

2016 Insurance Industry Disruptors: The Casualty View

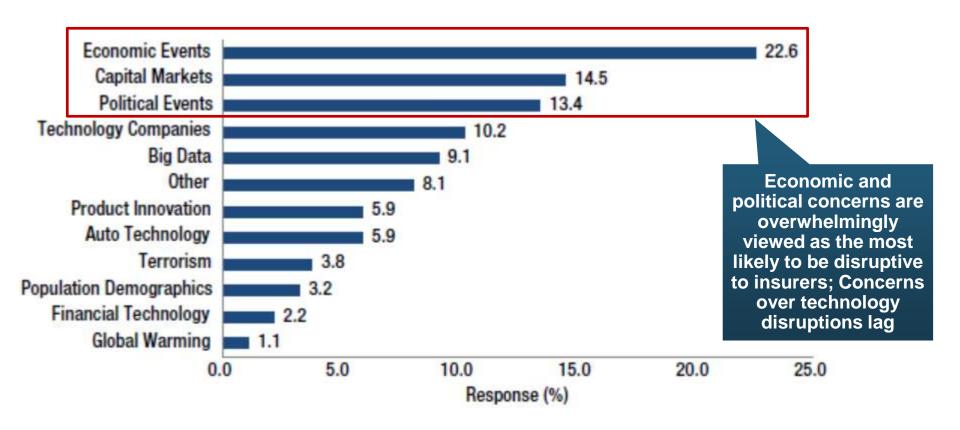
Advisen Casualty Insights Conference New York, NY March 31, 2016 Download at www.iii.org/presentations

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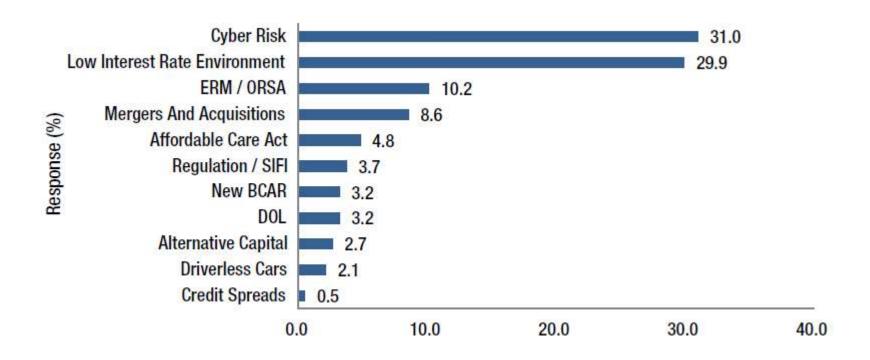
Leading Disruptive Forces for the Insurance Industry Over the Next 5 Years





A.M. Best Survey: Top Insurance Industry Concerns







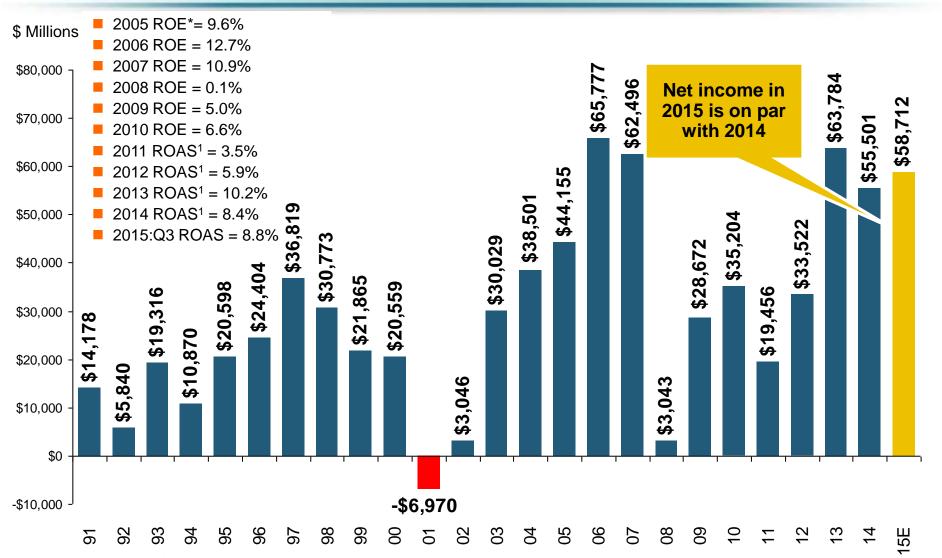
Insurance Industry: Financial Update & Outlook

2015 Was a Reasonably Good Year and Similar to 2014

2016: Could Be Similar to 2015

P/C Industry Net Income After Taxes 1991-2015E

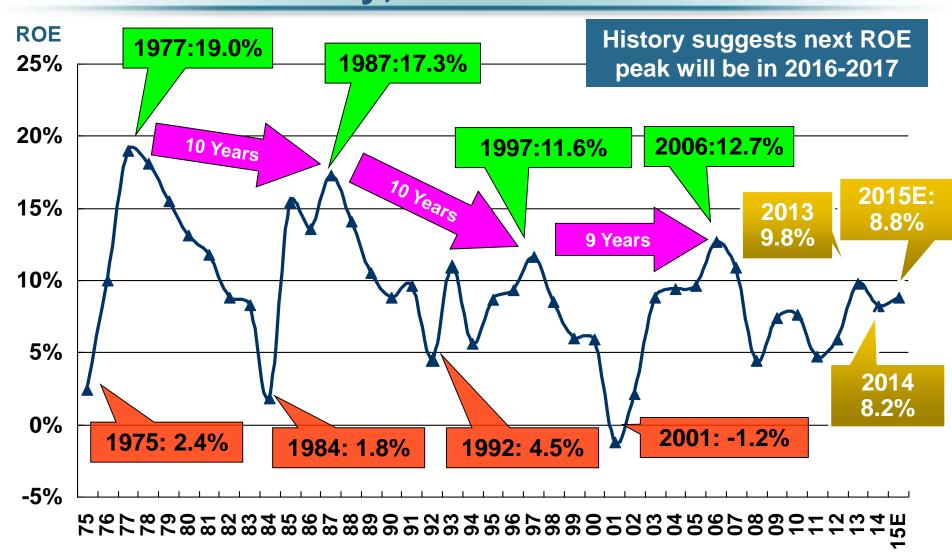




•ROE figures are GAAP; ¹Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 8.2% ROAS in 2014, 9.8% ROAS in 2013, 6.2% ROAS in 2012, 4.7% ROAS for 2011, 7.6% for 2010 and 7.4% for 2009; 2015E is annualized figure based actual figure through Q3 of \$44.0 Sources: A.M. Best, ISO: Insurance Information Institute

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



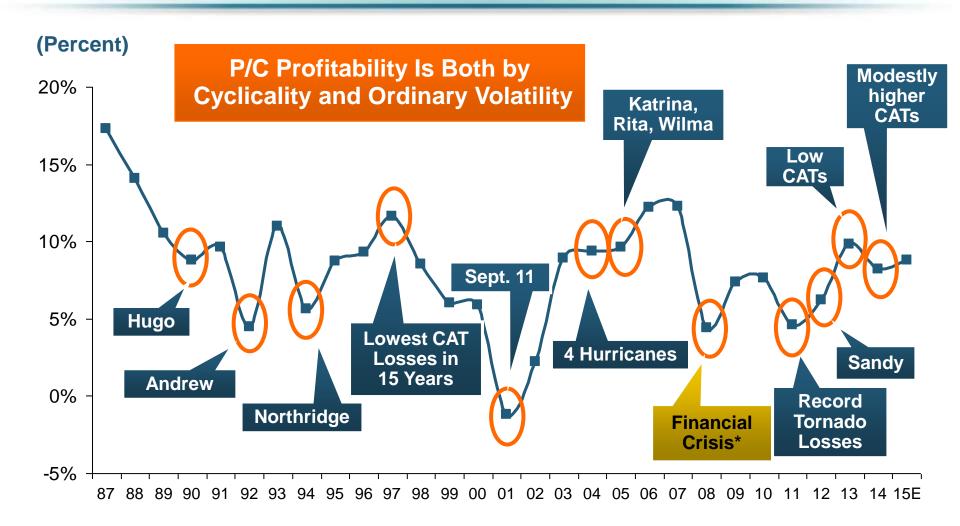


^{*}Profitability = P/C insurer ROEs. 2011-14 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.

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

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

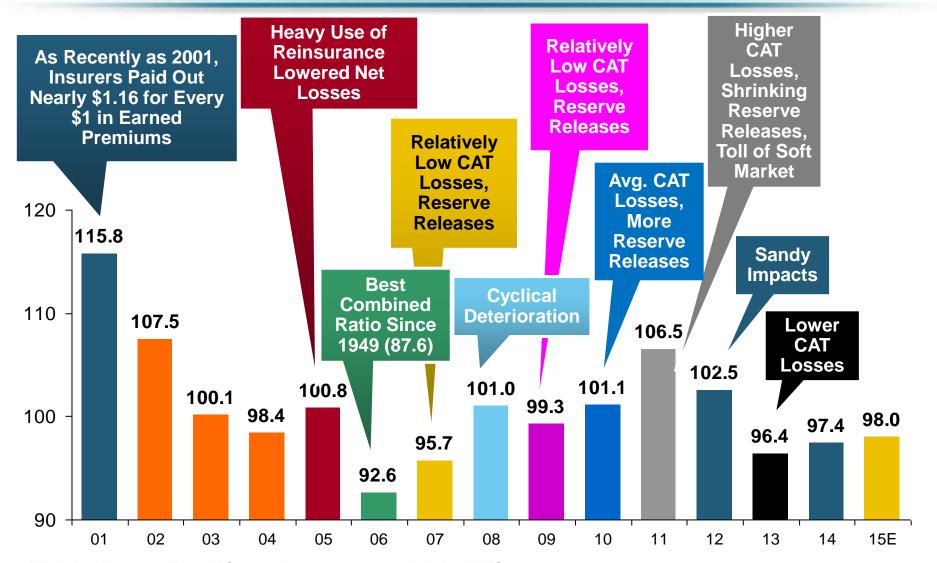




^{*} Excludes Mortgage & Financial Guarantee in 2008 – 2014. Sources: ISO, *Fortune*; Insurance Information Institute.

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





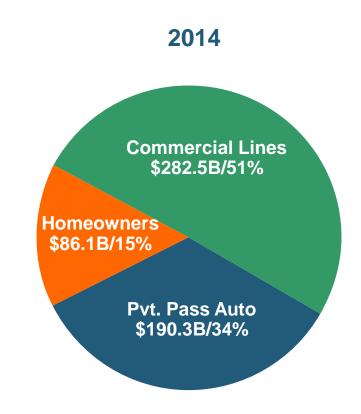
^{*} Excludes Mortgage & Financial Guaranty insurers 2008--2014. Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0.

Distribution of Direct Premiums Written by Segment/Line, 2014



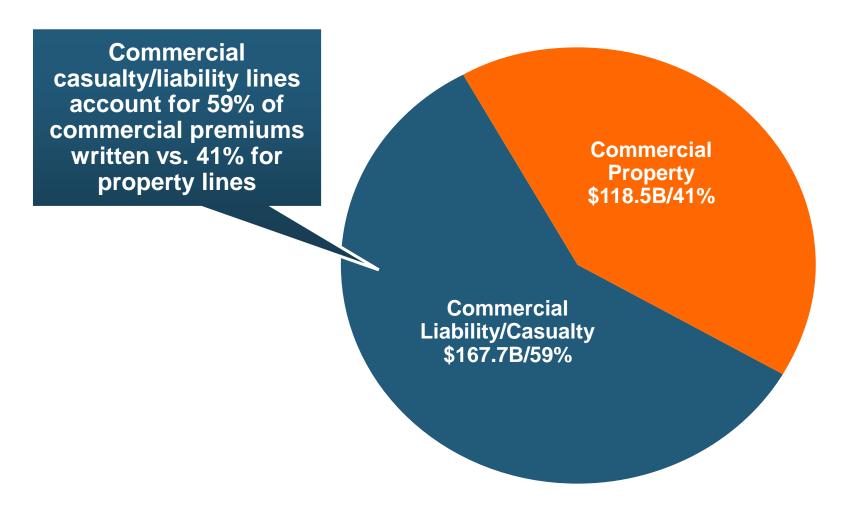
Distribution Facts

- Personal/Commercial lines split has been about 50/50 for many years
- Personal lines growth now exceeds Commercial lines; Industrywide, Private Passenger Auto is by far the largest line of insurance and is currently the most important source of industry profits
- Commercial lines growth in a flat rate environment is highly dependent on exposure growth driven by the expanding economy and product innovation



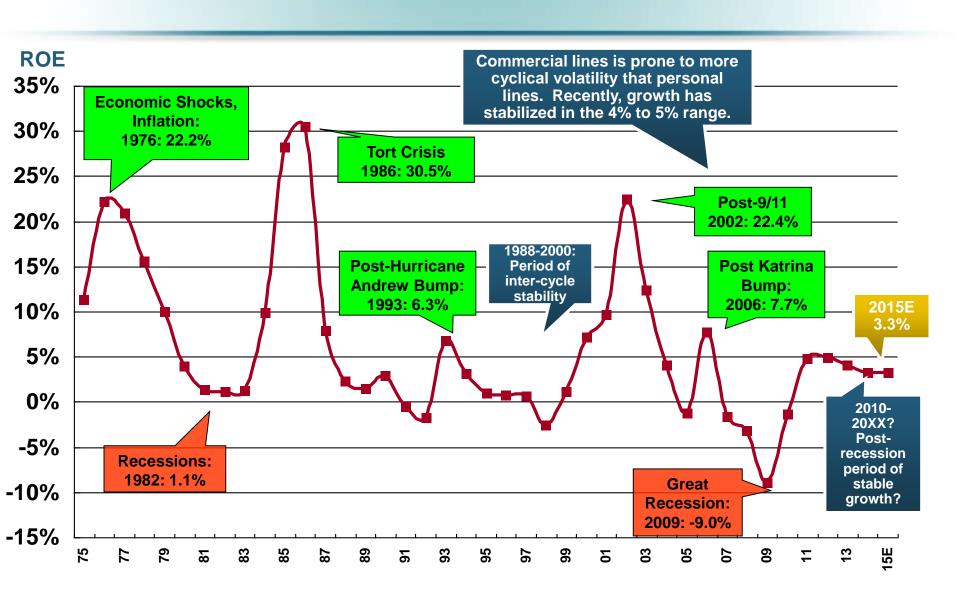
Distribution of Commercial Lines Premiums: Property vs. Liability, 2015





Commercial Lines NPW Premium Growth: 1975 – 2015E

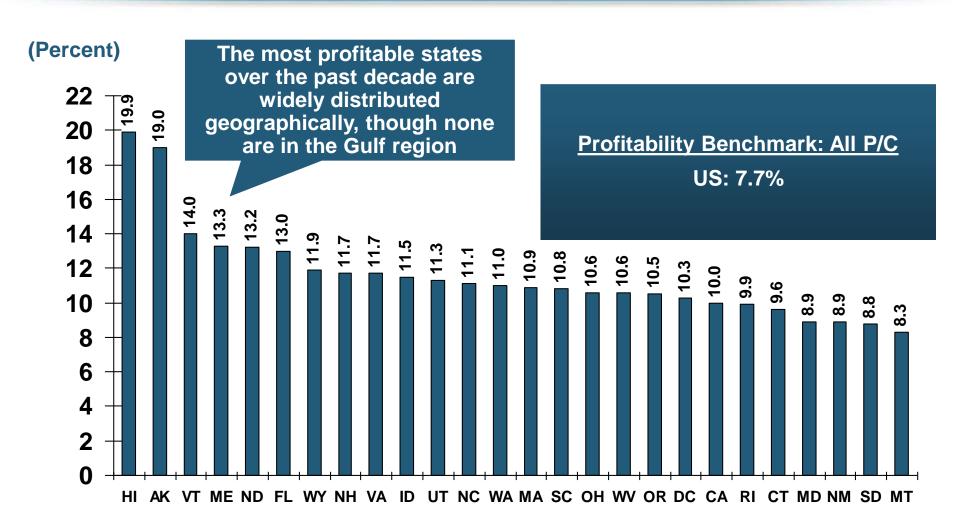




Note: Data include state funds beginning in 1998. Source: A.M. Best: Insurance Information Institute.

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

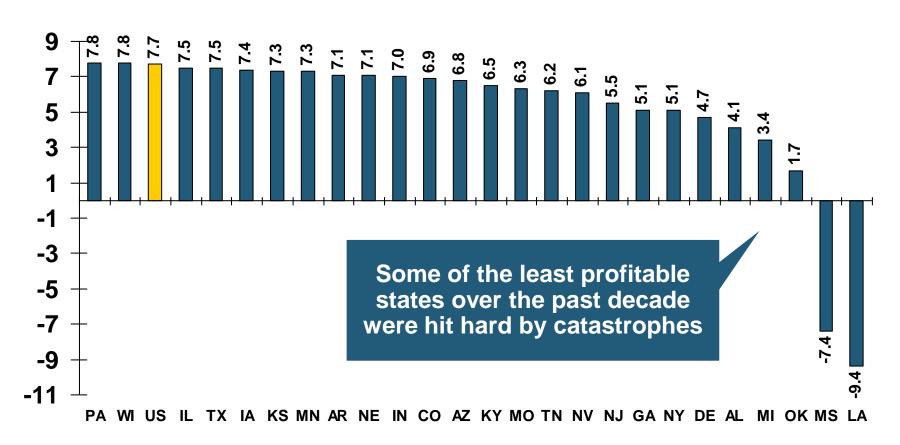




RNW All Lines, 2005-2014 Average: Lowest 25 States



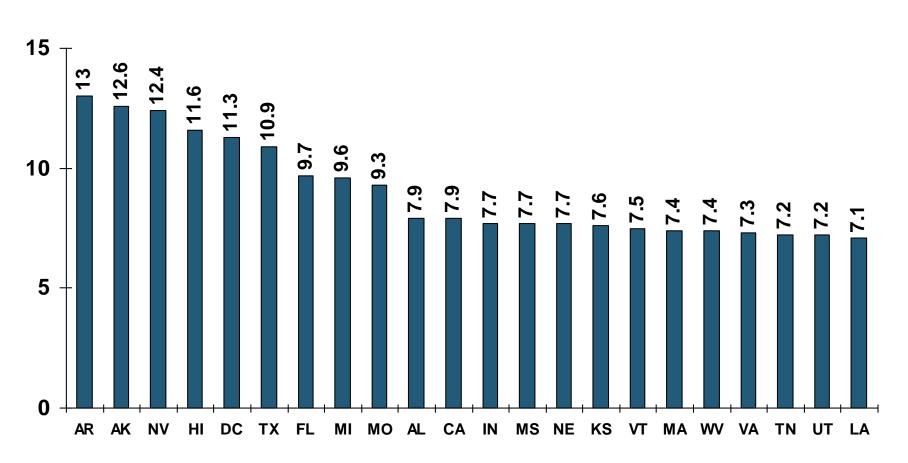
(Percent)



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



(Percent)

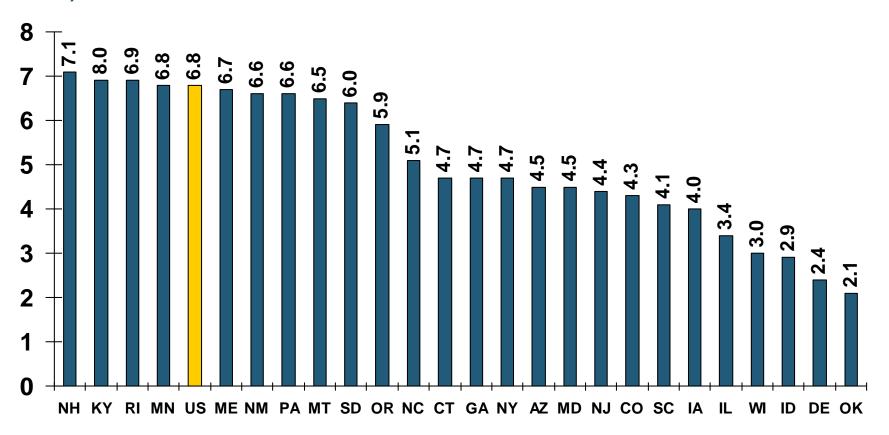


Sources: NAIC; Insurance Information Institute

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



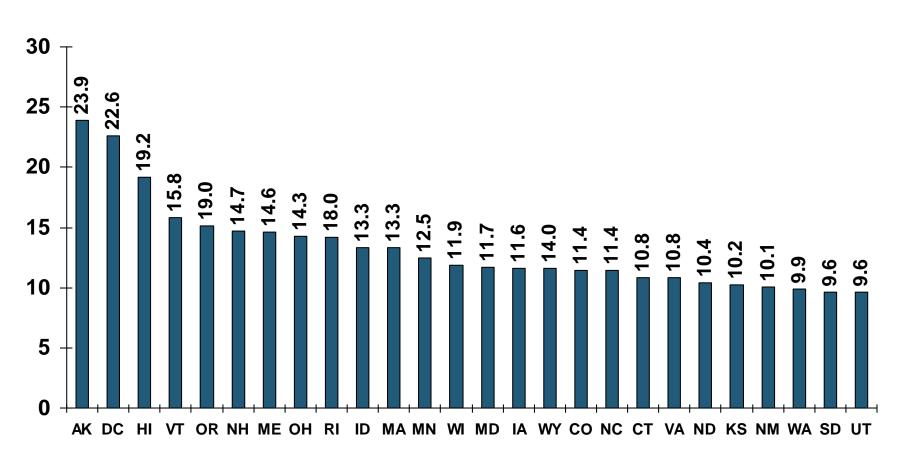
(Percent)



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



(Percent)

