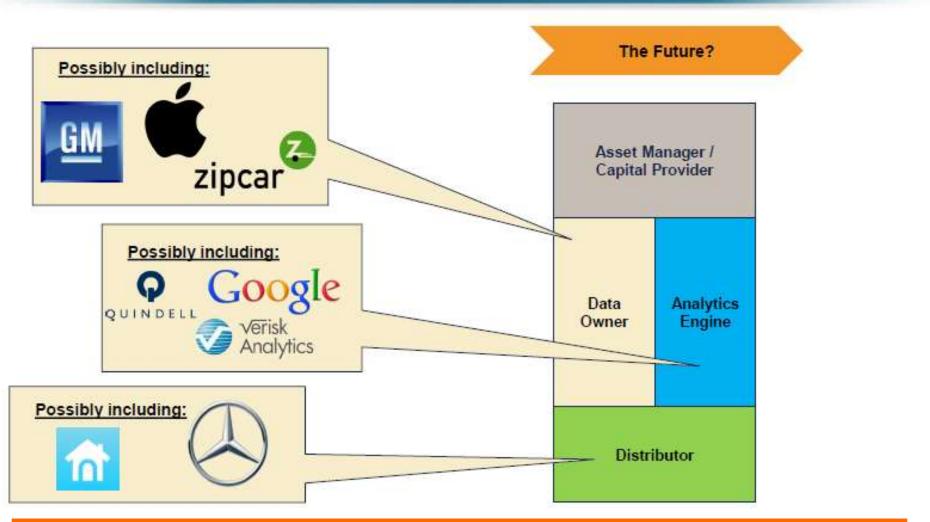


The Insurance Industry Value Chain Is Changing for Many Reasons

Source: Willis Capital Markets & Advisory; Insurance Information Institute.

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?

Source: Willis Capital Markets & Advisory; Insurance Information Institute.



A NEST Case Study

Nest: A Leader in the "Internet of Things"

Collision Course or Cooperation with the Insurance Industry?



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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

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

∩est.

Source: <u>https://nest.com/insurance-partners/</u> accessed 1/10/16; Insurance Information Institute research.

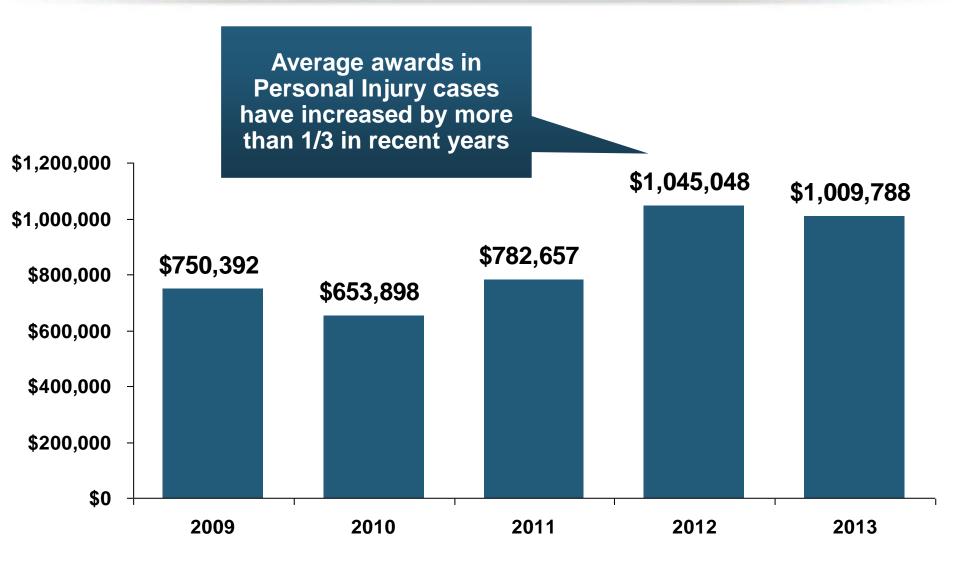


Shifting Legal Liability & Tort Environment

Will the Tort Pendulum Swing Against Insurers?

Average Personal Injury Jury Award, 2009 – 2013





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

Business Leaders Ranking of Liability Systems in 2015



Worst States Best States New in 2015 41. Arkansas 1. Delaware **Newly Notorious** Vermont **New Hampshire** 42. Missouri 2. Vermont North Carolina Arkansas South Dakota Missouri 43. Mississippi 3. Nebraska 44. Florida lowa 4. **Rising Above Drop-offs** 45. New Mexico 5. New Hampshire Oklahoma Minnesota 6. Idaho 46. Alabama Kansas Montana 7. North Carolina Virginia California 47. North Dakota 8. Wyoming Illinois 48.

Louisiana

West Virginia

49.

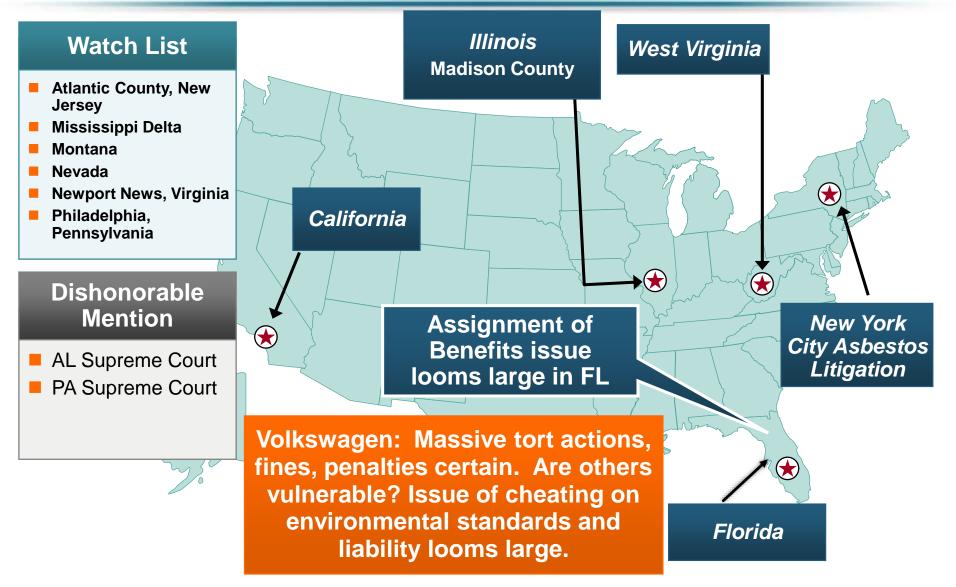
50.

- 9. South Dakota
- 10. Utah

Source: US Chamber of Commerce 2015 State Liability Systems Ranking Study; Insurance Info. Institute.

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

INSURANCE INFORMATION INSTITUTE



Source: American Tort Reform Association; Insurance Information Institute



Insurance Information Institute Online:

www.iii.org

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