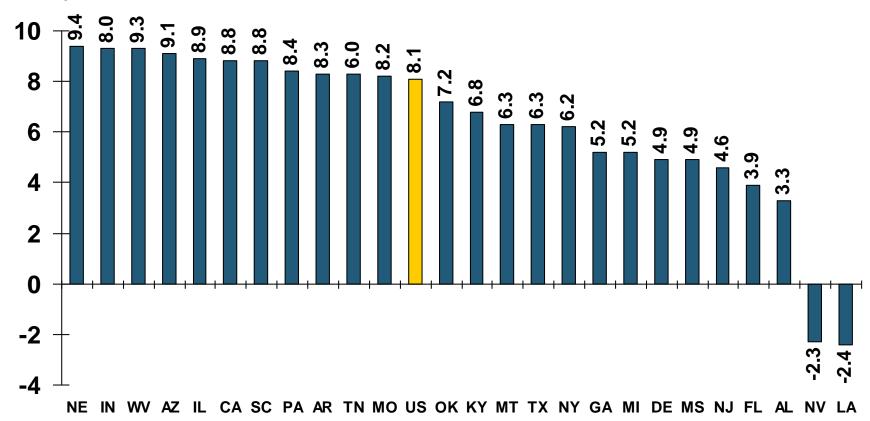


Sources: NAIC; Insurance Information Institute

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

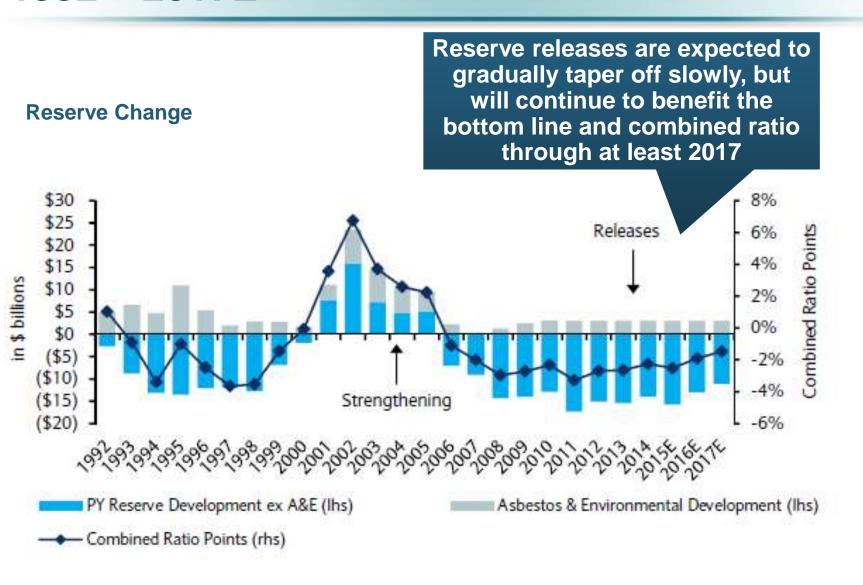






P/C Insurance Loss Reserve Development, 1992 – 2017E*





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

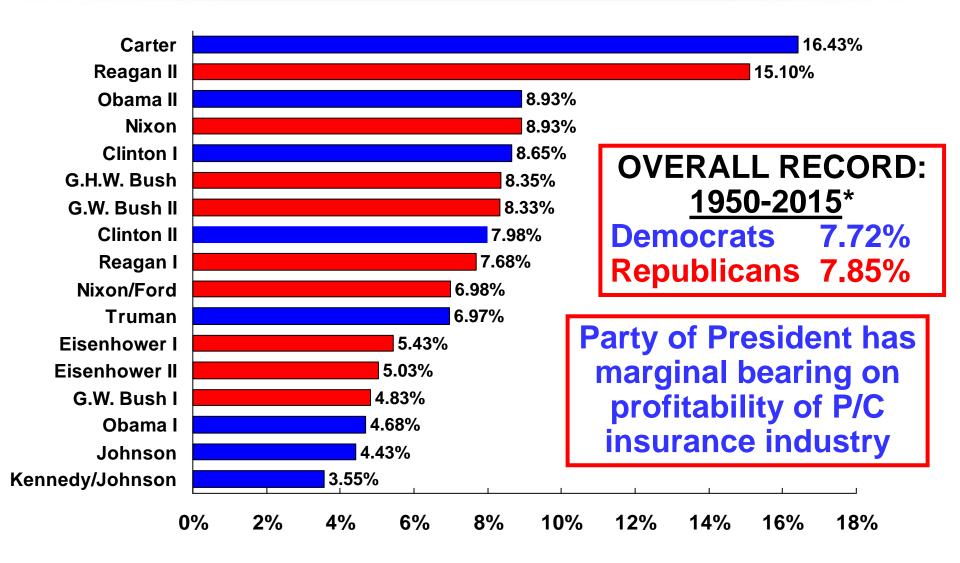


Profitability & Politics

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

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

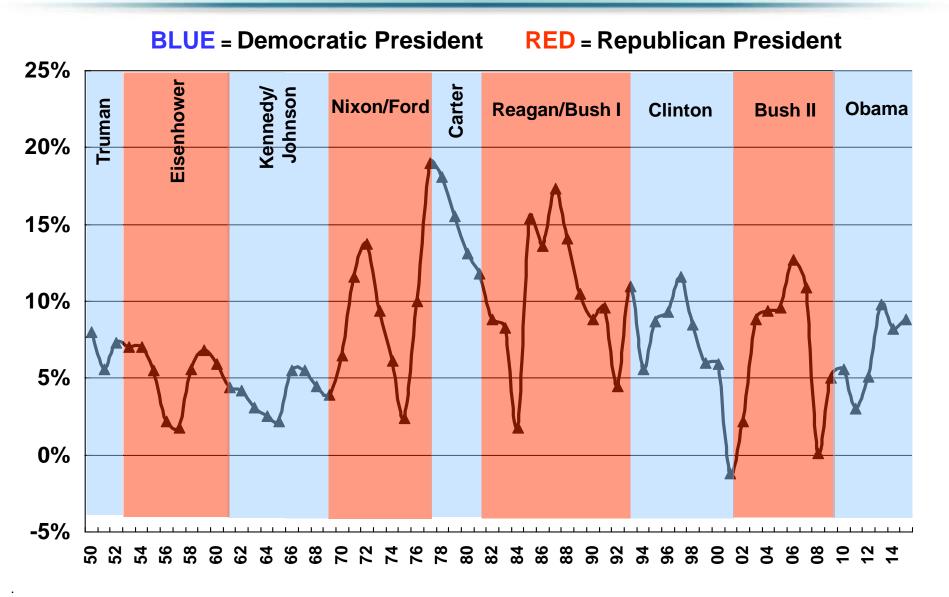




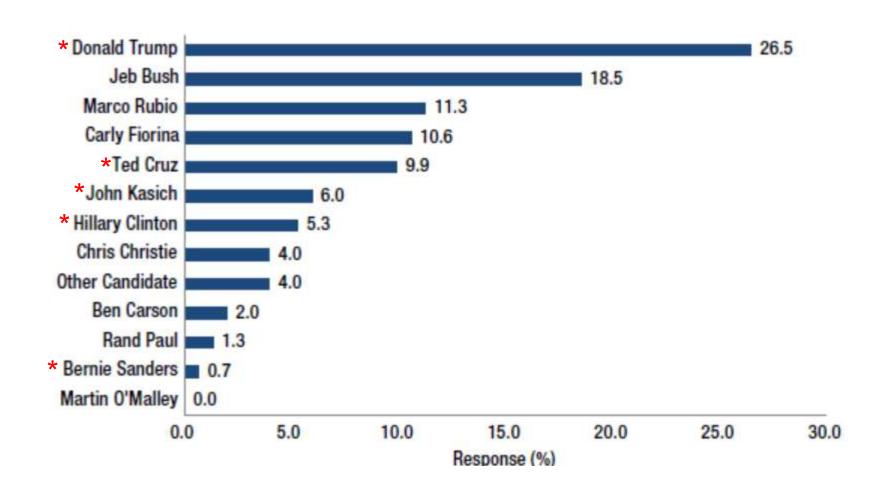
^{*}Truman administration ROE of 6.97% based on 3 years only, 1950-52;. Source: Insurance Information Institute

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





Presidential Candidate Anticipated as Having the Most Favorable Policies for the P/C Insurance Industry



^{*}Still in the race as of March 31, 2016.
Sources: A.M. Best Winter 2015/2016 Insurance Industry Survey, March 2016; Insurance Information Institute.

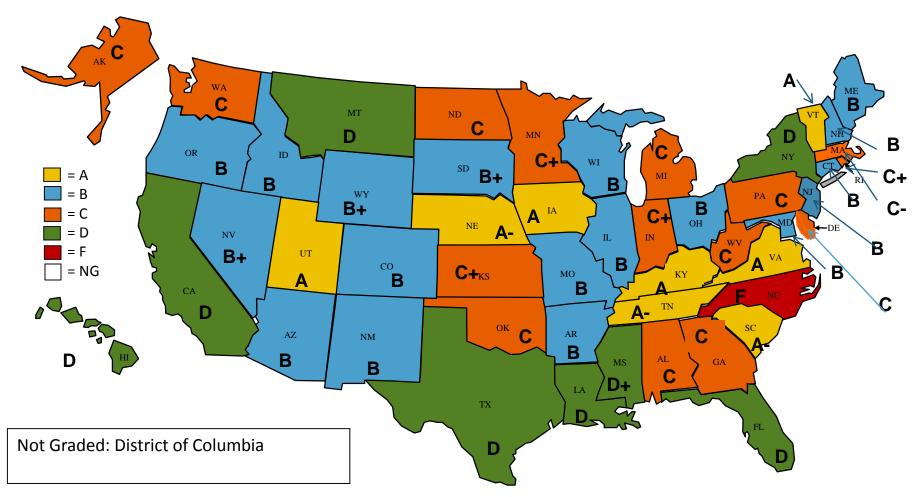
Trump vs. Clinton: Issues that Matter to P/C Insurers



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	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

2015 Property and Casualty Insurance Regulatory Report Card





Source: R Street Insurance Regulation Report Card, December 2015



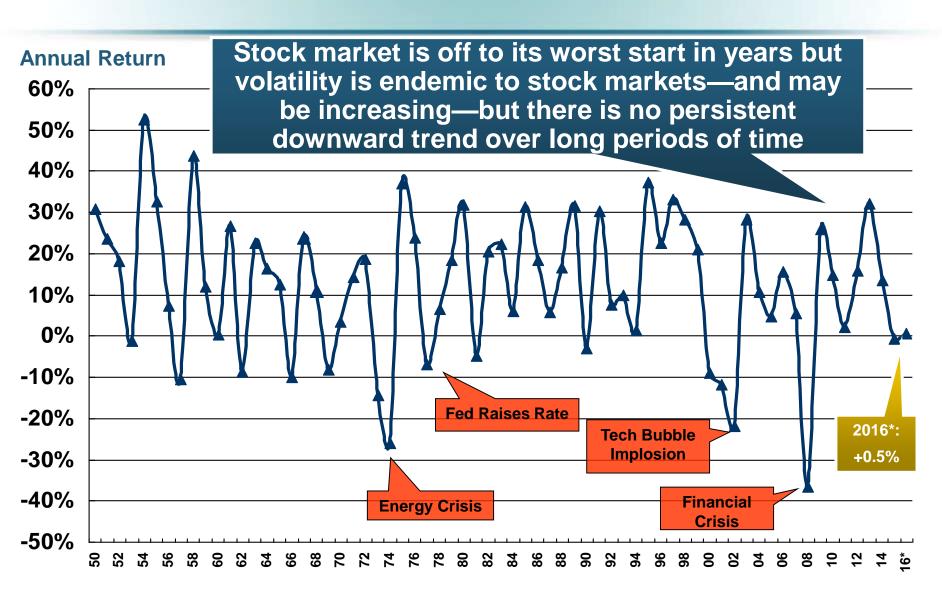
INVESTMENTS: THE NEW REALITY

Investment Performance is a Key Driver of Profitability

Depressed Yields Will Necessarily Influence Underwriting & Pricing

S&P 500 Index Returns, 1950 – 2016*



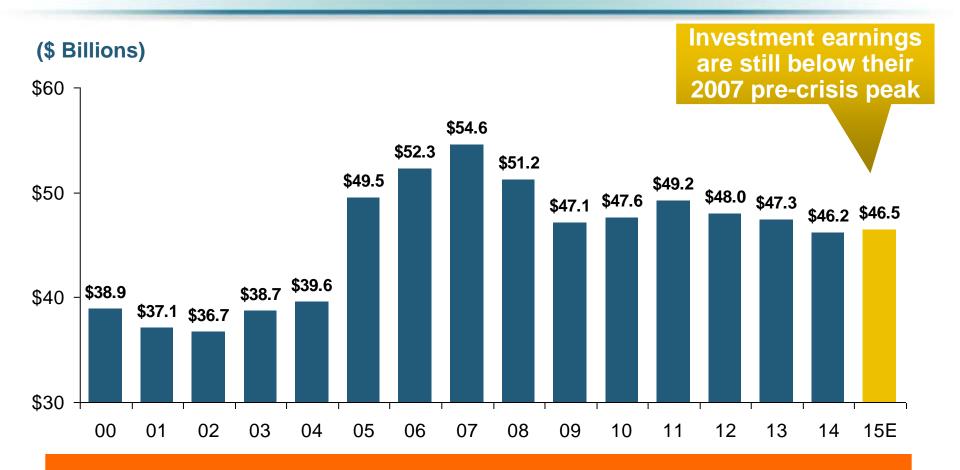


^{*}Through March 29, 2016.

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

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





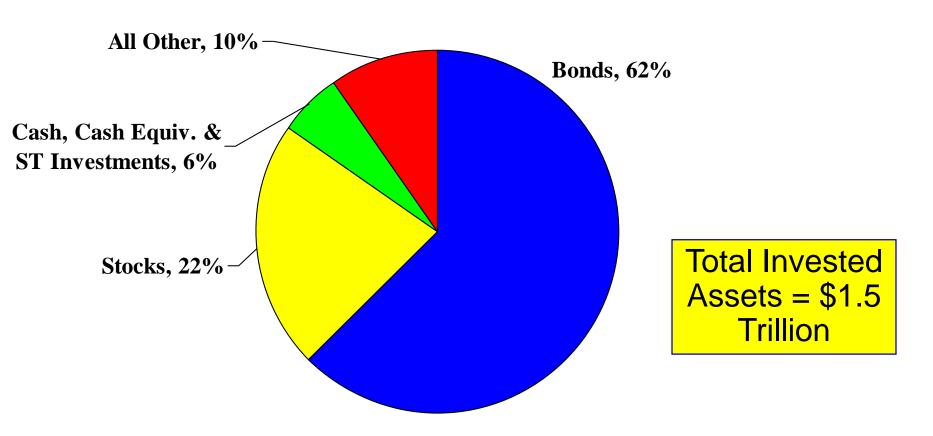
Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014.

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

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



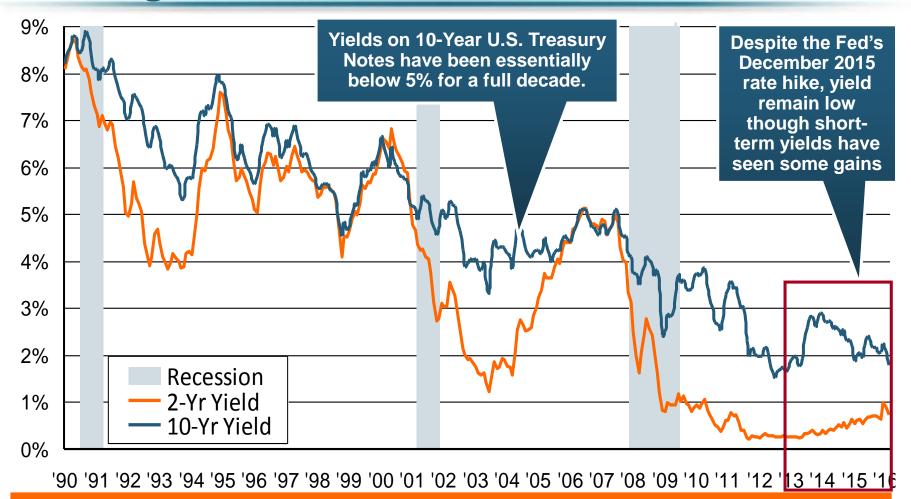
\$ Billions



Source: Insurance Information Institute Fact Book 2015, A.M. Best.

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





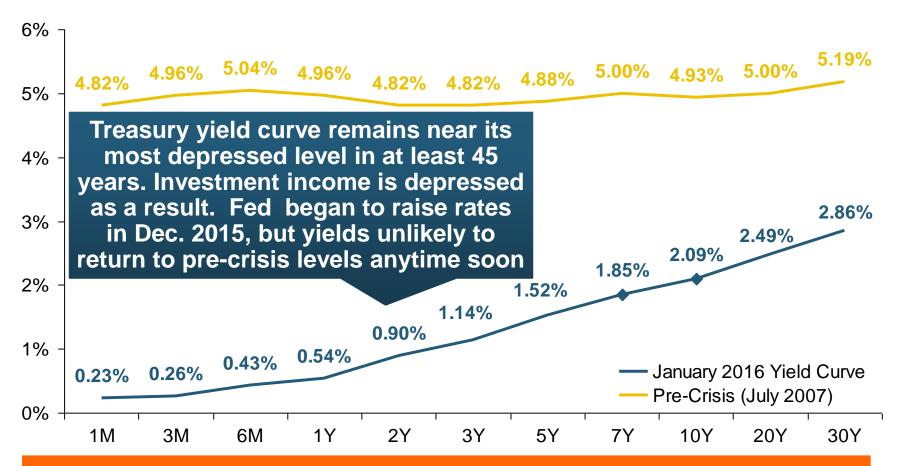
Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for years to come.

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

^{*}Monthly, constant maturity, nominal rates, through February 2016.

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

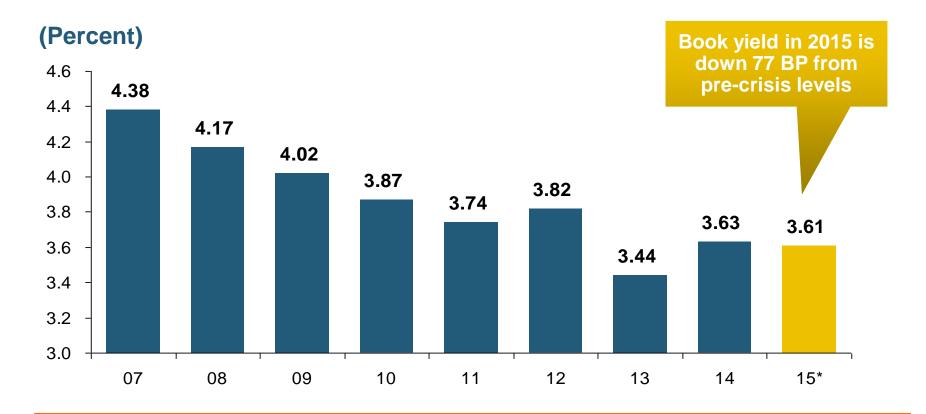




The Fed Began to Raise Rates in Dec. 2015 but Market Volatility and Weakness Abroad Will Make It Difficult for the Fed to Raise Rates in Early 2016

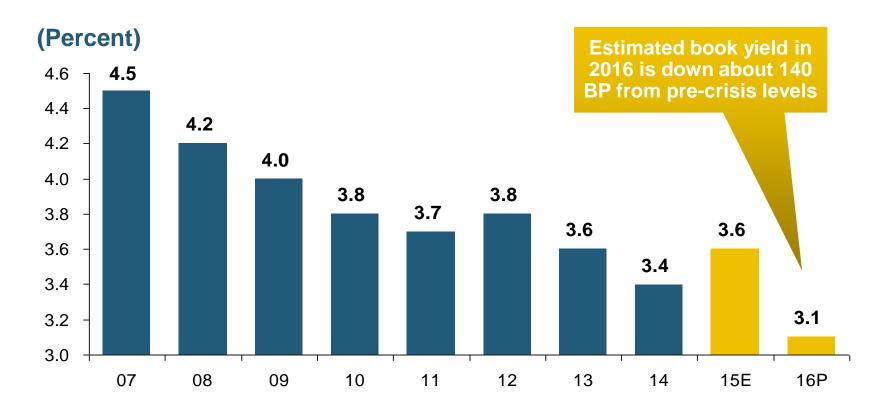
Net Yield on Property/Casualty Insurance Invested Assets, 2007–2015*





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.

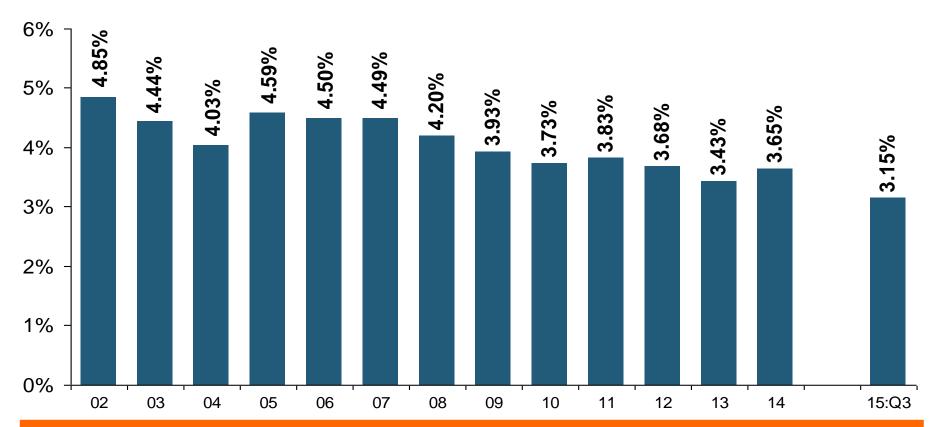
Net Investment Yield on Property/ Casualty Insurance Invested Assets, 2007–2016P*



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.

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

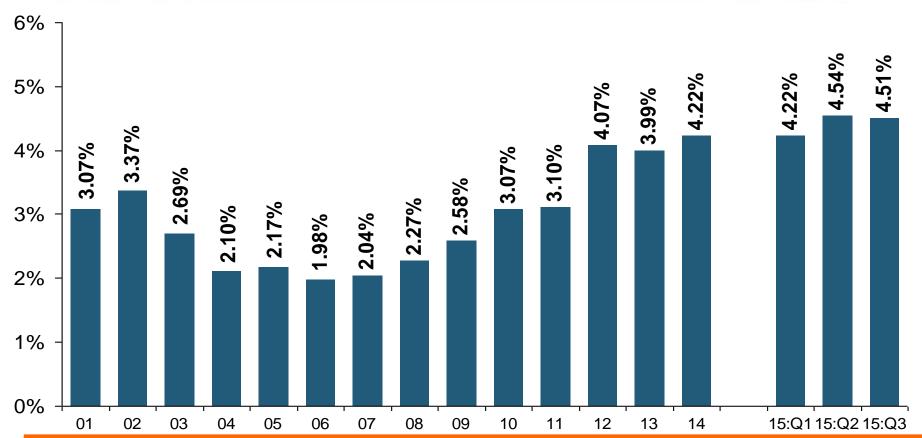




P/C carrier yields have been falling for over a decade, reflecting the long downtrend in prevailing interest rates. Even as prevailing rates rise in the next few years, portfolio yields are unlikely to rise quickly, since low yields of recent years are "baked in" to future returns.

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

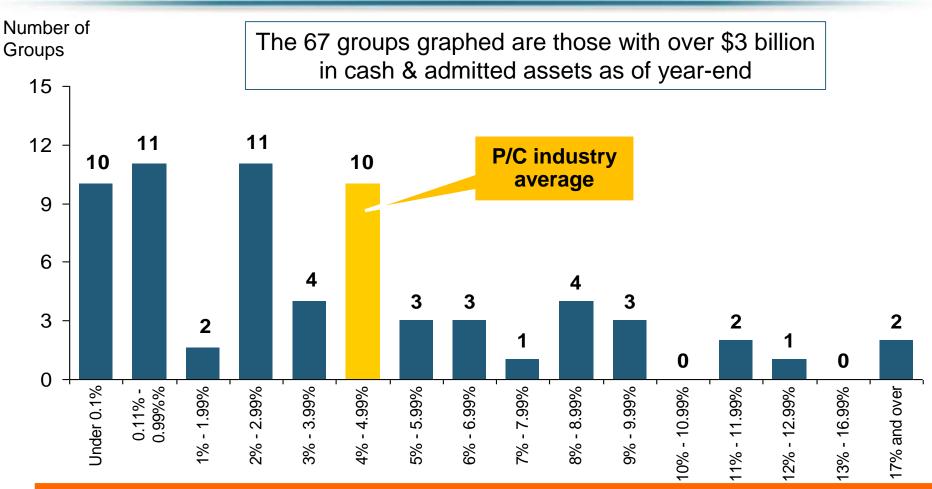




As a group, P/C carriers have increased the percentage of bond investments in riskier instruments. Since 2006-07, that percentage has risen over 200 basis points (double what it was). As interest rates rise, will this percentage return to pre-recession levels?

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



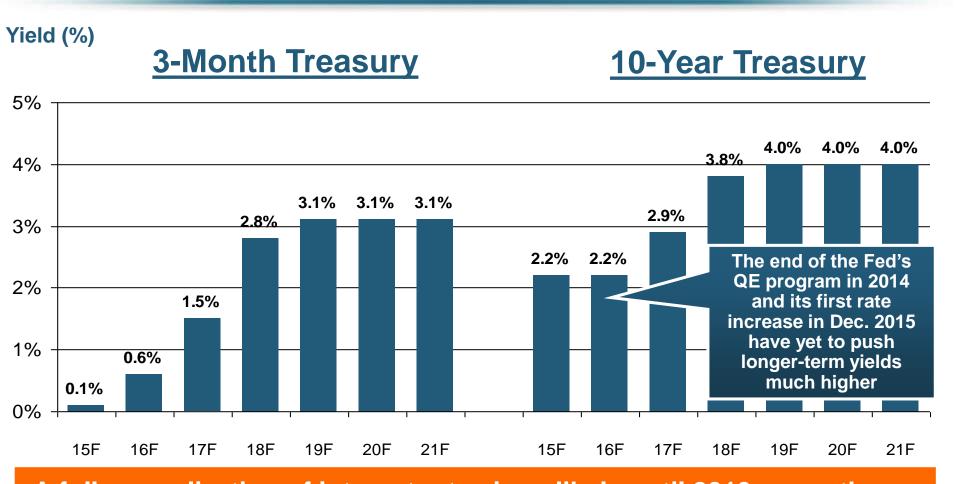


There is a wide disparity among insurance groups regarding holdings of below-investment-grade bonds. Some hold none (or almost none); a few have over 10% of their bond portfolio in BIGs.

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

Interest Rate Forecasts: 2015 - 2021

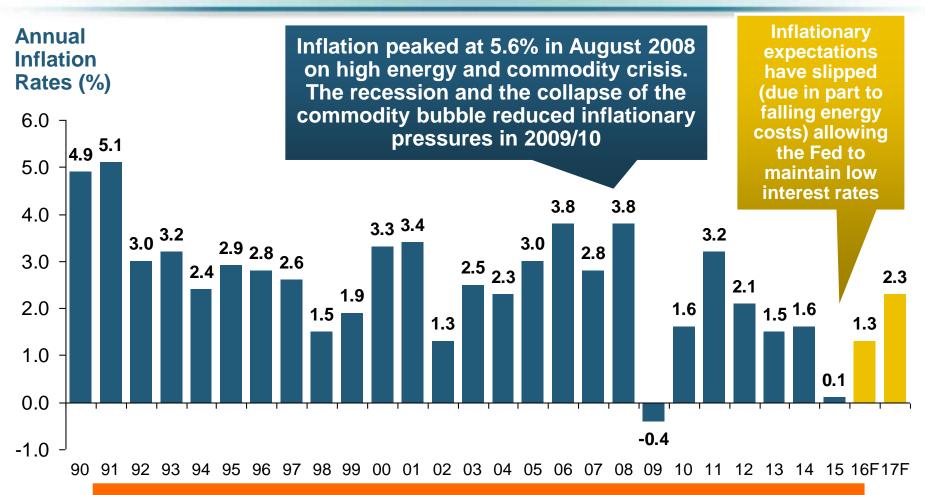




A full normalization of interest rates is unlikely until 2019, more than a decade after the onset of the financial crisis.

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

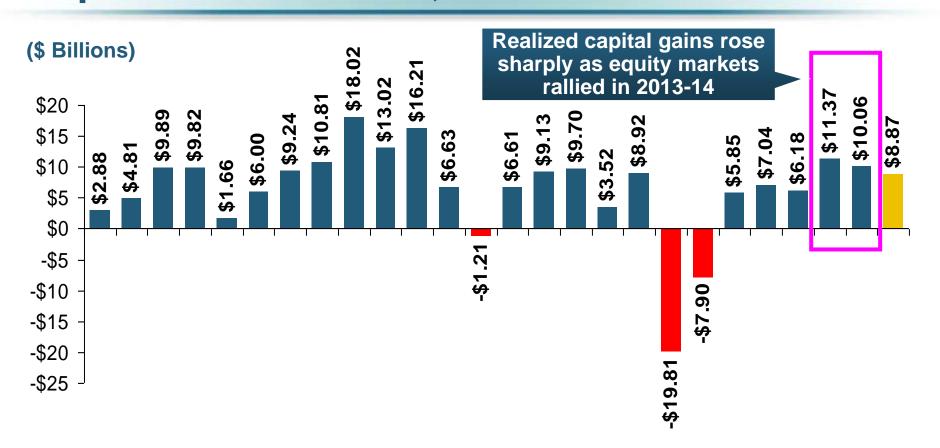




Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

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





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*

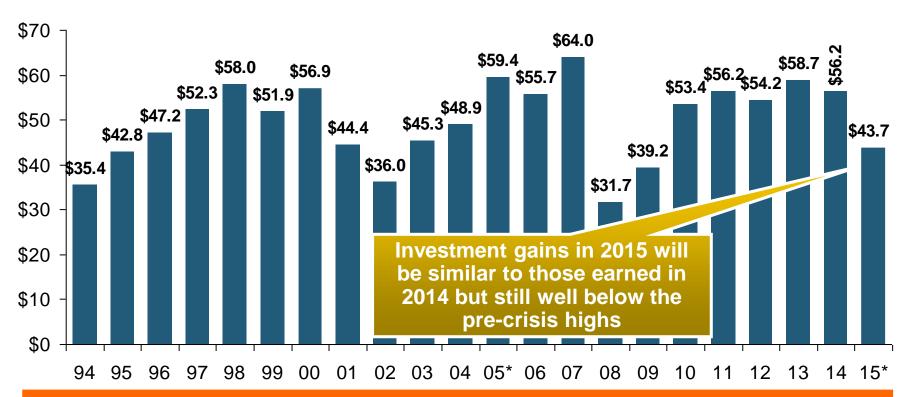
Insurers Posted Net Realized Capital Gains in 2010 - 2014 Following Two Years of Realized Losses During the Financial Crisis. Realized Capital Losses Were a Primary Cause of 2008/2009's Large Drop in Profits and ROE.

^{*}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

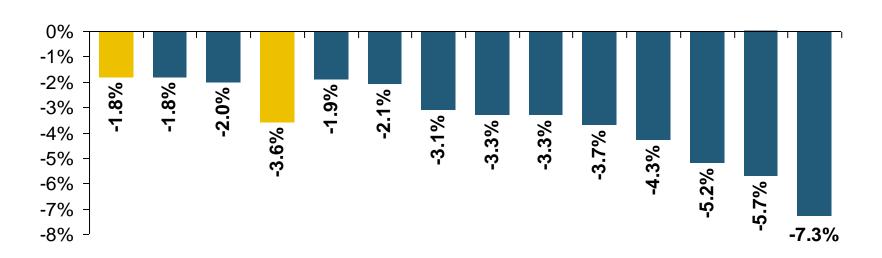
¹ Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.

^{* 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

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

^{*}Based on 2008 Invested Assets and Earned Premiums

^{**}US domestic reinsurance only

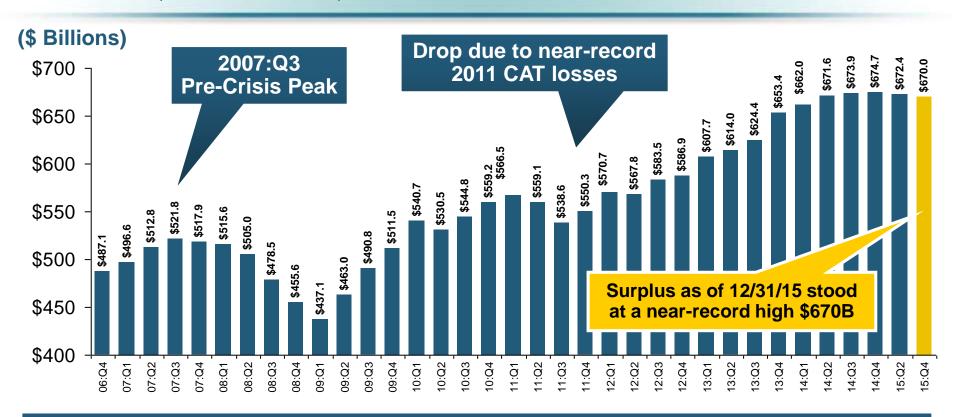


CAPITAL/CAPACITY

Capital Accumulation Has Multiple Impacts Alternative Capital Impacts?

Policyholder Surplus, 2006:Q4–2015:Q4E





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

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

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

Sources: ISO, A.M .Best.



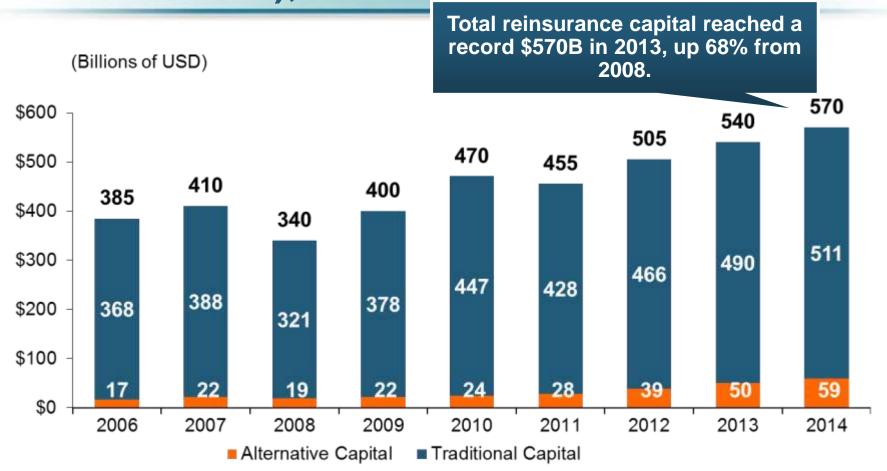
Alternative Capital

New Investors Continue to Change the Reinsurance Landscape

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

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





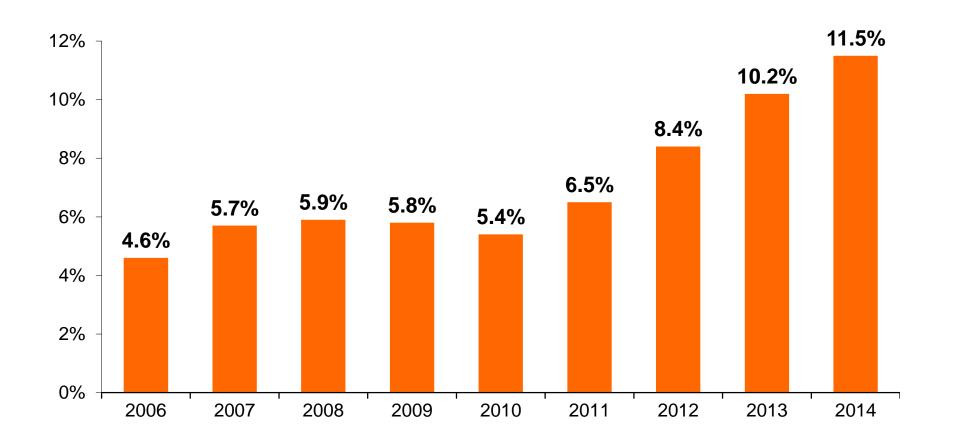
But alternative capacity has grown 210% since 2008, to \$50B. It has more than doubled in the past three years.

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.

Alternative Capital as a Percentage of Traditional Global Reinsurance Capital





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

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.

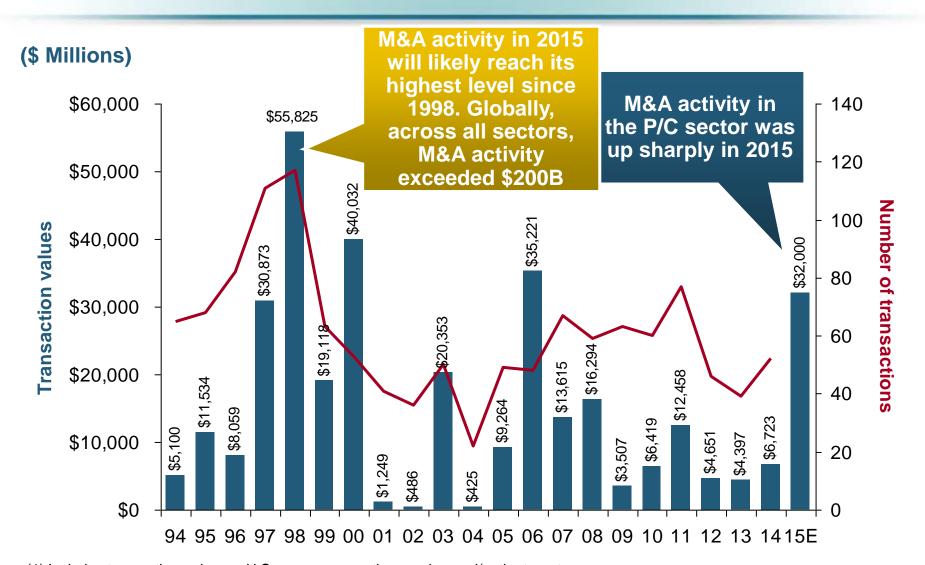


GLOBAL M&A UPDATE: A PATH TO GROWTH?

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

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



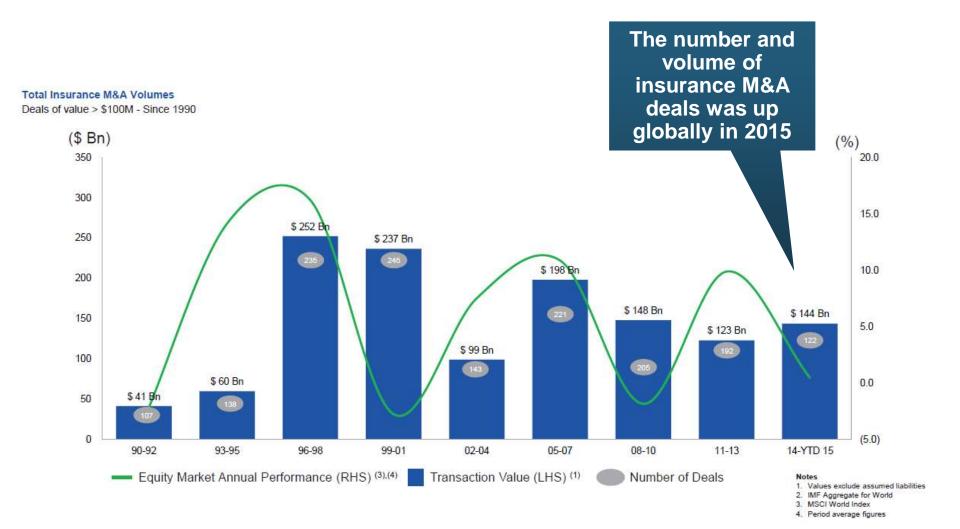


(1) Includes transactions where a U.S. company was the acquirer and/or the target.

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

Global M&A Activity Tends to Follow Equity Market Performance

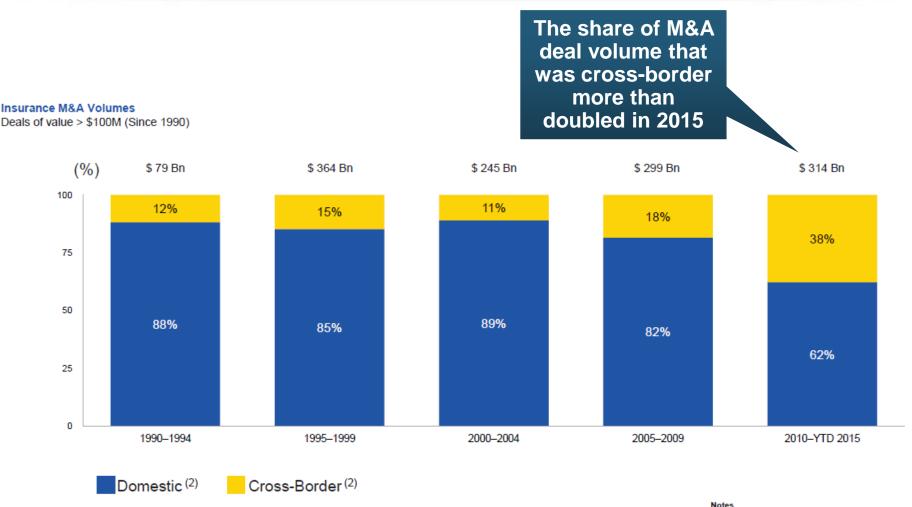




Source: Thomson Reuters, Capital IQ as of Oct. 2015 and IMF from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "Facts vs. Sentiment: Deals in the Insurance Sector," by Aviva CEO Mark Wilson.

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



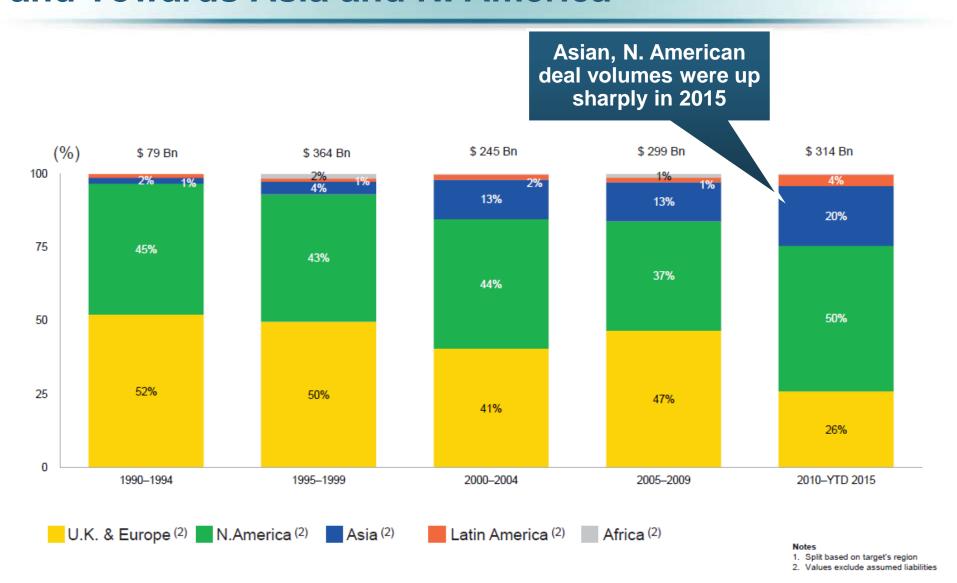


Notes

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

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

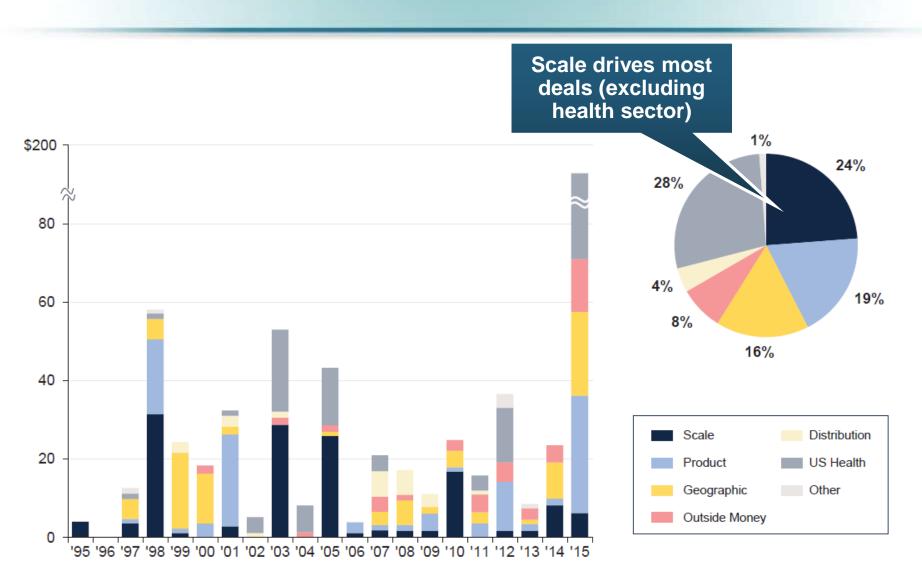




Source: Thomson Reuters as of Oct. 2015 from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "Facts vs. Sentiment: Deals in the Insurance Sector." by Aviva CEO Mark Wilson.

M&A: Deal Rationale by Dollar Amount

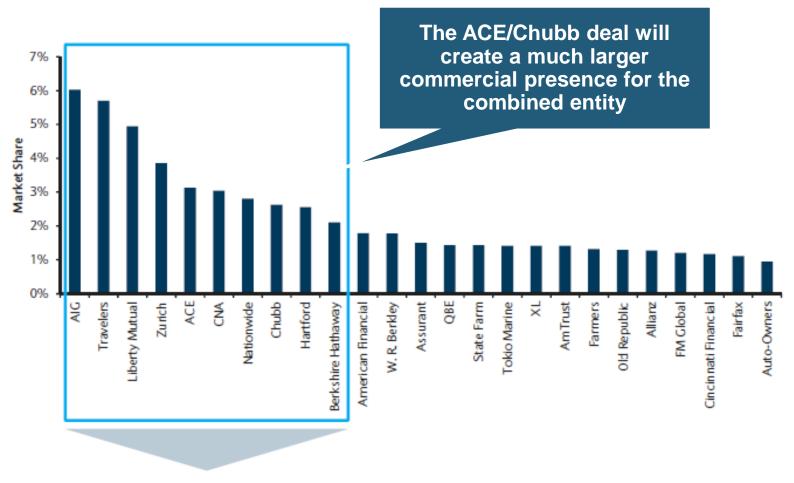




Source: SNL Financial and WCMA estimates from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "What is the Logic Behind Consolidation? And Does It Create Value? A View from Outside," by Brian Shea, Head of Willis Capital Markets & Advisory Europe (WCMA).

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





Total Top 10 Market Share = ~40%

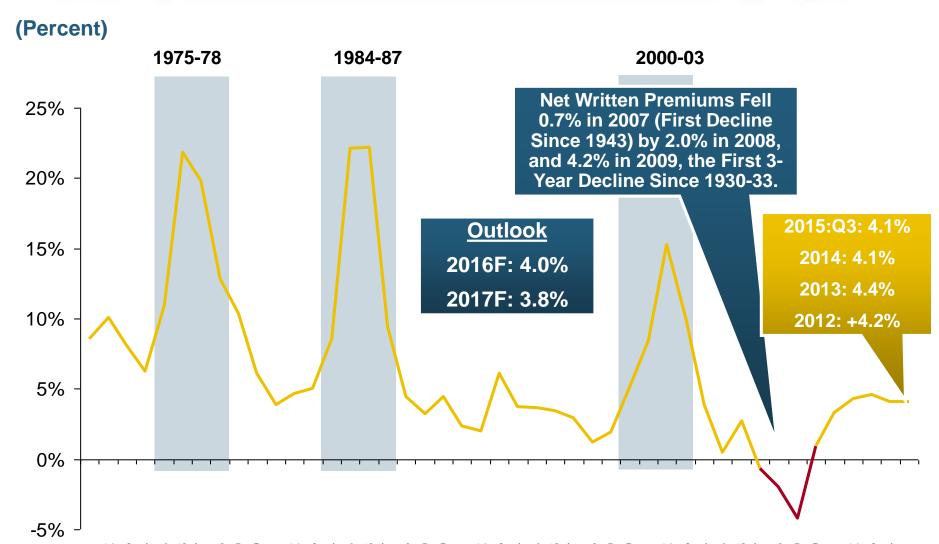


Growth

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

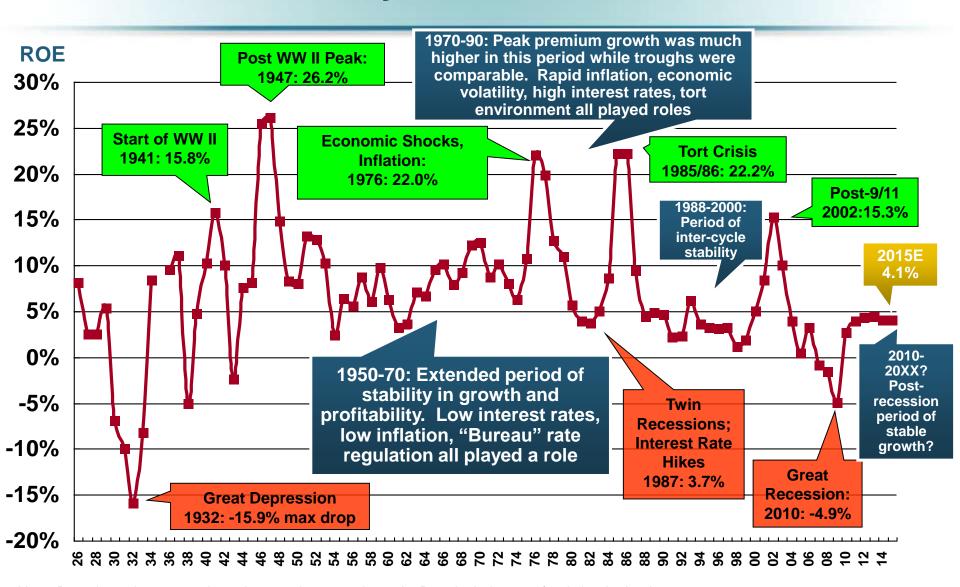
Net Premium Growth (All P/C Lines): Annual Change, 1971—2015:Q3





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

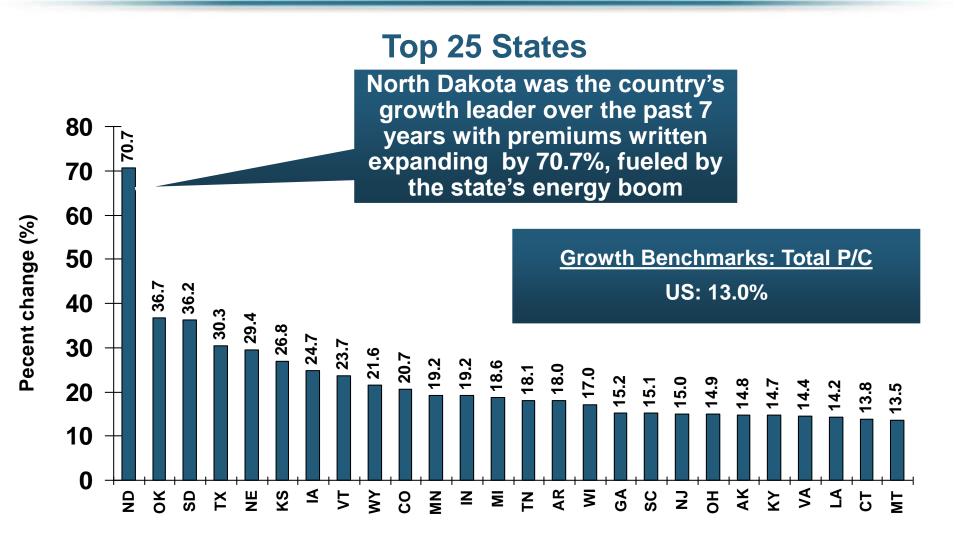




Note: Data through 1934 are based on stock companies only. Data include state funds beginning in 1998. Source: A.M. Best: Insurance Information Institute.

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

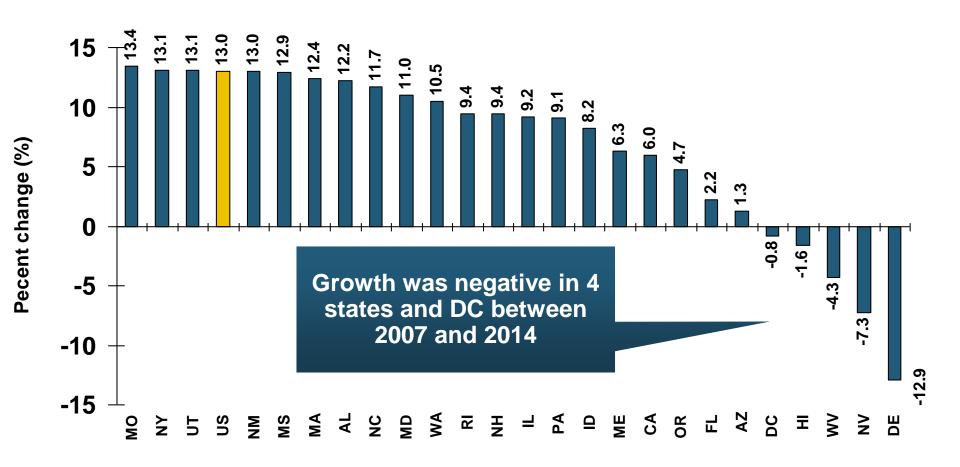




Direct Premiums Written: Total P/C Percent Change by State, 2007-2014



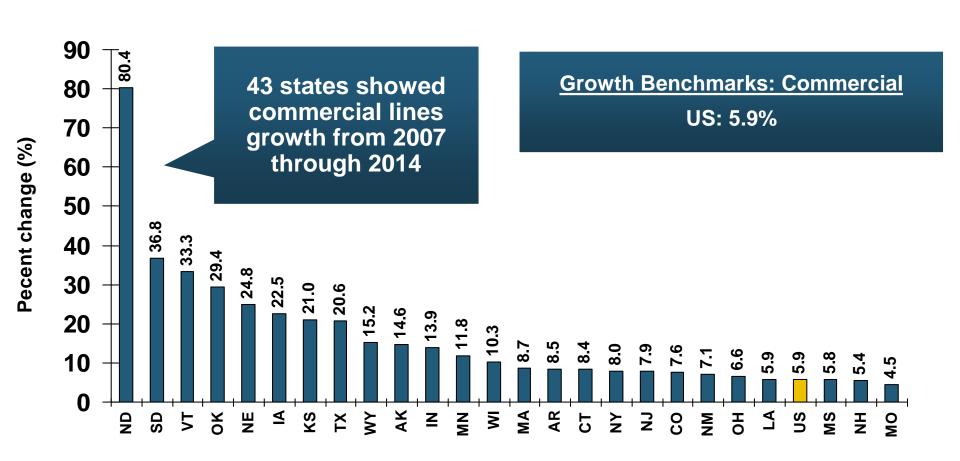
Bottom 25 States



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



Top 25 States

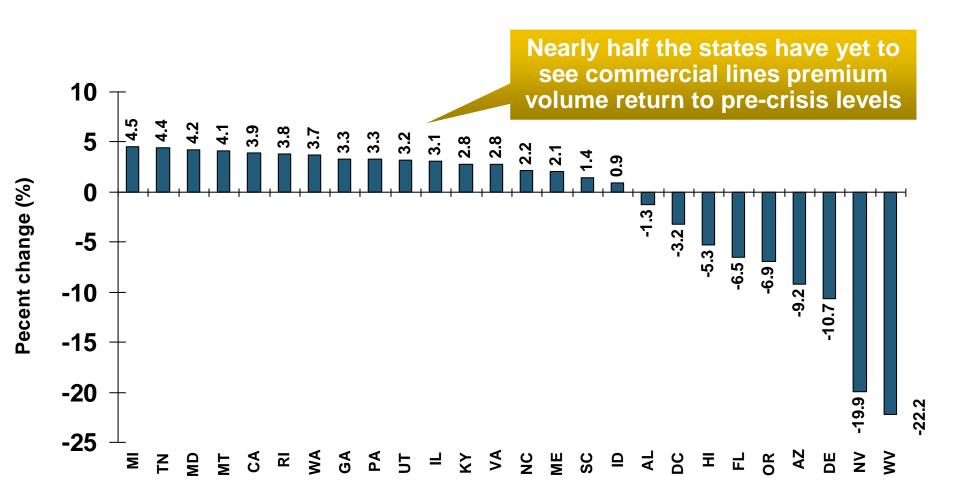


Sources: SNL Financial LLC.; Insurance Information Institute.

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



Bottom 25 States



Sources: SNL Financial LLC.; Insurance Information Institute.



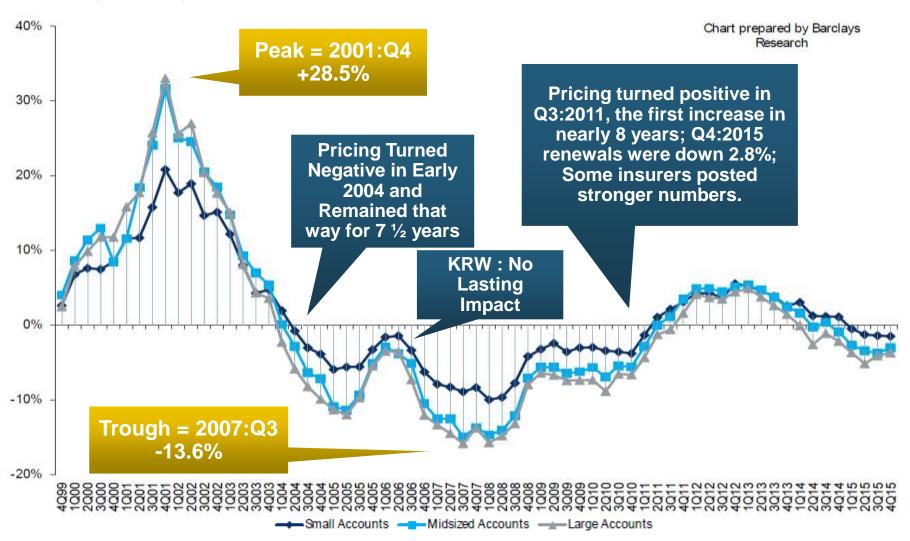
Pricing Trends

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

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



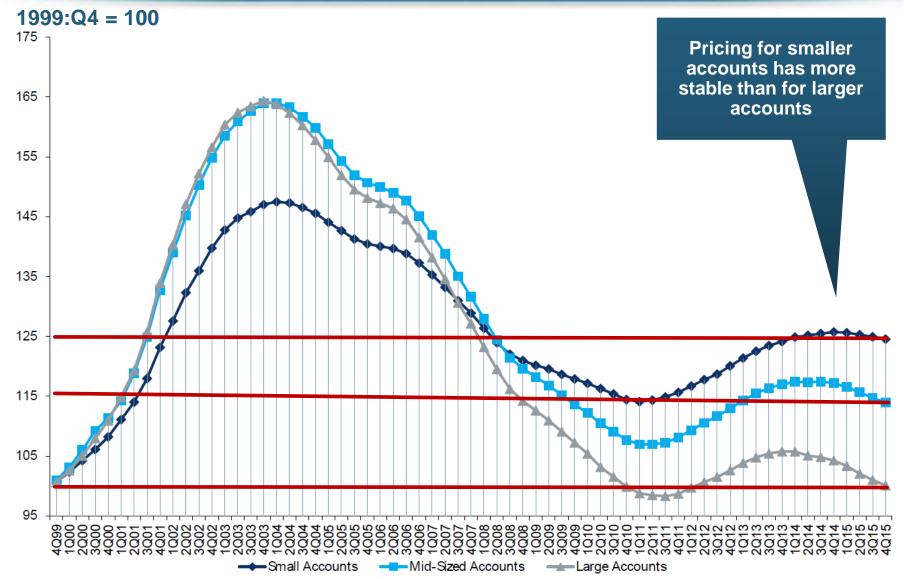
Percentage Change (%)



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

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

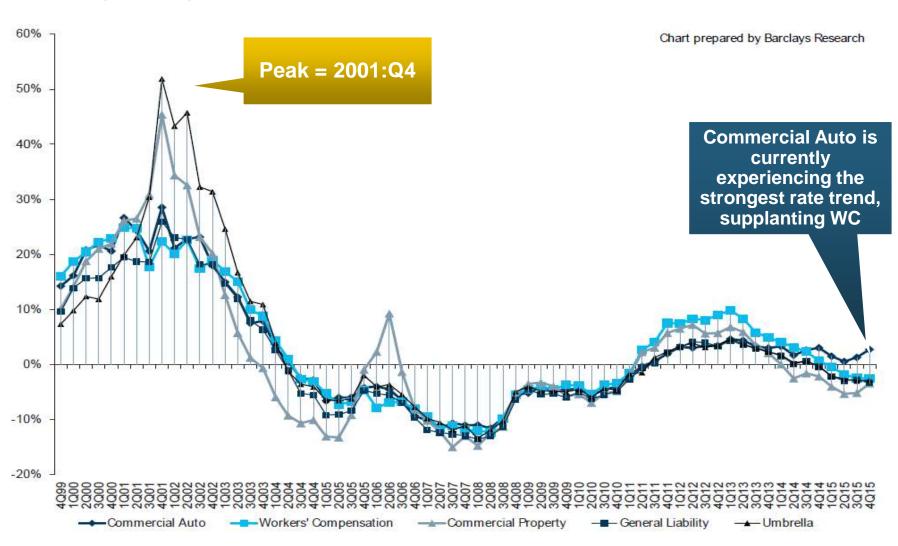




Change in Commercial Rate Renewals, by Line: 1999:Q4 to 2015:Q4



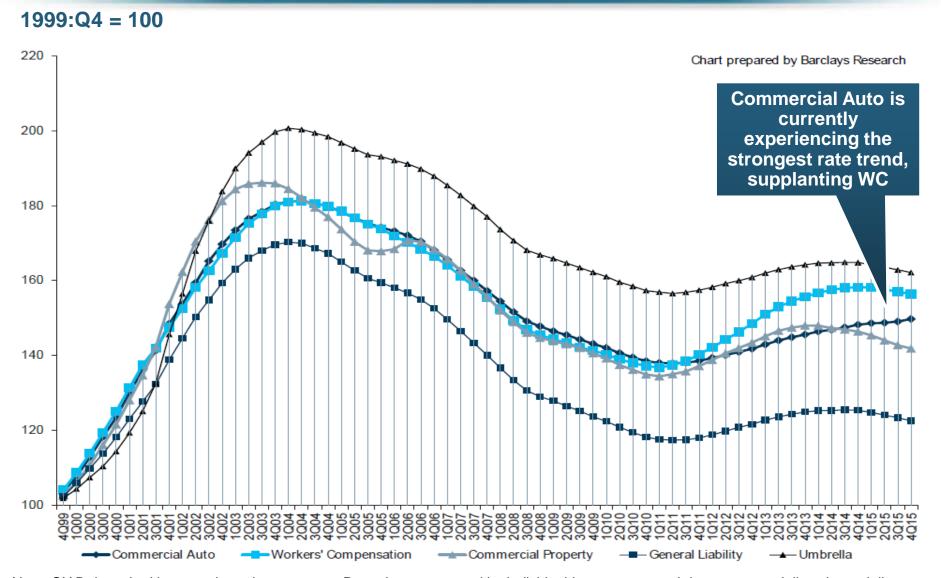
Percentage Change (%)



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



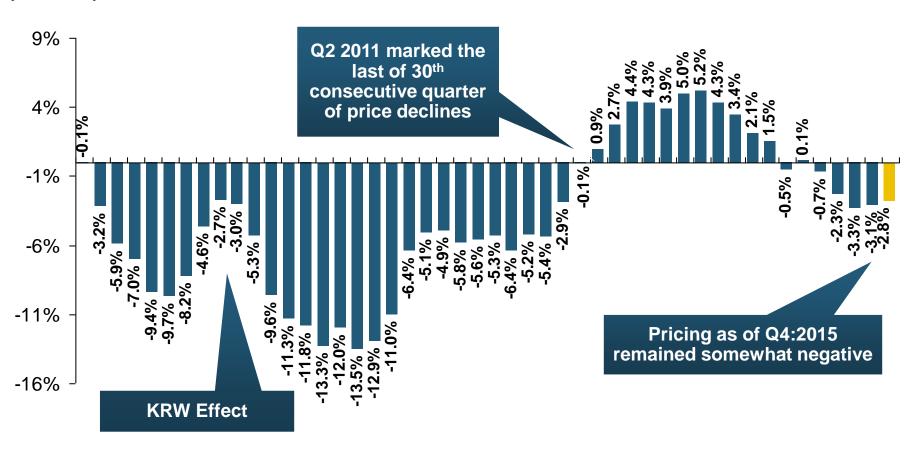


Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

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



(Percent)

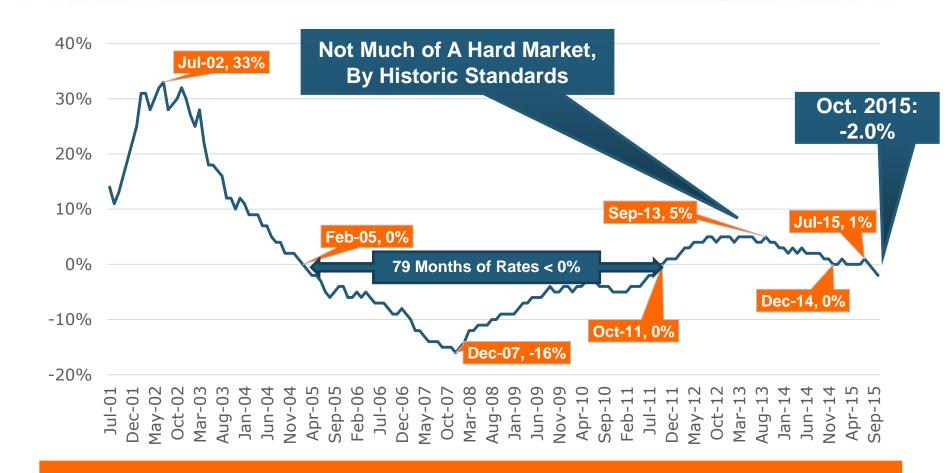


 $\begin{array}{c} -2 \% + -2$

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

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

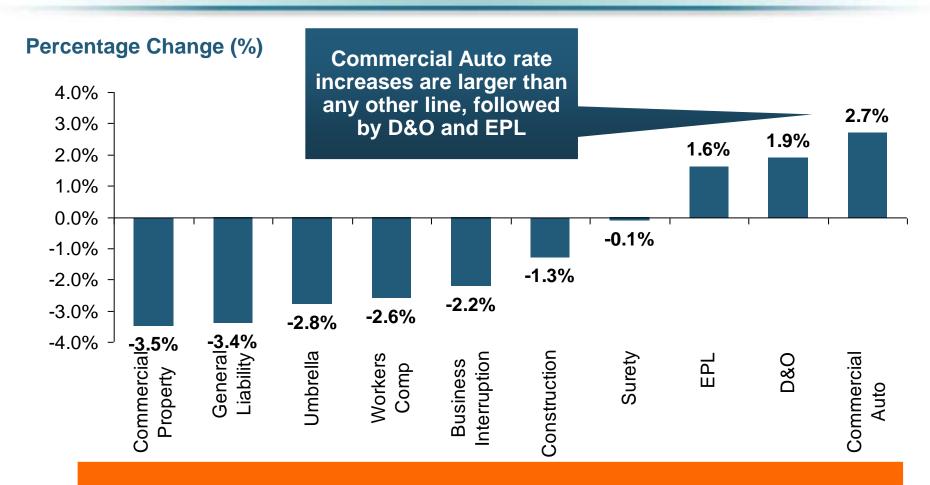




Commercial Insurance Rate Changes Are Flat to Slightly Down

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

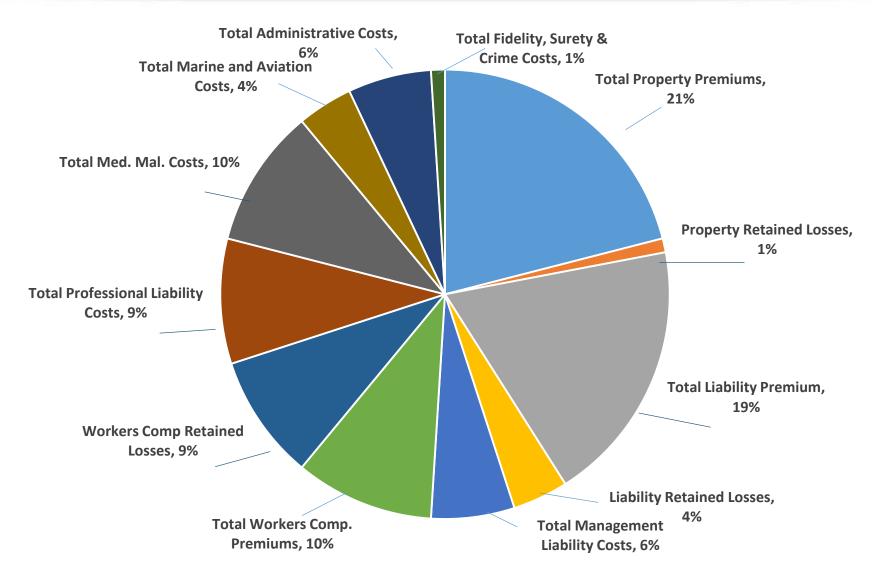




Major Commercial Lines Renewals Were Mixed to Down in Q4:2015; EPL, D&O and Commercial Auto Saw Gains

How the Risk Dollar is Spent (U.S. Firms with Revenues Under \$1 Bill)



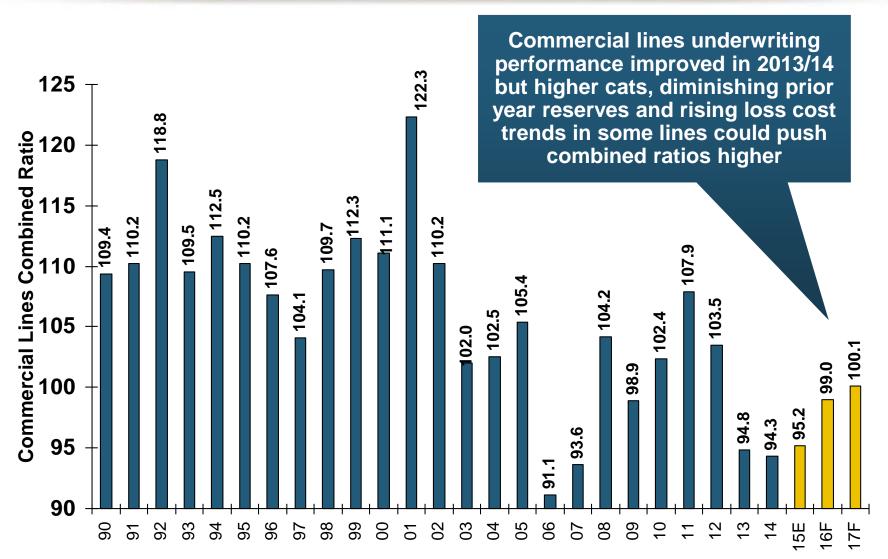




Underwriting Performance

Commercial Lines Combined Ratio, 1990-2017F*

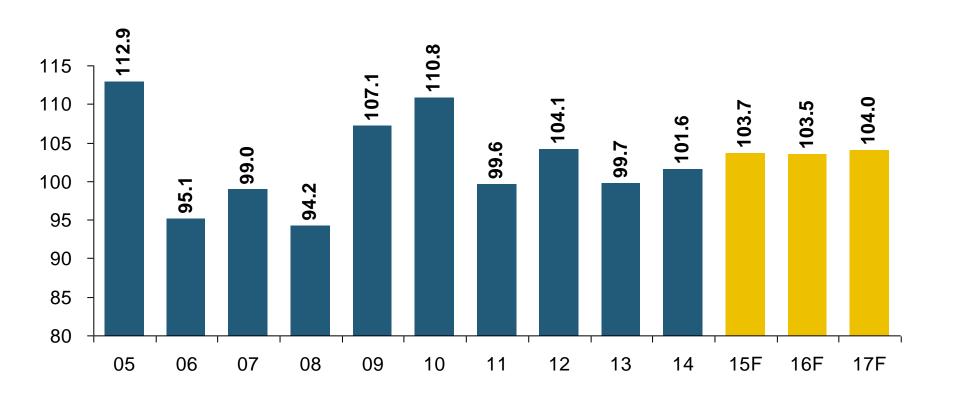




*2007-2012 figures exclude mortgage and financial guaranty segments. Source: A.M. Best (1990-2014); Conning (2015E-17F) Insurance Information Institute.

General Liability Combined Ratio: 2005–2017F

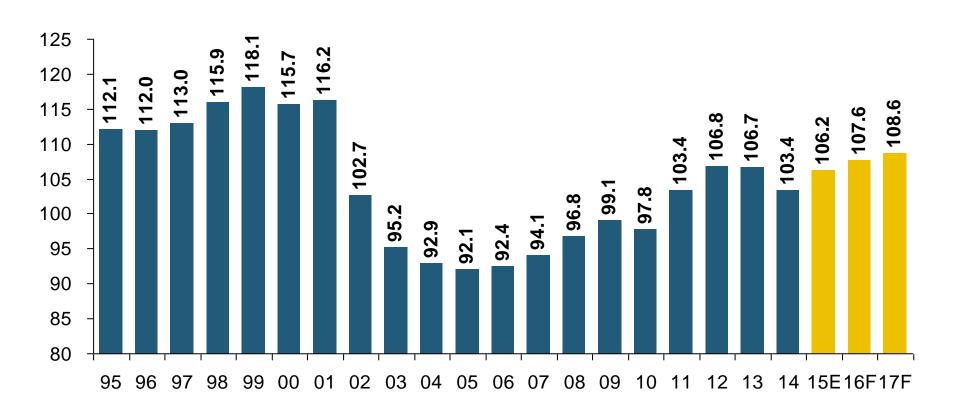




Commercial General Liability Underwriting Performance Has Been Volatile in Recent Years

Commercial Auto Combined Ratio: 1993–2017F



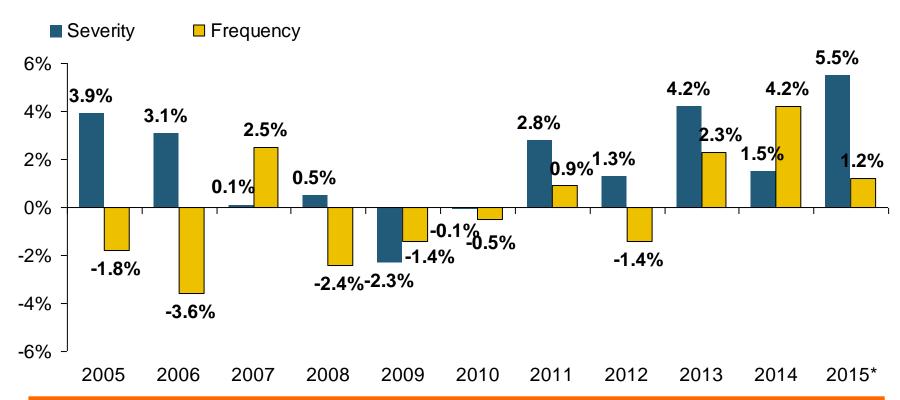


Commercial Auto Results Are Challenged as Rate Gains Barely Have Yet to Offset Adverse Frequency and Severity Trends

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



Annual Change, 2005 through 2015*

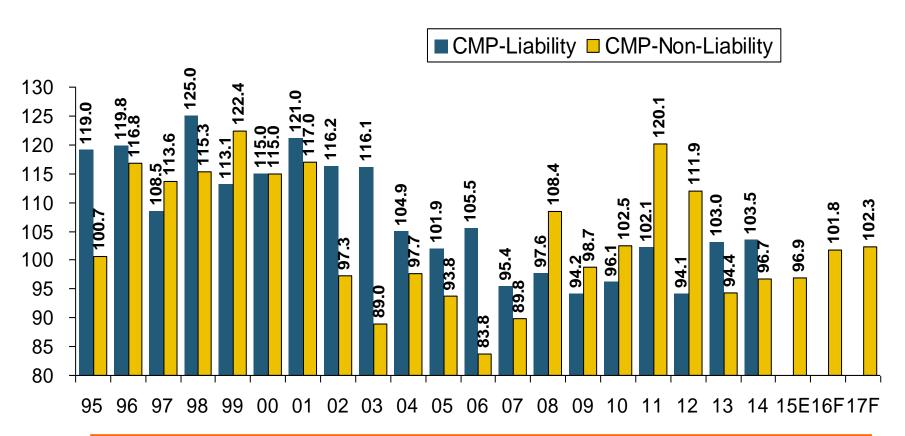


The Recession, High Fuel Prices Helped Temper Frequency and Severity, But this Trend Has Clearly Reversed, Consistent with Experience from Past Recoveries

^{*2015} figure is for the 4 quarters ending with 2015:Q3. Source: ISO/PCI *Fast Track* data; Insurance Information Institute

Commercial Multi-Peril Combined Ratio: 1995–2017F



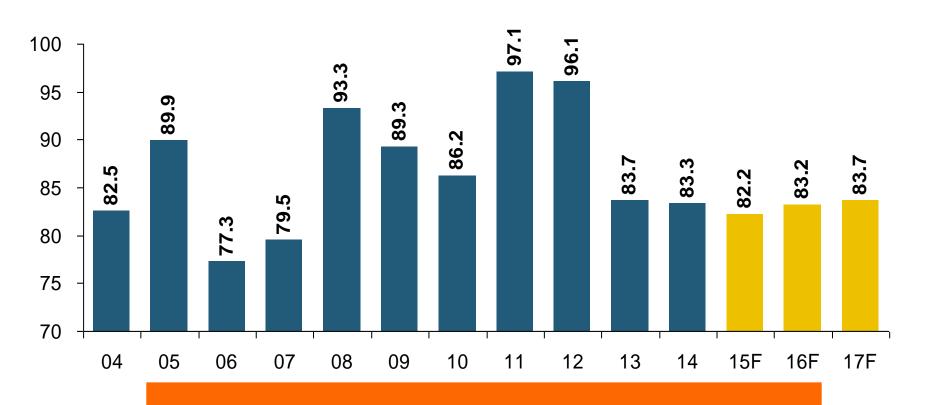


Commercial Multi-Peril Underwriting Performance is Expected to Deteriorate Slightly in the 2015 - 2017 Period Assuming Normal Catastrophe Loss Activity

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

Inland Marine Combined Ratio: 2004–2017F

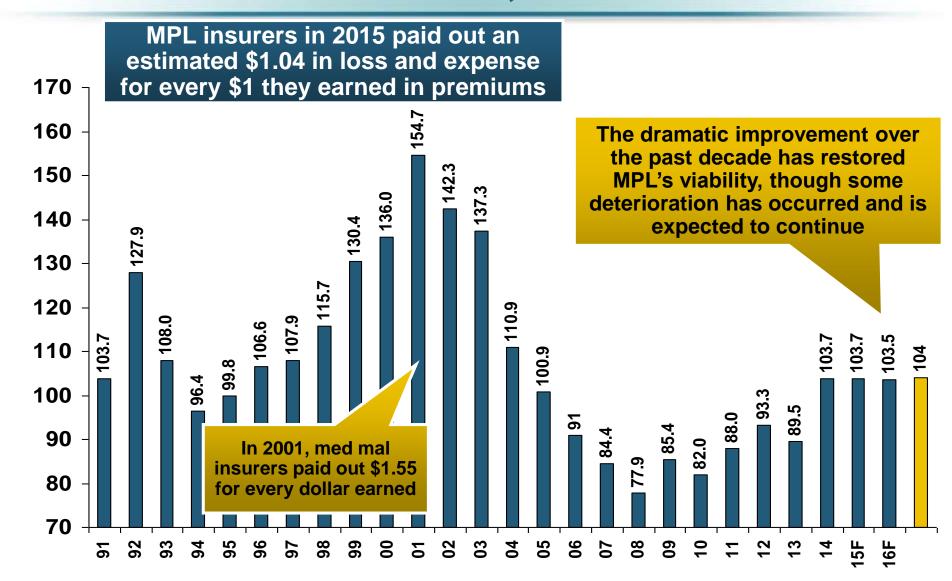




Inland Marine Underwriting Performance Has Been Consistently Strong for Many Years

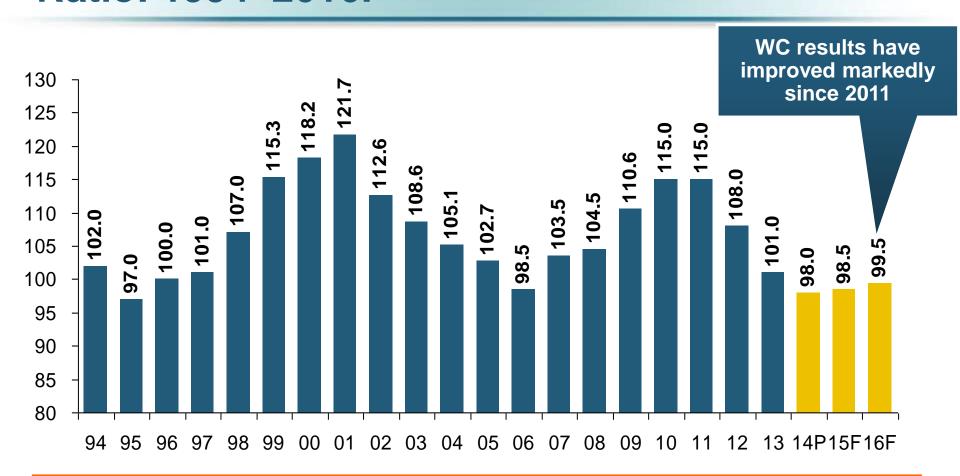
Medical Malpractice Combined Ratio vs. All Lines Combined Ratio, 1991-2017F





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.

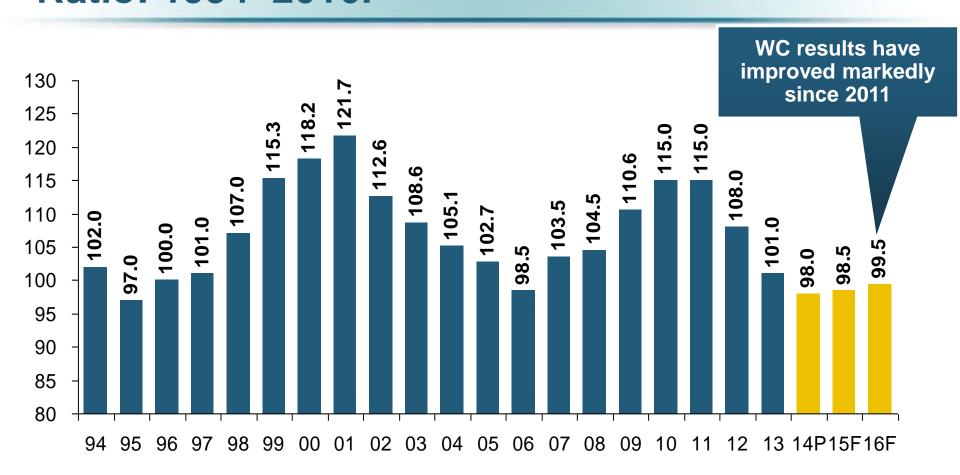


Workers Compensation Operating Environment

Workers Comp Results Have Improved Substantially in Recent Years

Workers Compensation Combined Ratio: 1994–2016F



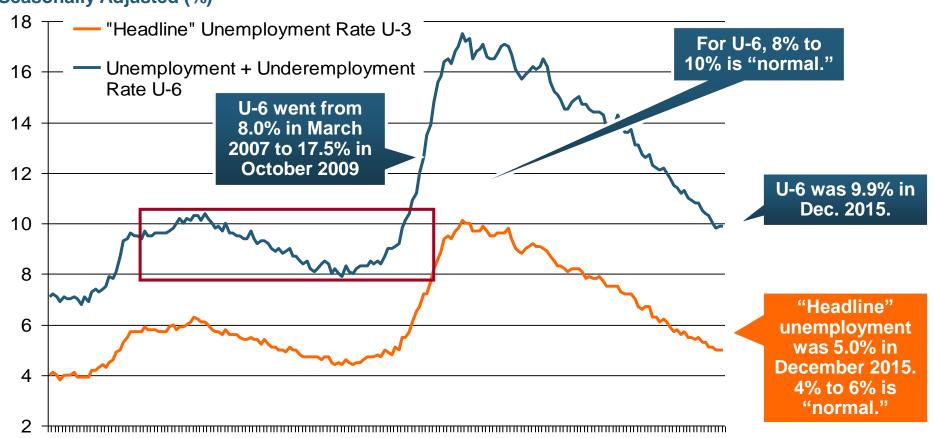


Workers Comp Results Began to Improve in 2012. Underwriting Results Deteriorated Markedly from 2007-2010/11 and Were the Worst They Had Been in a Decade.

Unemployment and Underemployment Rates: Still Falling



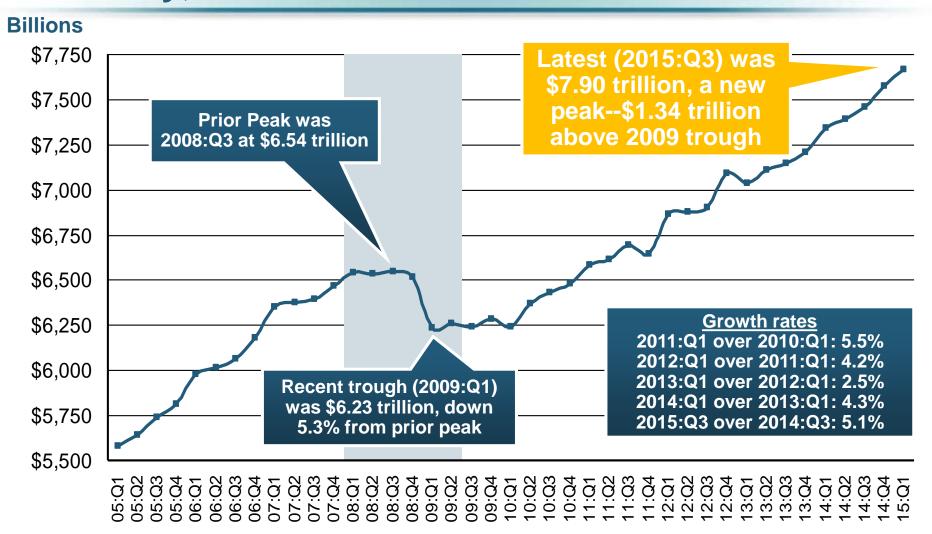




High unemployment and underemployment still constrain overall economic growth, but the job market is now clearly improving.

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



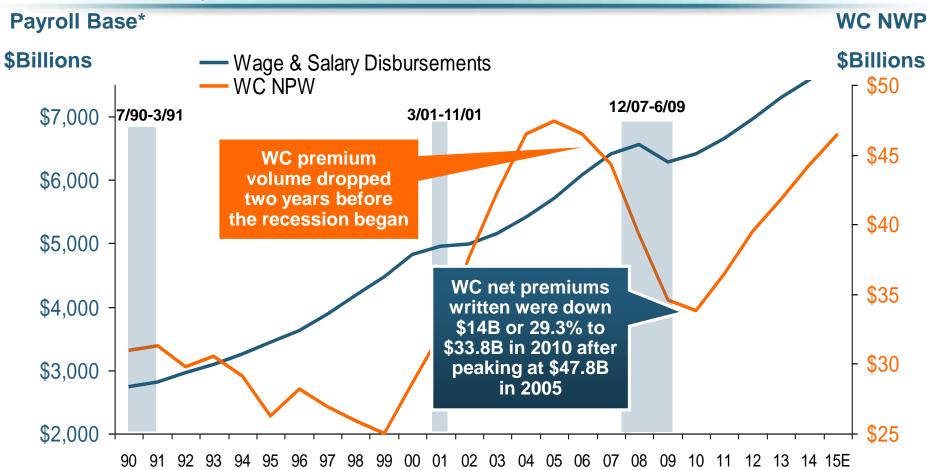


Note: Recession indicated by gray shaded column. Data are seasonally adjusted annual rates.

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

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





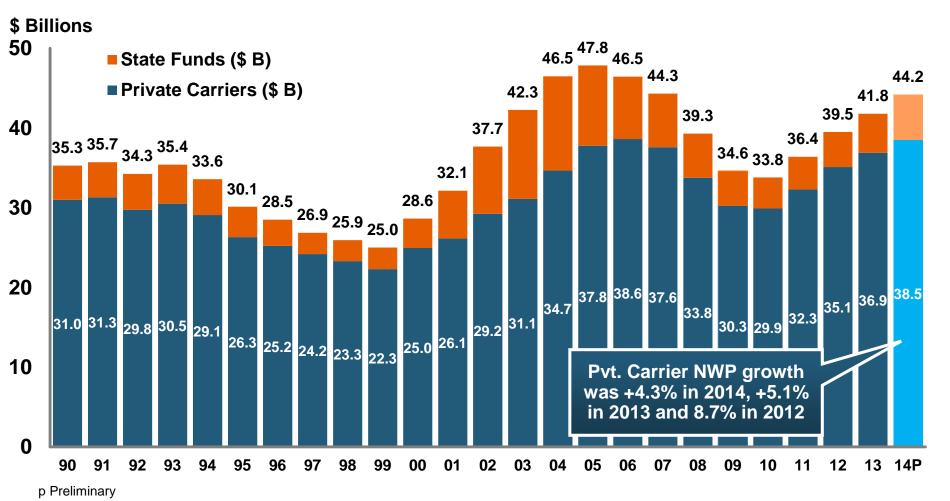
Continued Payroll Growth and Rate Gains Suggest WC NWP Will Grow Again in 2016

^{*}Private employment; Shaded areas indicate recessions. WC premiums are from NCCI through 2014; I.I.I. estimate for 2015. Sources: NBER (recessions); Federal Reserve Bank of St. Louis at http://research.stlouisfed.org/fred2/series/WASCUR (annualized as of Q3 2015); NCCI; I.I.I.

Workers Compensation Premium: Fourth Consecutive Year of Increase



Net Written Premium



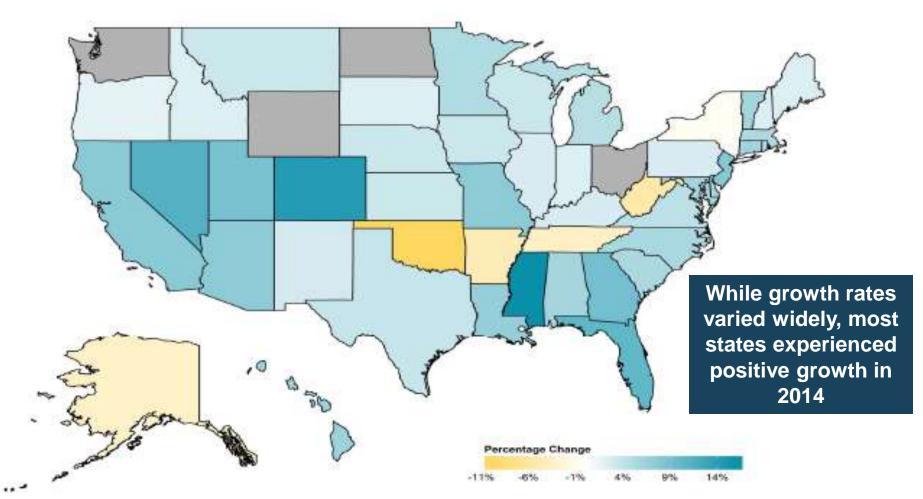
Source: NCCI from Annual Statement Data.

Includes state insurance fund data for the following states: AZ, CA, CO, HI, ID, KY, LA, MD, MO, MT, NM, OK, OR, RI, TX, UT. Each calendar year total for State Funds includes all funds operating as a state fund that year.

2014 Workers Compensation Direct Written Premium Growth, by State*



PRIVATE CARRIERS: Overall 2014 Growth = +4.6%



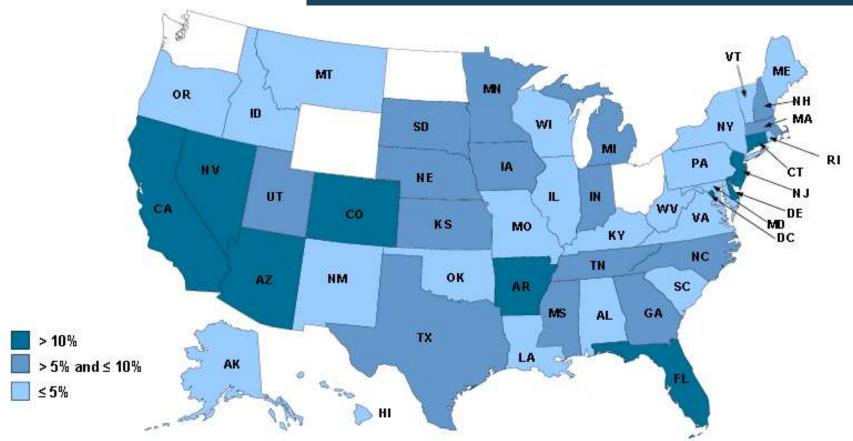
^{*}Excludes monopolistic fund states (in gray): OH, ND, WA and WY. Source: NCCI.

2013 Workers Compensation Direct Written Premium Growth, by State*



PRIVATE CARRIERS: Overall 2013 Growth = +5.4%





^{*}Excludes monopolistic fund states (in white): OH, ND, WA and WY. Source: NCCI.

Workers Compensation Components of Written Premium Change, 2013 to 2014



Written Premium Change from 2013 to 2014	
Net Written Premium—Countrywide	+4.6%
Direct Written Premium—Countrywide	+4.6%
Direct Written Premium—NCCI States	+4.5%
Components of DWP Change for NCCI States	
Change in Carrier Estimated Payroll	+4.7%
Change in Bureau Loss Costs and Mix	-1.4%
Change in Carrier Discounting	+0.4%
Change in Other Factors	+0.8%
Combined Effect	+4.5%

Growth is now almost entirely payroll driven

Sources: Countrywide: Annual Statement data.

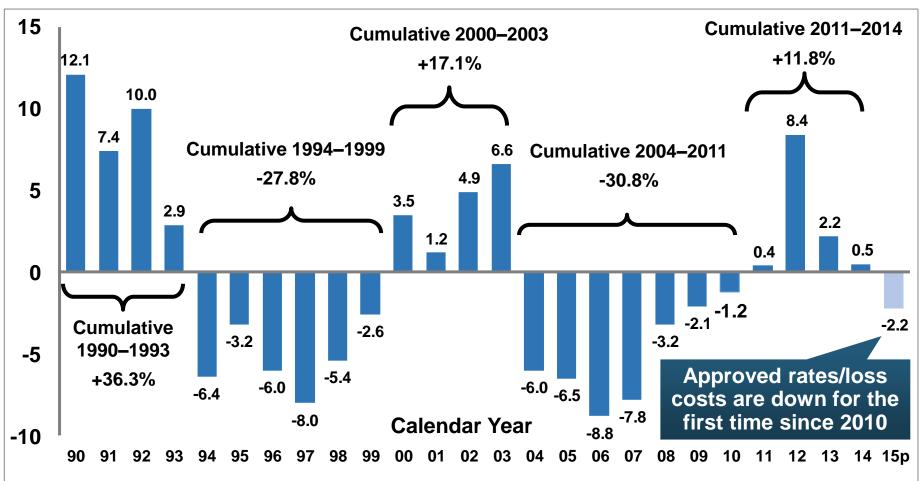
NCCI States: Annual Statement Statutory Page 14 for all states where NCCI provides ratemaking services.

Components: NCCI Policy data.

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







^{*}States approved through 4/24/15.

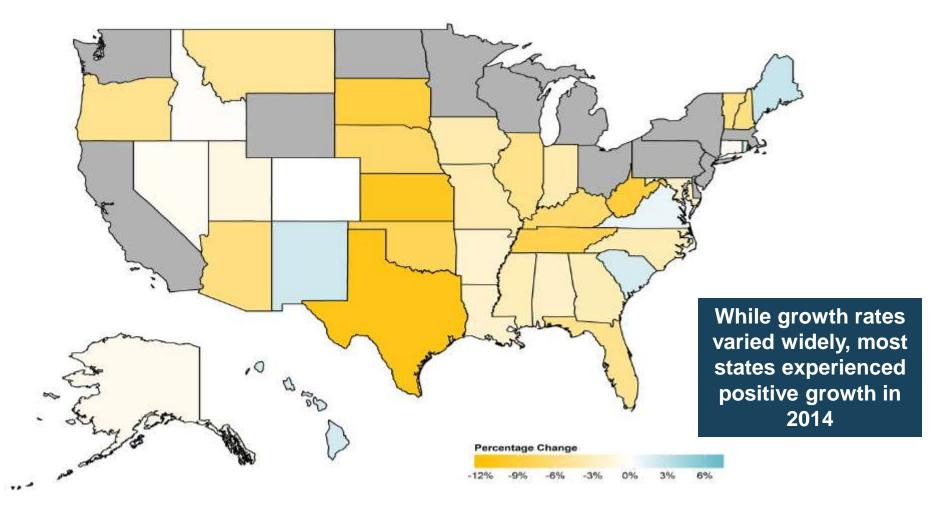
Note: Bureau premium level changes are countrywide approved changes in advisory rates, loss costs and assigned risk rates as filed by applicable rating organization, relative to those previously approved.

Source: NCCI.

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



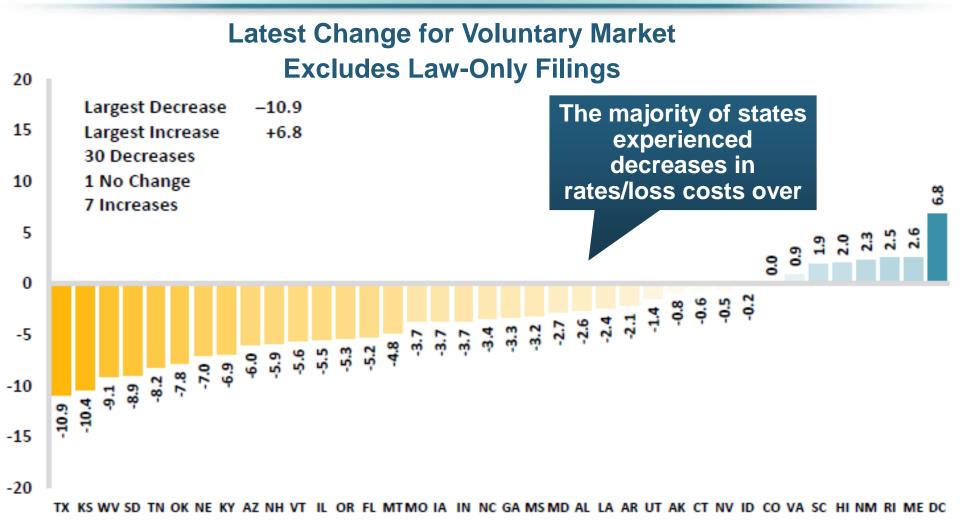
Latest Change for Voluntary Market



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

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



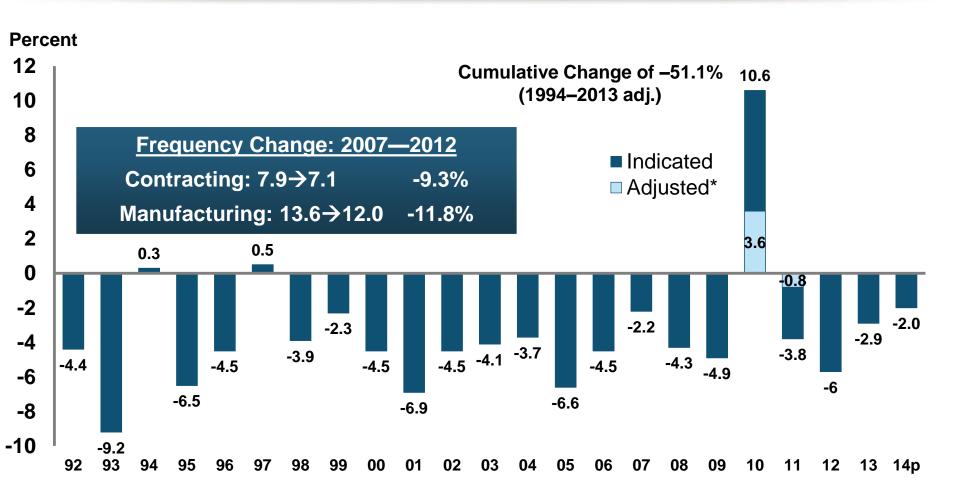


Note: Premium level changes are approved changes are approved or filed and pending changes in advisory rates, loss costs and rating values as of 4/24/15 as filed by applicable rating organization, relative to those previously approved. SC is filed and pending. IN and NC are in cooperation with state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

Source: NCCL

Workers Compensation Lost-Time Claim Frequency Declined in 2014





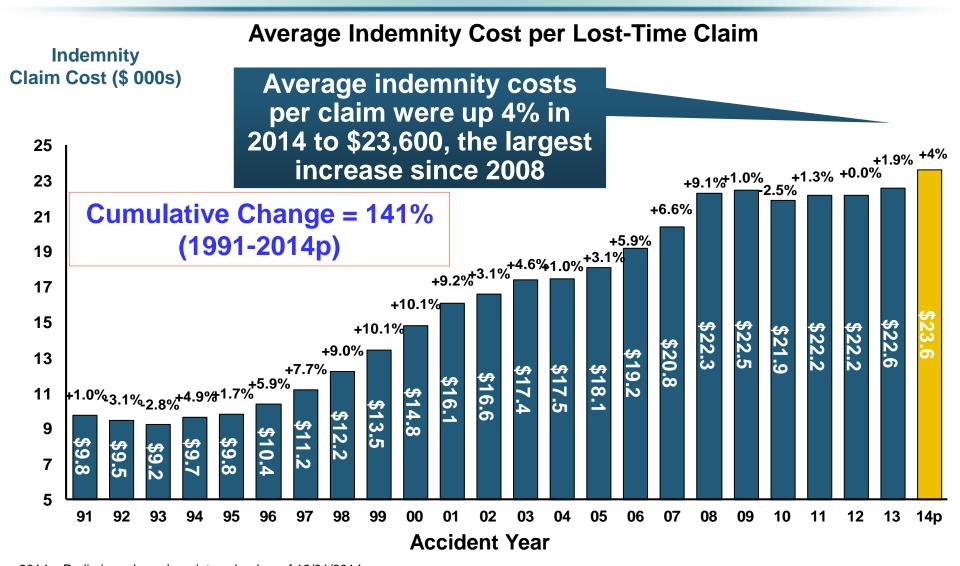
*Adjustments primarily due to significant audit activity. 2014p: Preliminary based on data valued as of 12/31/2014.

Accident Year

Source: NCCI Financial Call data, developed to ultimate and adjusted to current wage an voluntary loss cost level; Excludes high deductible policies: 1994-2013: Based on data through 12/31/13. Data for all states where NCCI provides ratemaking services, excluding WV. Frequency is the number of lost-time claims per \$1M pure premium at current wage and voluntary loss cost level

Workers Comp Indemnity Claim Costs: Modest Increase in 2014



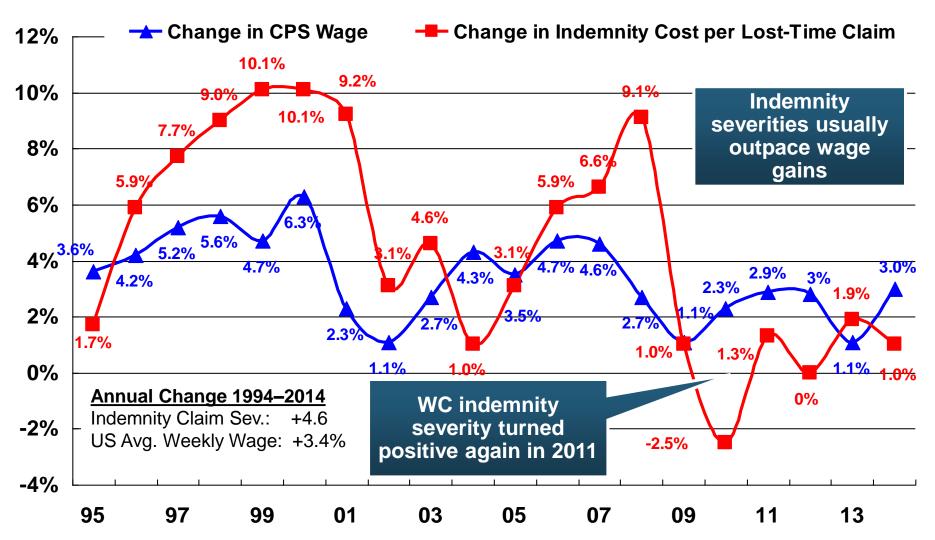


2014p: Preliminary based on data valued as of 12/31/2014. 1991-2013: Based on data through 12/31/2013, developed to ultimate

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

WC Indemnity Severity vs. Wage Inflation, 771



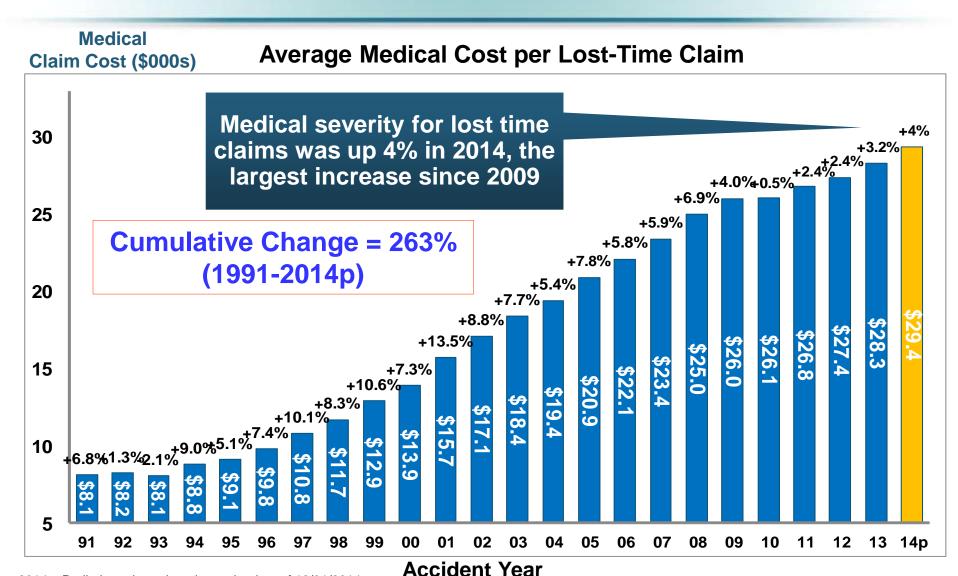


2014p: Preliminary based on data valued as of 12/31/2014; 1991-2010: Based on data through 12/31/2010, developed to ultimate. Based on the states where NCCI provides ratemaking services. Excludes the effects of deductible policies. CPS = Current Population Survey.

Source: NCCI

Workers Compensation Medical Severity: Moderate Increase in 2014





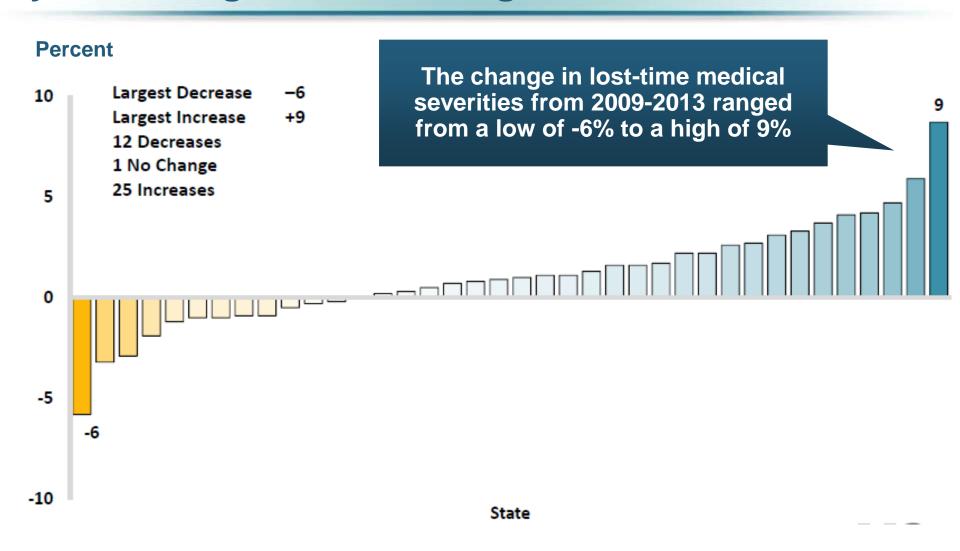
2014p: Preliminary based on data valued as of 12/31/2014.

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

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

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



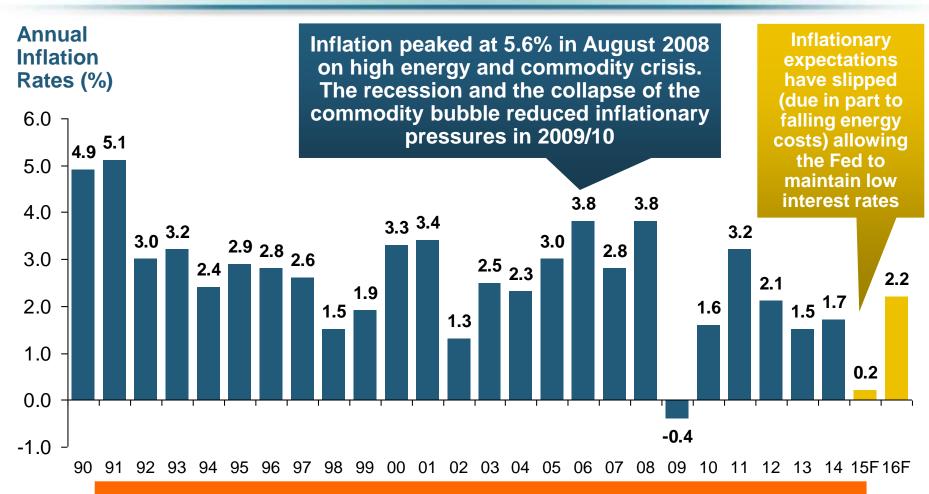


Source: NCCI's Analysis of Frequency and Severity of Claims Across the Country as of 12/31/13 on ncci.com. Values reflect methodology and state data underlying the most recent rate/lost cost filing.

TX changes are for the years 2010-2013.

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





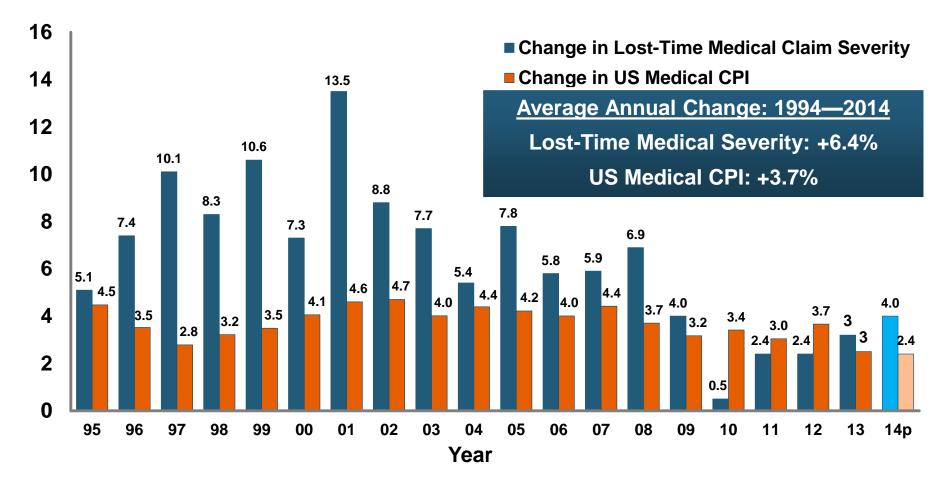
Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

Workers Compensation Change in Medical Severity



Comparison to Change in Medical Consumer Price Index (CPI)

Percent Change



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

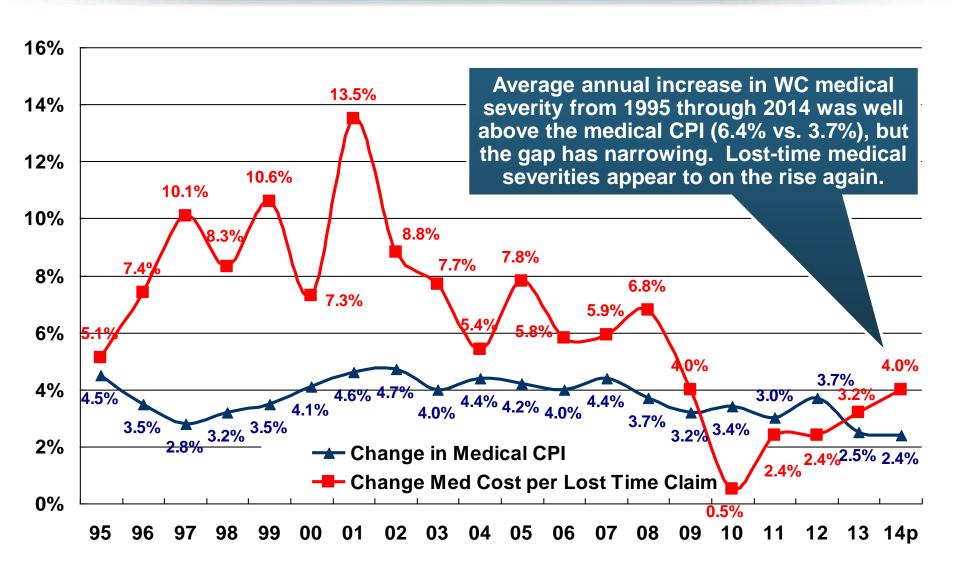
Sources: Severity: 995-2013: Based on data through 12/31/2013, developed to ultimate

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

US Medical CPI: US Bureau of Labor Statistics.

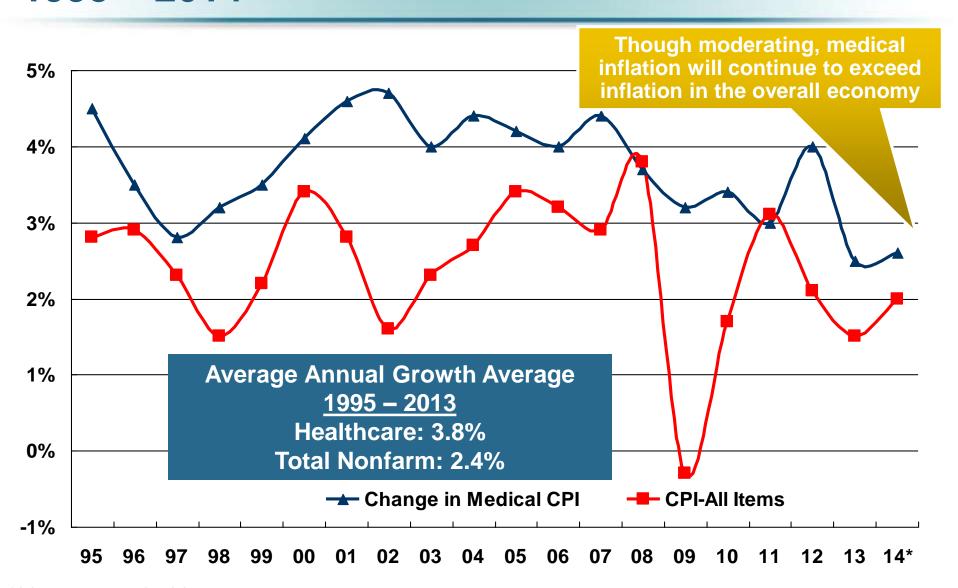
WC Medical Severity Generally Outpaces the Medical CPI Rate





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



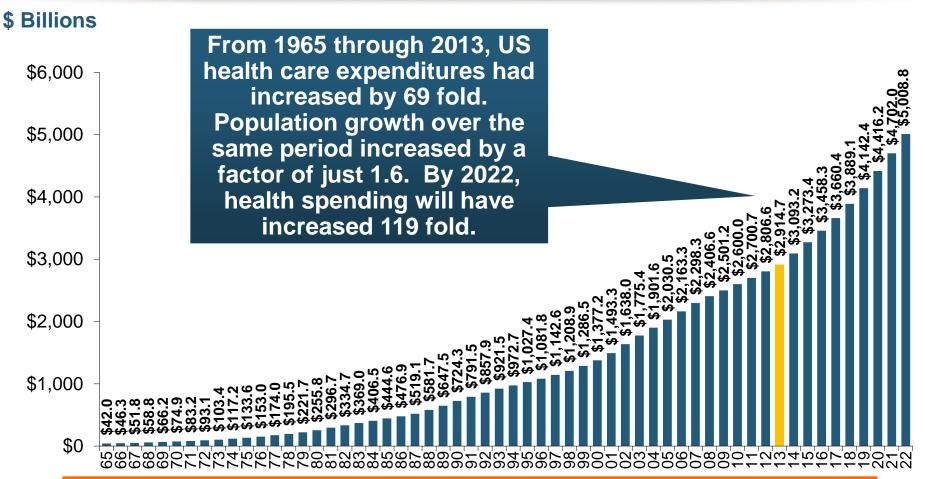


^{*}July 2014 compared to July 2013.

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

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



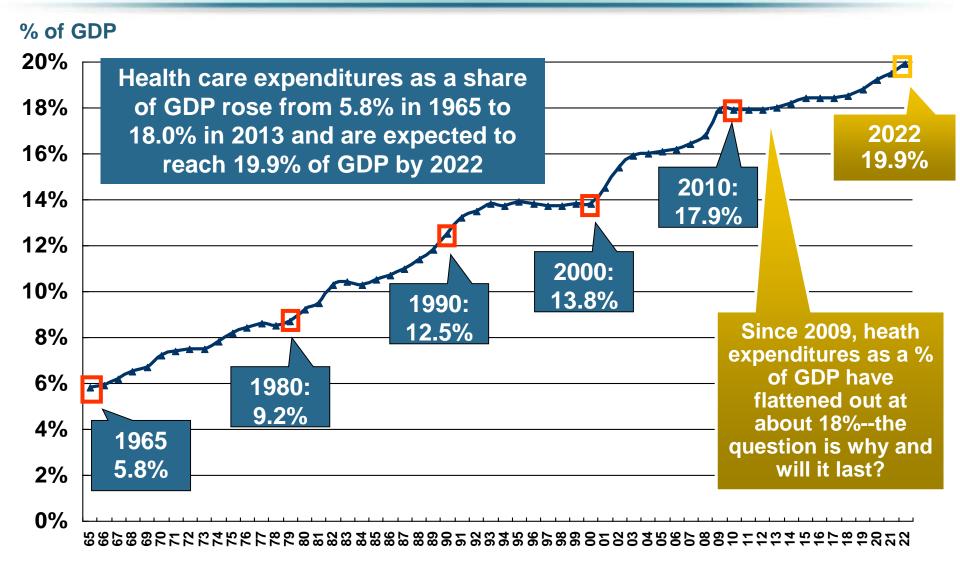


U.S. health care expenditures have been on a relentless climb for most of the past half century, far outstripping population growth, inflation of GDP growth

Sources: Centers for Medicare & Medicaid Services, Office of the Actuary at <a href="http://www.cms.gov/Research-Statistics-Data-and-Systems/S

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





Sources: Centers for Medicare & Medicaid Services, Office of the Actuary at <a href="http://www.cms.gov/Research-Statistics-Data-and-Systems/S

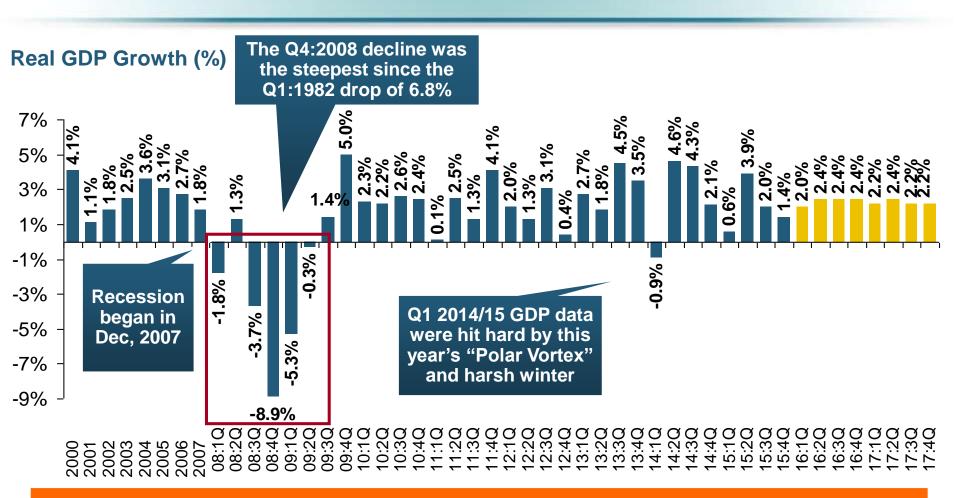


THE ECONOMY

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

US Real GDP Growth*





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

^{*} Estimates/Forecasts from Blue Chip Economic Indicators.

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



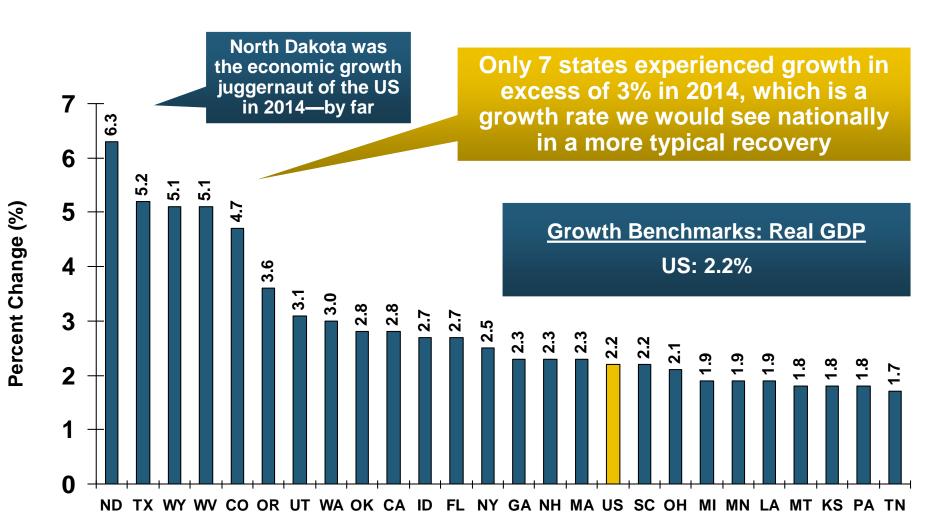


perhaps expecting a recession in that time frame.

Sources: Blue Chip Economic Indicators, Feb. 2016 issue for 2016-2017; Oct. 2015 issue for 2018-2021; I.I.I.

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

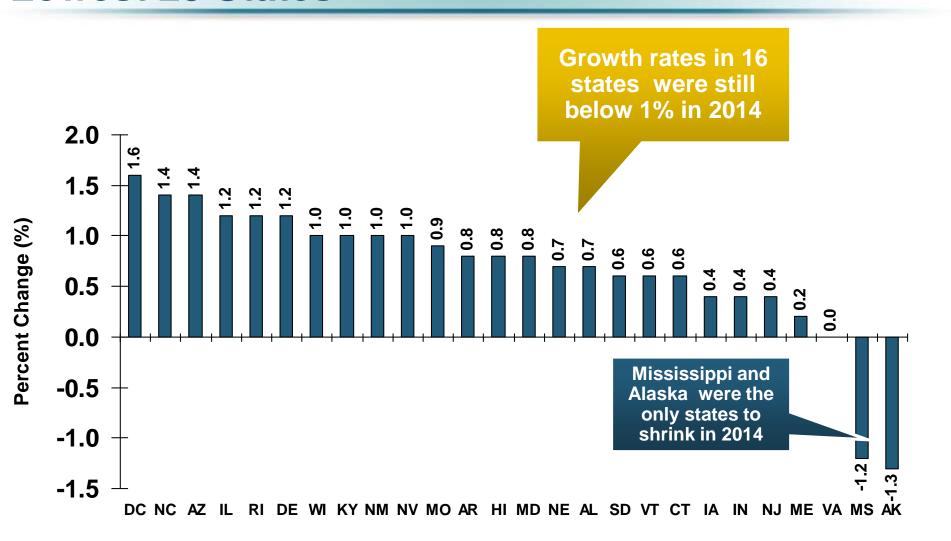




^{*}Advance statistics

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

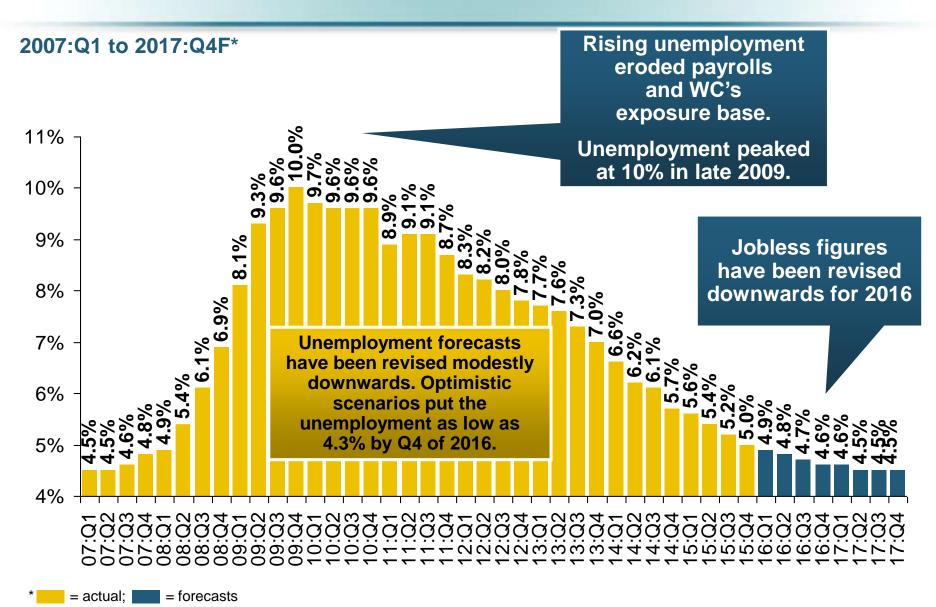




^{*}Advance statistics
Sources: US Bureau of Economic Analysis; Insurance Information Institute.

US Unemployment Rate Forecast





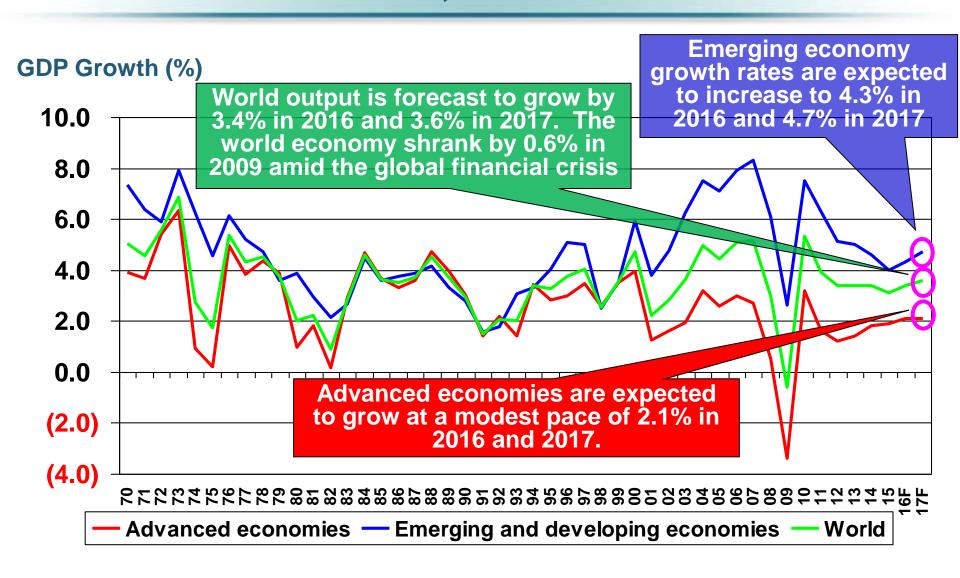


Global Insurance Market Comparisons

US Will Generate More Premium Volume than Any Other Country Premium Growth in Emerging Economies Will Slow Due to Economic Weakness

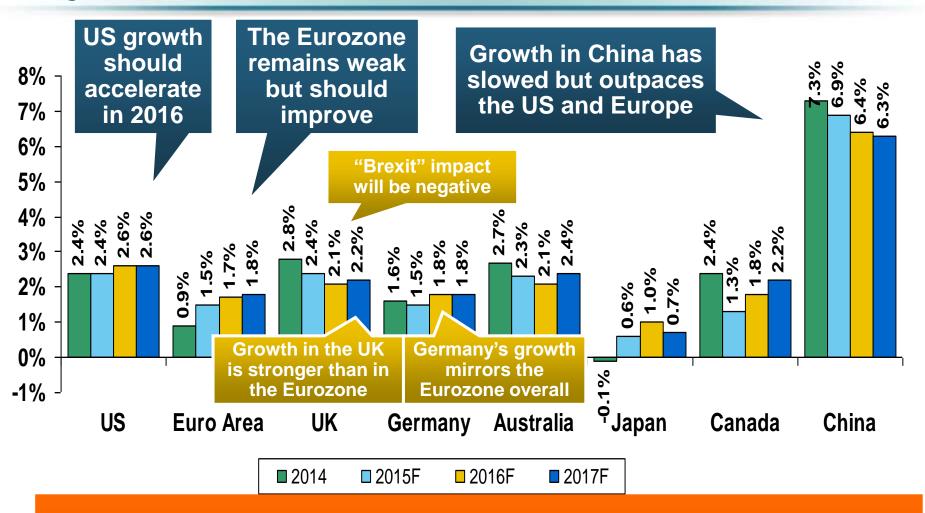
GDP Growth: Advanced & Emerging Economies vs. World, 1970-2016F





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



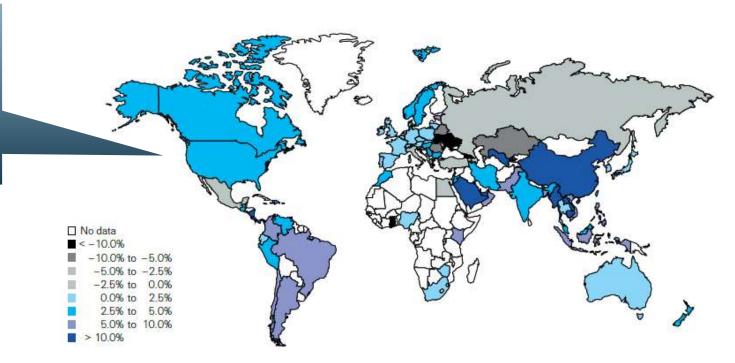


Growth Prospects Vary Widely by Region; US and the UK Lead the Advanced Economies; Germany Leads in the Euro Area; China Has Slowed

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



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

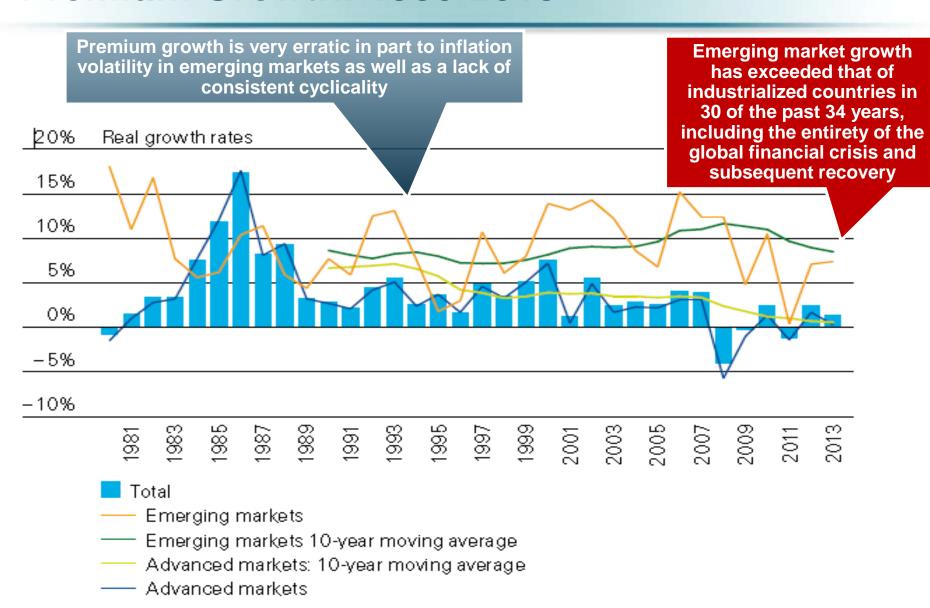


Market	Life	Non-Life	Total
Advanced	3.8	1.8	2.9
Emerging	6.9	8.0	7.4
World	4.3	2.9	3.7

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

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





Source: Swiss Re, sigma, No. 3/2014.

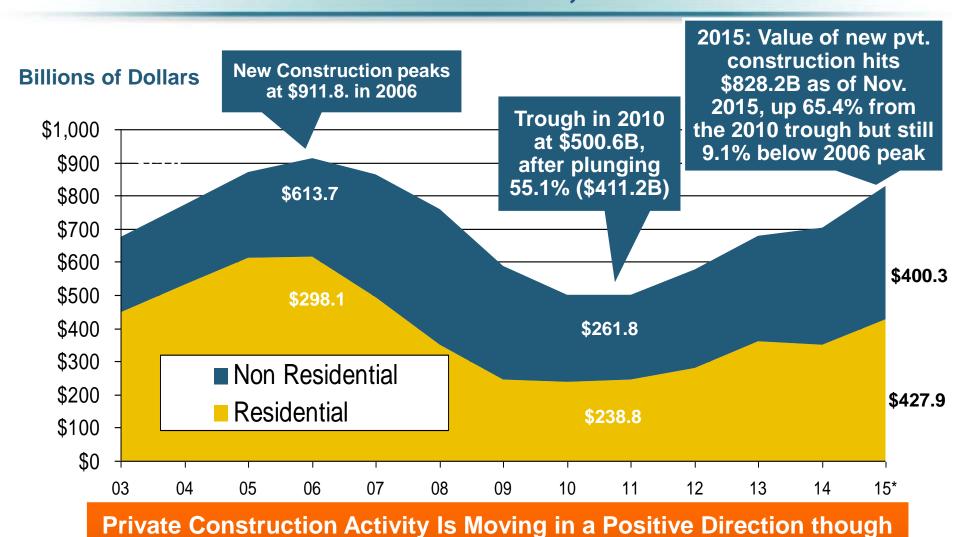


CONSTRUCTION INDUSTRY OVERVIEW & OUTLOOK

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

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



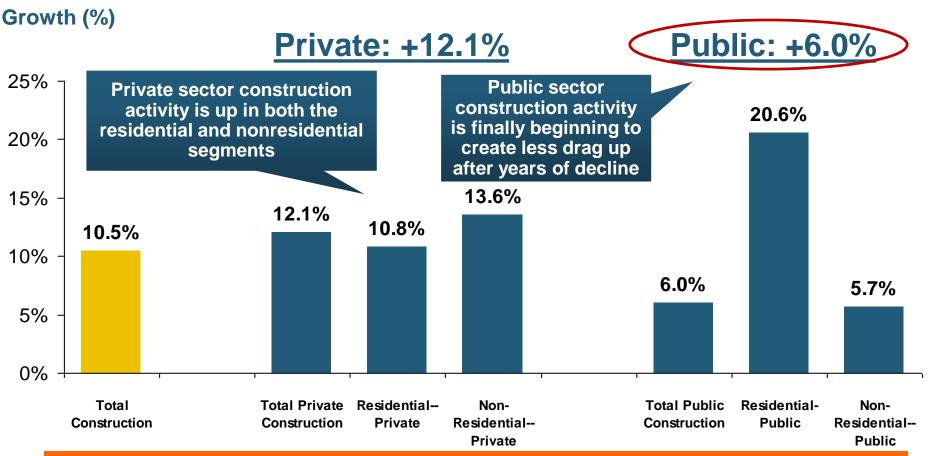


Remains Well Below Pre-Crisis Peak; Residential Dominates

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

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



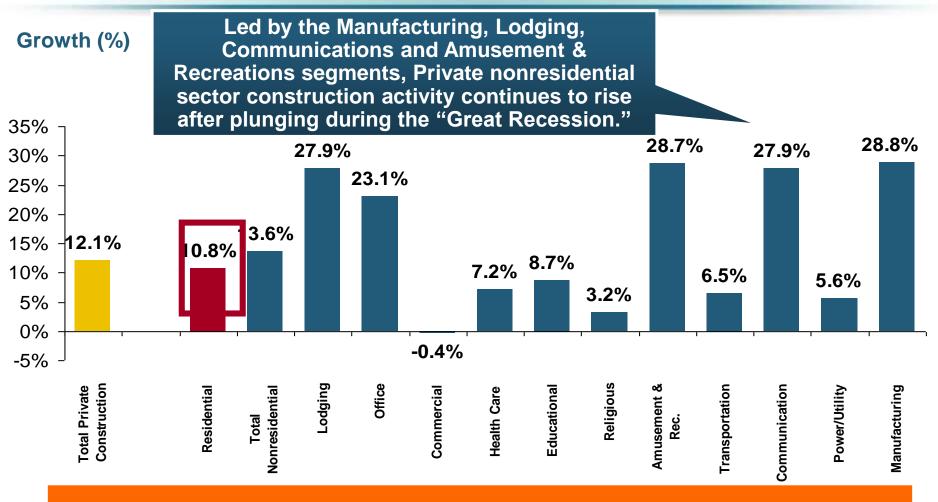


Overall Construction Activity is Up Again After Languishing in Early 2015; State/Local Sector Government Sector May Be Recovering as Budget Woes Ease in Some Jurisdictions

^{*}seasonally adjusted data through November.
Source: U.S. Census Bureau, http://www.census.gov/construction/c30/c30index.html; Insurance Information Institute.

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



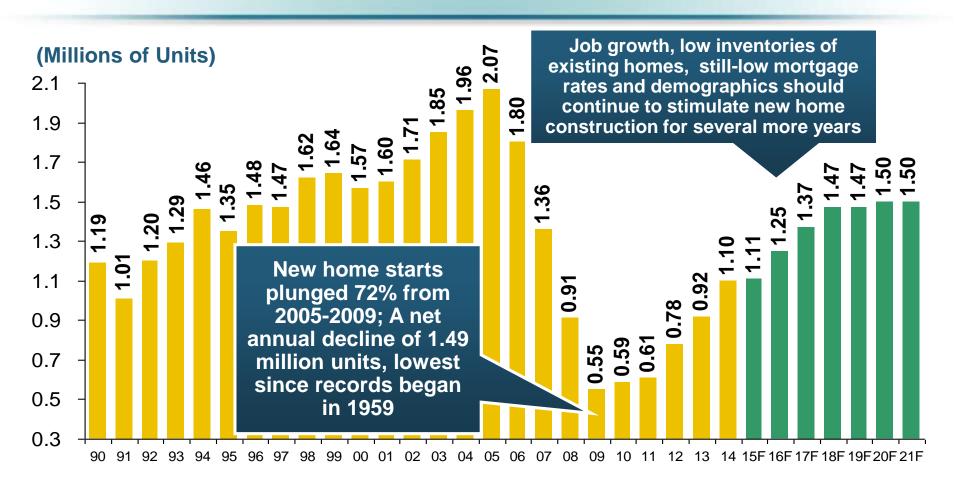


Private Construction Activity is Up in Most Segments in the Second Half of 2015; Expansion Should Continue

^{*}seasonally adjusted through Nov. 2015. Source: U.S. Census Bureau, http://www.census.gov/construction/c30/c30index.html; Insurance Information Institute.

New Private Housing Starts, 1990-2021F

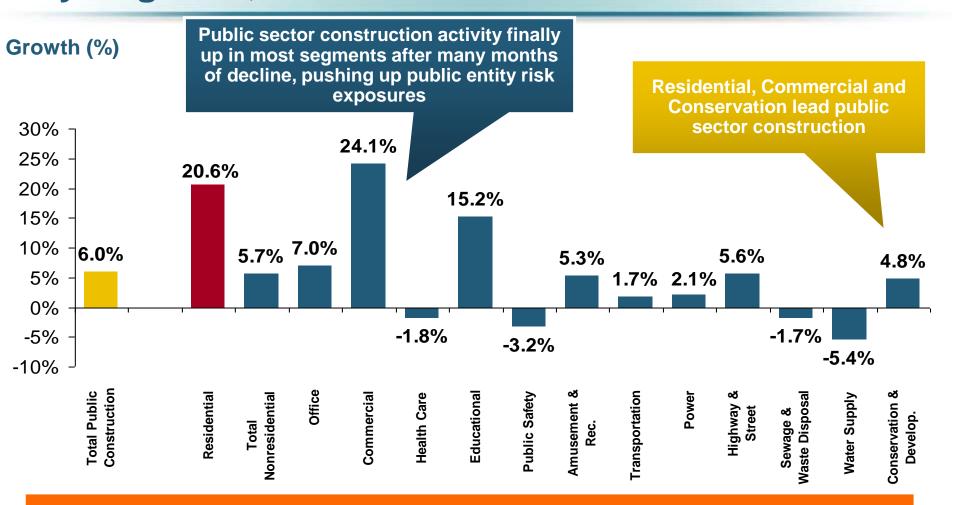




Insurers Are Continue to See Meaningful Exposure Growth in the Wake of the "Great Recession" Associated with Home Construction: Construction Risk Exposure, Surety, Commercial Auto; Potent Driver of Workers Comp Exposure

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





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

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



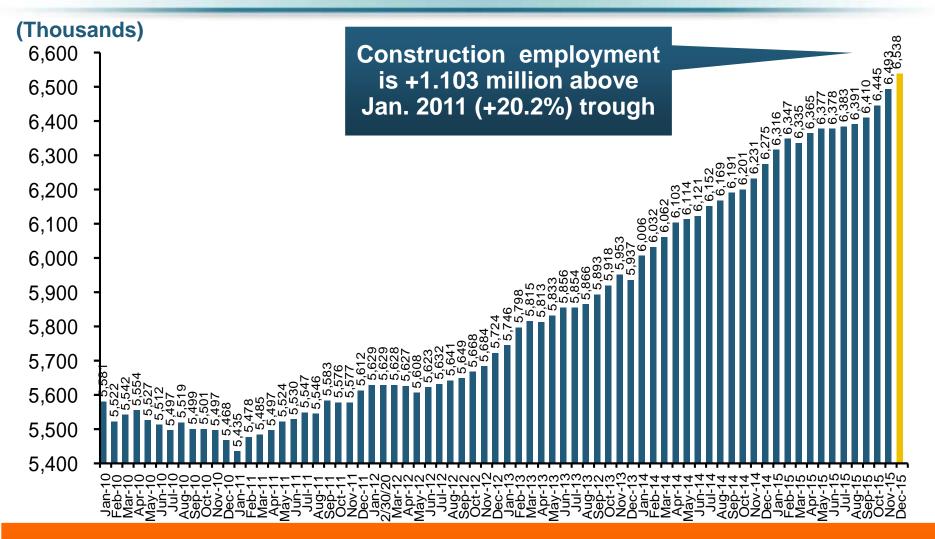


Government Construction Spending Peaked in 2009, Helped by Stimulus Spending, but Contracted As State/Local Governments Grappled with Deficits and Federal Sequestration; Only Now Recovering

^{*2015} figure is a seasonally adjusted annual rate as of November; http://www.census.gov/construction/c30/historical_data.html Sources: US Department of Commerce; Insurance Information Institute.

Construction Employment, Jan. 2010—Dec. 2015*



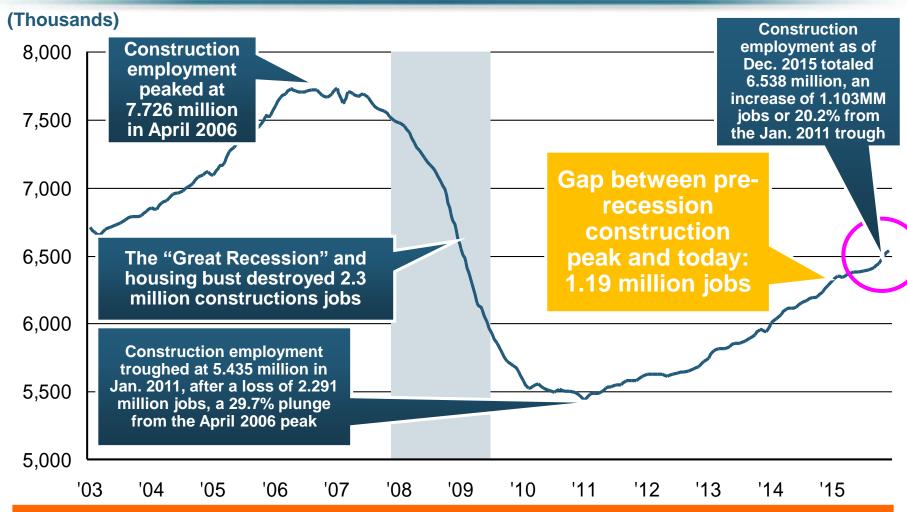


Construction and manufacturing employment constitute 1/3 of all WC payroll exposure.

^{*}Seasonally adjusted.

Construction Employment, Jan. 2003–Dec. 2015





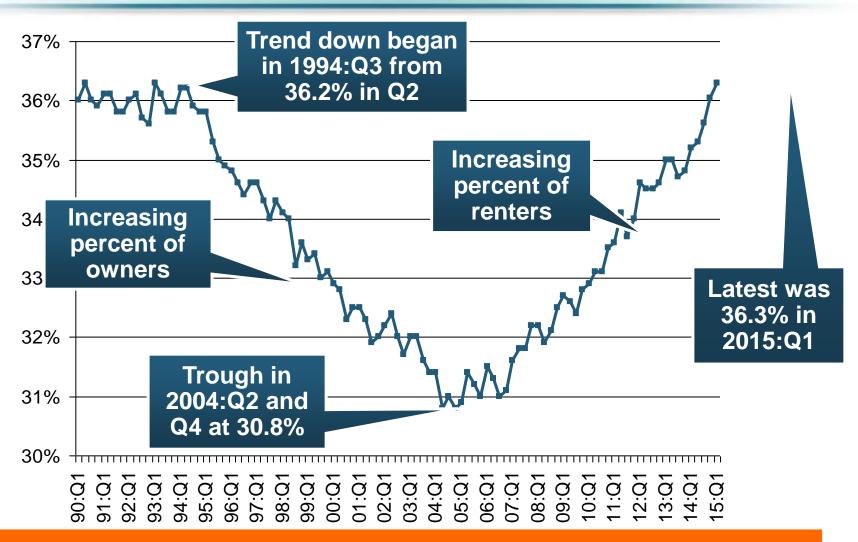
The Construction Sector Was a Growth Leader in 2014-15 as the Housing Market, Private Investment and Govt. Spending Recover. WC Insurers Will Benefit.

Note: Recession indicated by gray shaded column.

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

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





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

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

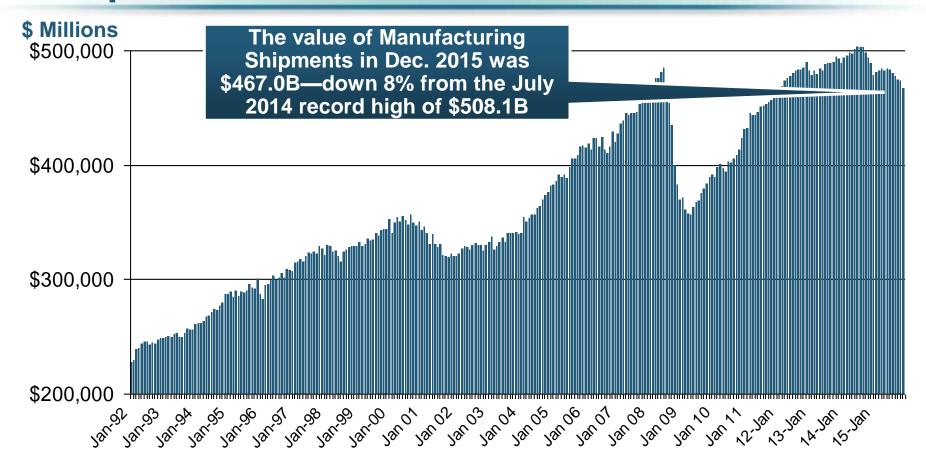


MANUFACTURING SECTOR OVERVIEW & OUTLOOK

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

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



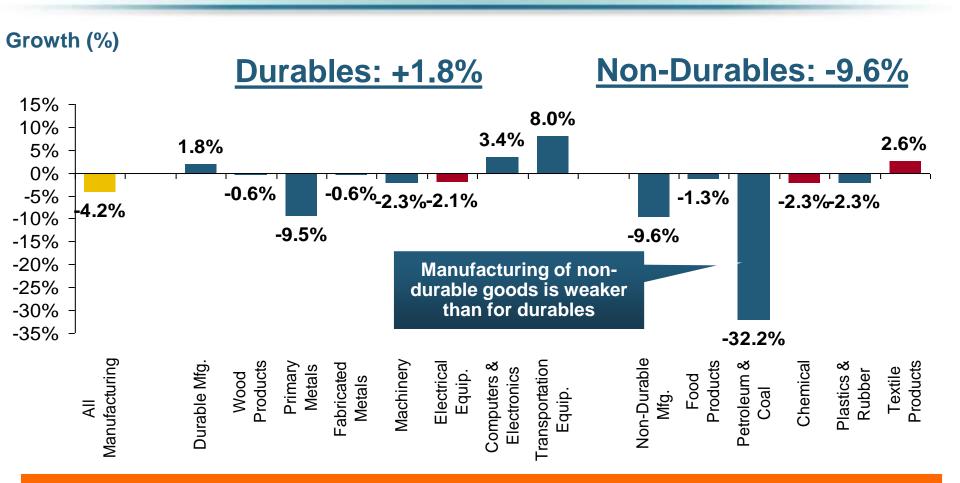


Monthly shipments in Nov. 2014 exceeded the pre-crisis (July 2008) peak but has declined in recent months. Weakness abroad, falling energy prices and a strong dollar are hurting the sector, especially exports. Manufacturing growth leads to gains in many commercial exposures: WC, Commercial Auto, Marine,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

^{*} Seasonally adjusted: Data published Feb. 4, 2016. Source: U.S. Census Bureau, Full Report on Manufacturers' Shipments, Inventories, and Orders, http://www.census.gov/manufacturing/m3/123

Manufacturing Growth for Selected Sectors, 2015 vs. 2014*



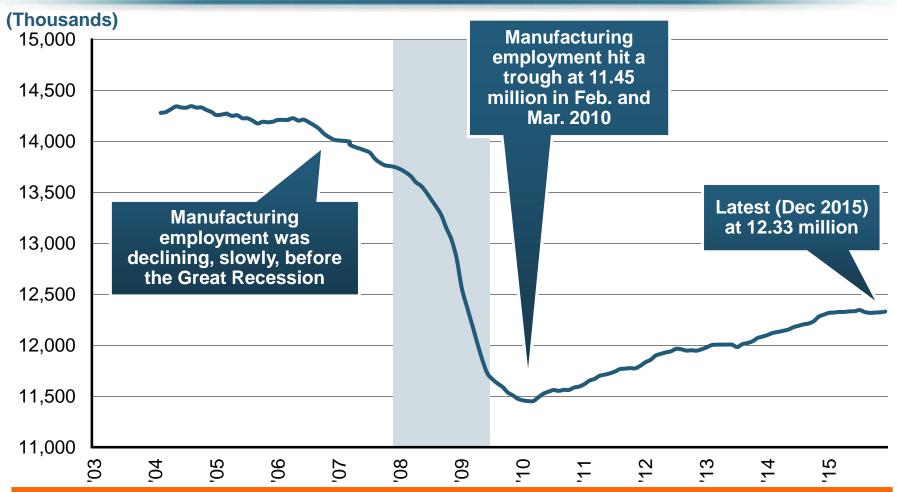


Manufacturing Is Contracting Across a Number of Sectors, Especially Petroleum. Adverse Exposure Impacts Are Likely for: WC, Commercial Property, Commercial Auto and Certain Liability Coverages

^{*}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/ 124

Manufacturing Employment, Jan. 2003–December 2015





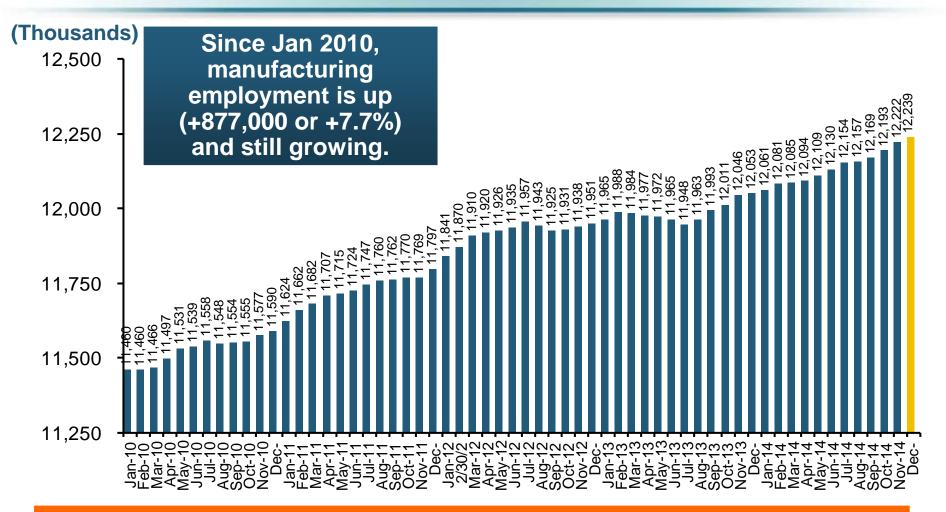
Manufacturing employment was growing slowly but steadily from 2010 through 2014 but has been flat in 2015. Automation, a slowing world economy, the strong dollar and other factors have held the growth rate down.

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*



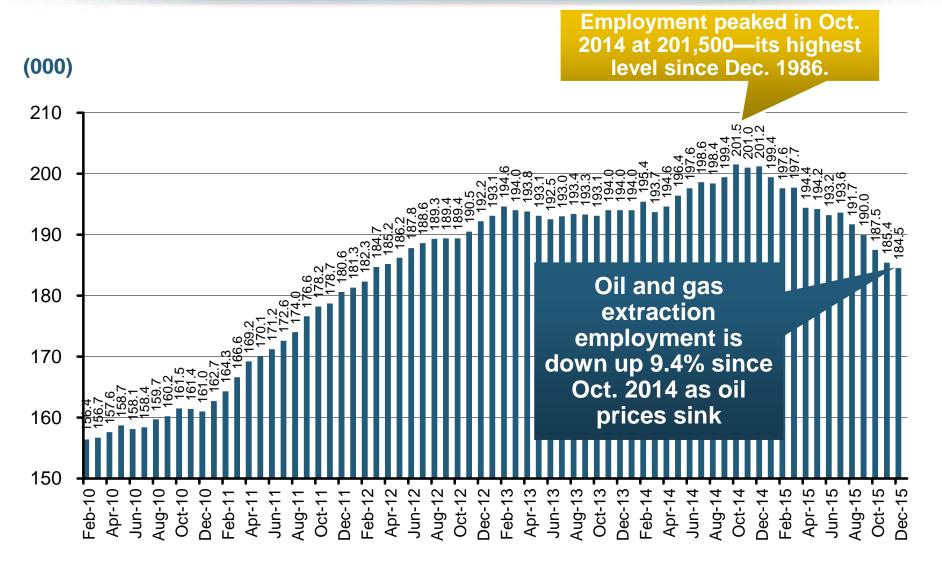


Manufacturing employment is a surprising source of strength in the economy. Employment in the sector is at a multi-year high.

^{*}Seasonally adjusted.

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



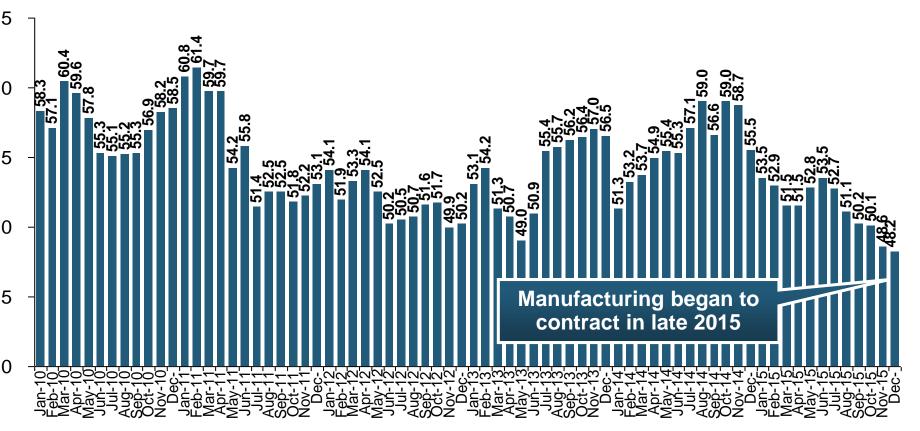


^{*}Seasonally adjusted

ISM Manufacturing Index (Values > 50 Indicate Expansion)



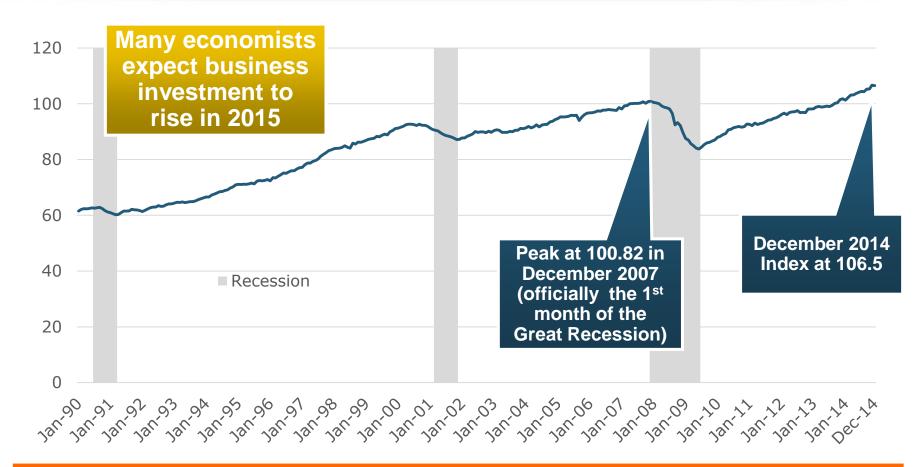
January 2010 through December 2015



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

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



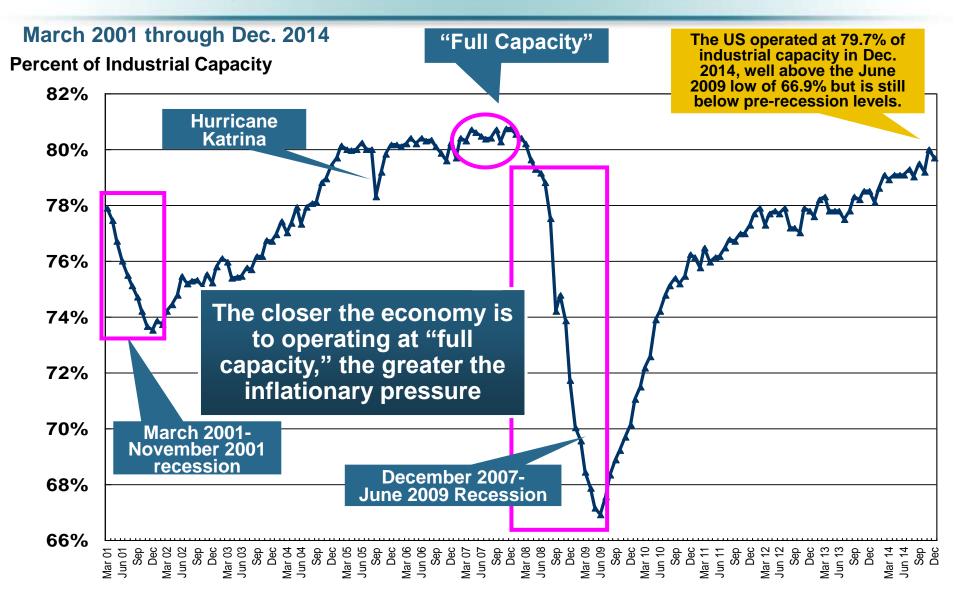


Insurance exposures for industrial production will continue growing in 2015, and commercial insurance premium volume with them. Y-o-Y growth to December 2014 was 4.6%. Both production and premium volume growth for 2015 should exceed this.

^{*}Monthly, seasonally adjusted, through December 2014 (which is preliminary). Index based on year 2007 = 100 Sources: Federal Reserve Board at http://www.federalreserve.gov/releases/g17/ipdisk/ip_sa.txt. National Bureau of Economic Research (recession dates); Insurance Information Institute.

Recovery in Capacity Utilization is a Positive Sign for Commercial Exposures







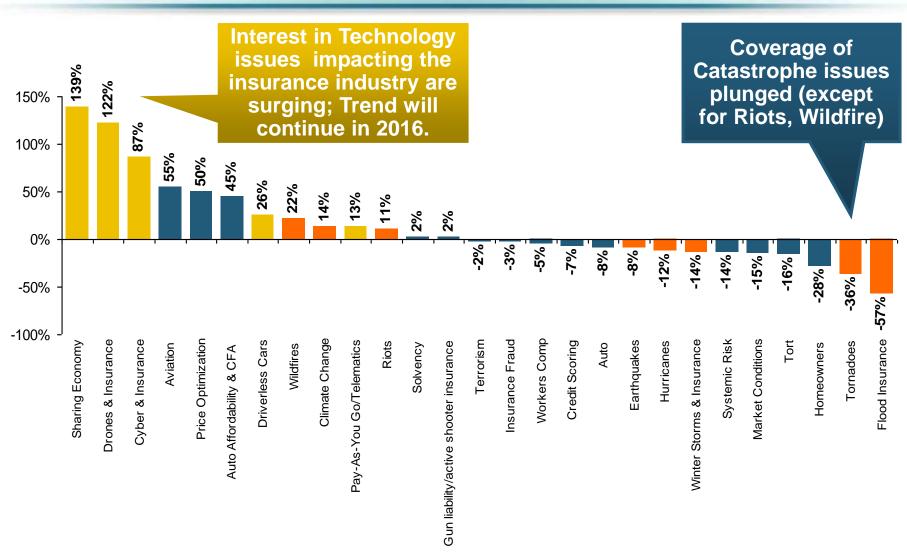
Top Insurance Issues: What's Hot, What's Not

Technology Spiked, Catastrophes Crashed

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

Percent increase/decrease from previous year

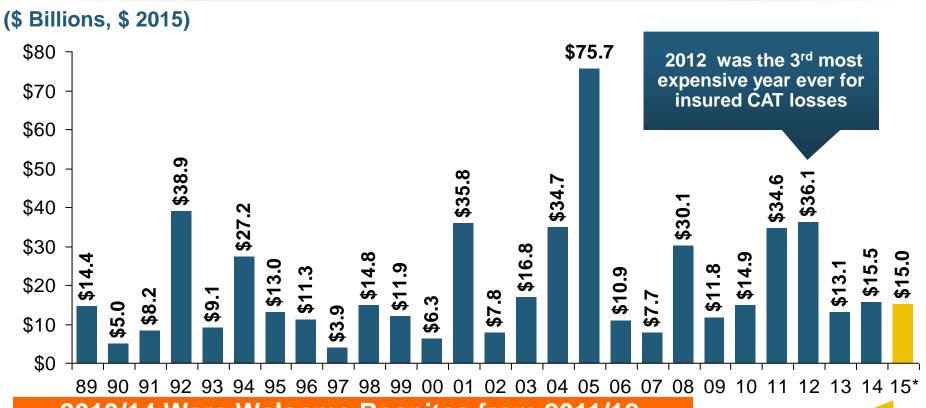




^{*}Based on a search of Lexis/Nexis (January 1-December15)

U.S. Insured Catastrophe Losses





2013/14 Were Welcome Respites 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.)

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.

^{*}Estimate hrough 12/31/15 in 2015 dollars.



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

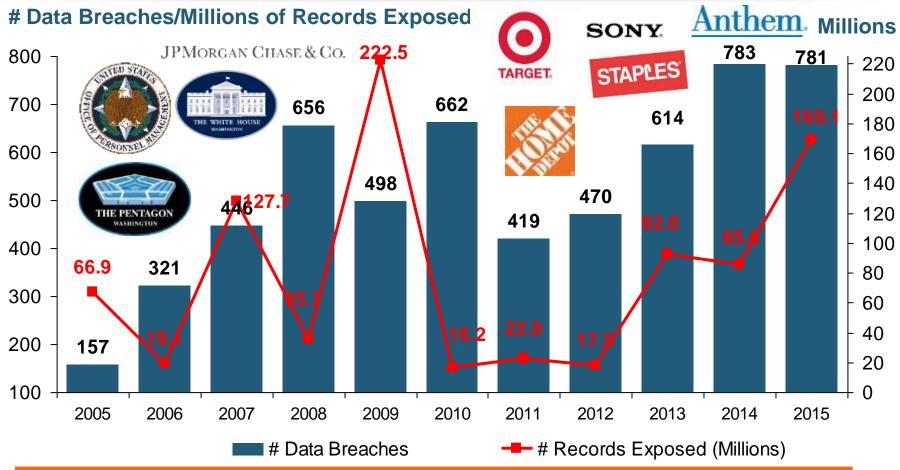


CYBER RISK AND INSURANCE

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



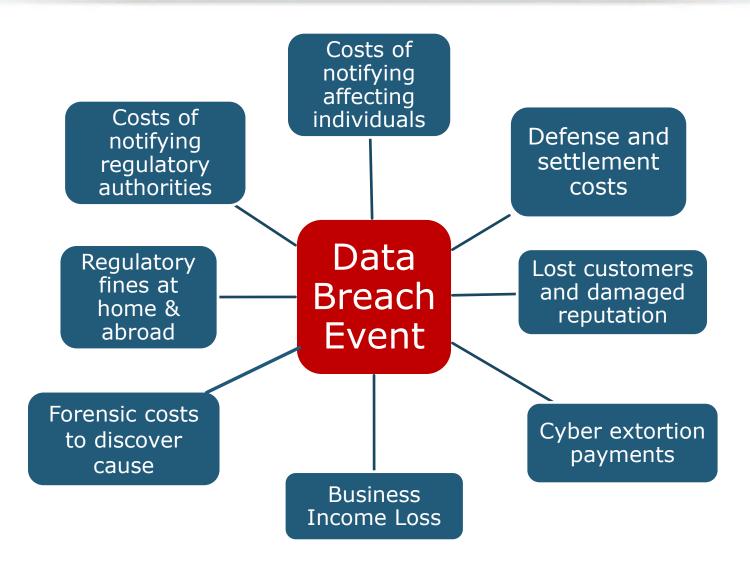


The 781 reported data breaches in 2015 was virtually unchanged form the record 783 reported in 2014. The number of exposed records soared to 169.1 million, and increase of 97.5%.

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

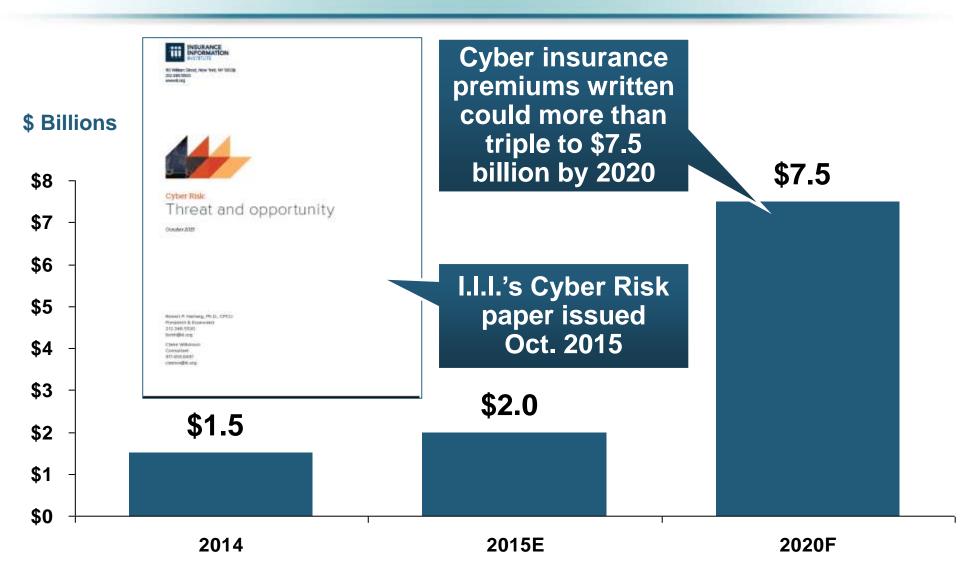
Data/Privacy Breach: Many Potential Costs Can Be Insured





Estimated Cyber Insurance Premiums Written, 2014 – 2020F







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 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







Regulation, Politics and the Sharing Economy

Insurers Need to Operate in a Complex and Rapidly Changing Regulatory Environment

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."

Regulatory Issues Abound as Well, With Implications for Insurance Coverages





In California, Uber Driver Is Employee, Not contractor: Agency

By Sarah McBride and Dan Levine

A driver for Uber is an **employee**, **not a contractor**, according to a California ruling that eventually could push up costs for the smartphone-based ride hailing service and hurt the closely watched start-up's valuation.

The California Labor Commissioner's decision could ripple through the burgeoning industry of providing services via smartphones, with potential implications for other "crowdsourced" services such as Uber rival Lyft, chore service TaskRabbit, and cleaning service Homejoy.



AUTO TECHNOLOGY & THE FUTURE OF AUTO INSURANCE

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





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



Hands-Free

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

32m

Partially autonomous 24m Fully autonomous Autonomous vehicles will challenge auto insurers, but they won't 16m obliterate them 8m 2035 DATA: BOSTON CONSULTING GROUP: GRAPHIC BY BLOOMBERG BUSINESSWEEK

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?

Source: Boston Consulting Group.

2015: Transportation Incidents on the Rise





"Is It Possible for Passengers to Hack Commercial Aircraft?"

- Federal Highway Administration Report, 1997

"Fiat Chrysler Issues Recall Over Hacking"

- The New York Times, July 24, 2015



"Hackers Show They Can Take Control of Moving Jeep Cherokee"

- Wall Street Journal, July 21, 2015

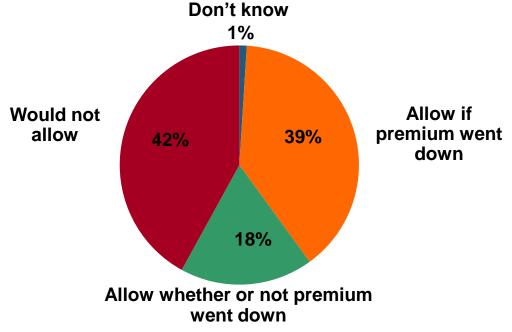
"Hackers Cut a Corvette's Brakes Via a Common Car Gadget"

- Wired, August 11, 2015

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.

Source: Insurance Information Institute Annual *Pulse* Survey.

¹Asked of those who auto insurance.

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







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

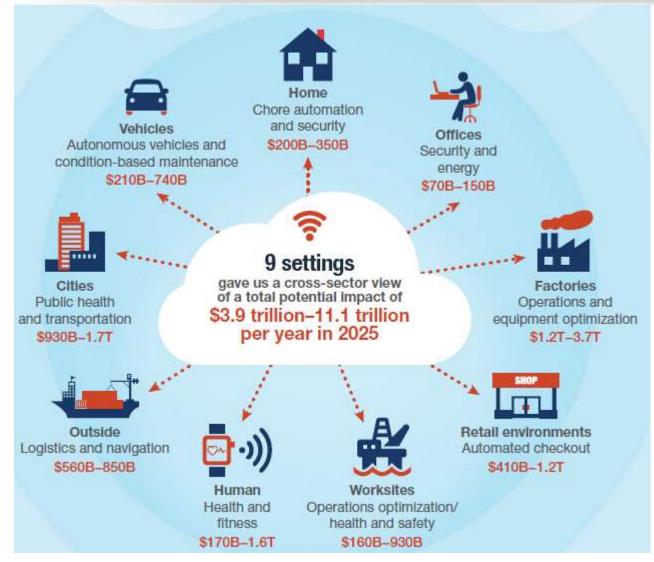


THE 'INTERNET OF THINGS'

Capturing Economic Value Amid a Shifting Insurer Value Chain

The Internet of Things and the Insurance Industry





- 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.

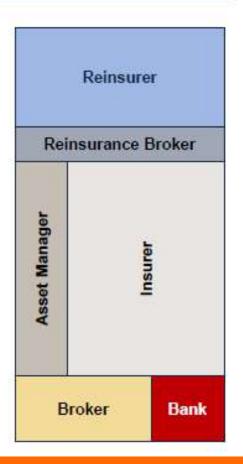
The Internet of Things and the Insurance Industry Value Chain

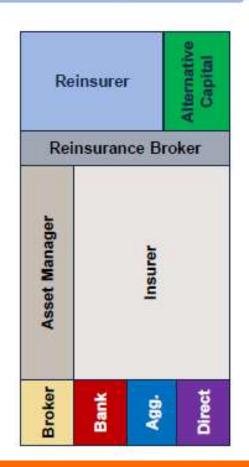


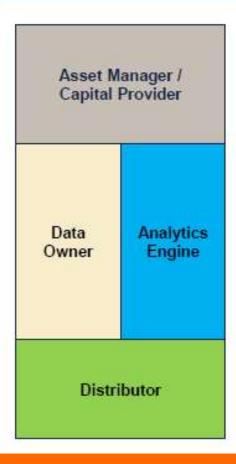
Historical value chain

Today's value chain

The Future?



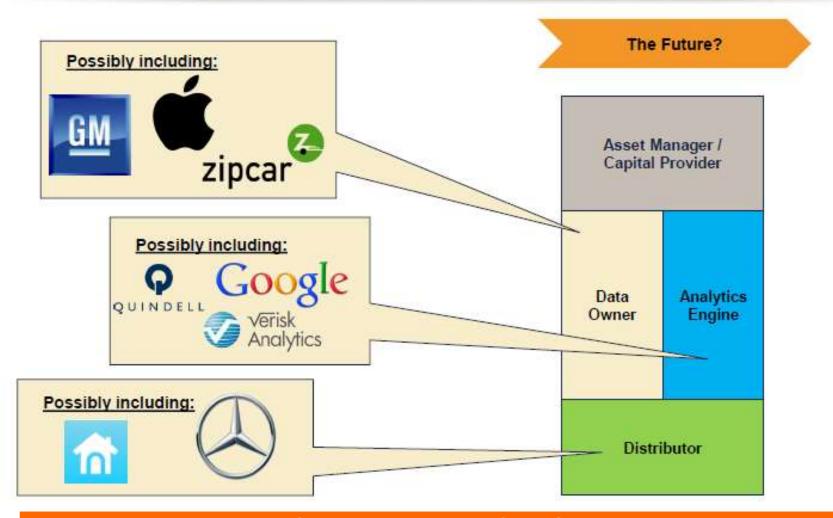




The Insurance Industry Value Chain Is Changing for Many Reasons

The Internet of Things, Data and the Insurance Industry Value Chain





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



Wearables and Beyond...

Where The Internet of Things Meets Health, Disability and Workers Compensation Insurance

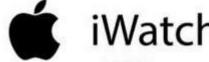
Wearables Show Significant Potential to Reduce Workplace Injury, Death



- Wearables Today Can Monitor:
 - Location
 - Heart rate
 - Temperature
 - Steps/Exertion
 - Sweat
 - Sleep
- In the Near Future Could Monitor:
 - Glucose level
 - Oxygen levels
 - Pain
 - Nausea







12:45

Beyond Wearables: Ingestibles and Implantables, VR Could Have Big Impacts Too

- Ingestibles:
 - Body chemistry
 - View malignancies
 - Detect diseases
 - Medication adherence
- Implantables
- Smart Fabrics
- Virtual Reality
 - Computer simulated reality
- Augmented Reality
 - Real world environment supplemented by computer generated inputs









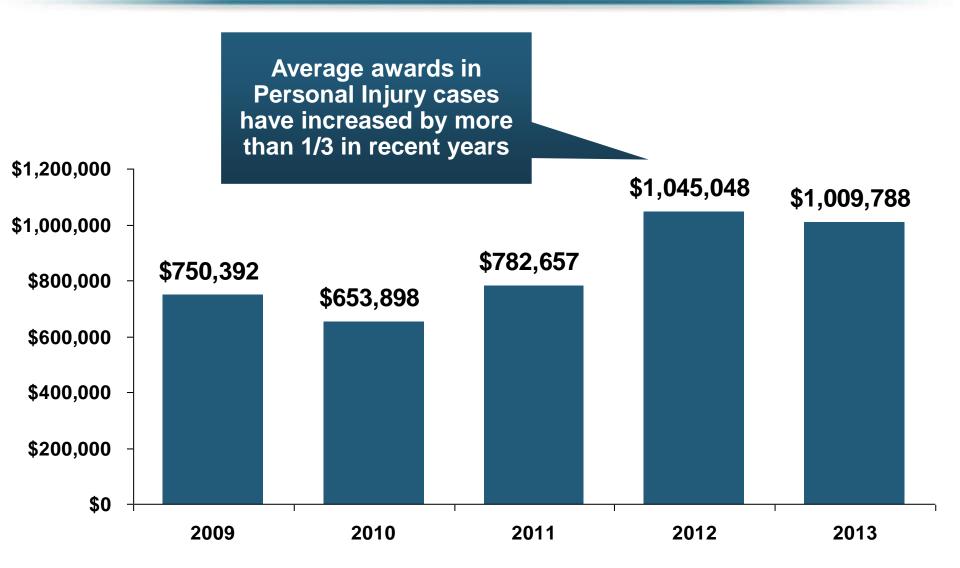


Shifting Legal Liability & Tort Environment

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



Best States

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

10. Utah

New in 2015

- Vermont
- New Hampshire
- North Carolina
- South Dakota

Drop-offs

- Minnesota
- Kansas
- Virginia
- North Dakota

Worst States

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

Newly Notorious

- Arkansas
- Missouri

Rising Above

- Oklahoma
- Montana

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

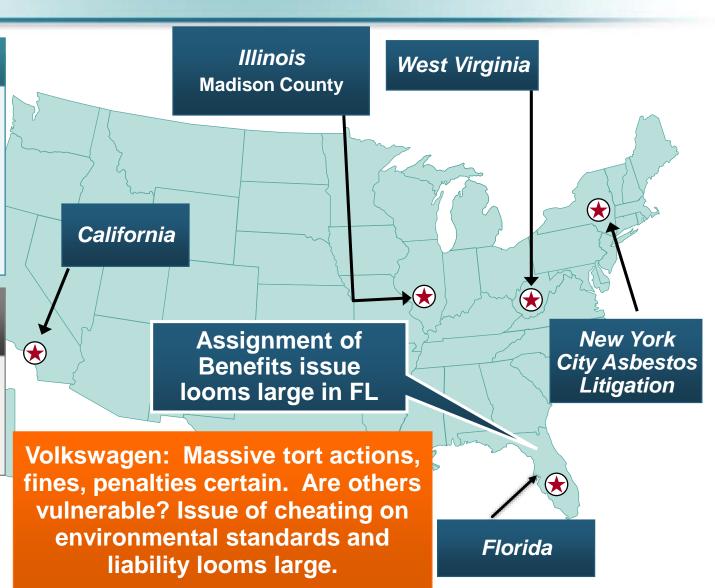


Watch List

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

Dishonorable Mention

- AL Supreme Court
- PA Supreme Court





Insurance Information Institute Online:

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