Florida Property & Casualty Insurance Market Update
*Trends, Challenges & Opportunities*

Florida Chamber of Commerce Insurance Summit
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Insurance Industry
Financial Performance

2014 Was a Reasonably Good Year
2015: A Repeat of 2014?
P/C Industry Net Income After Taxes
1991–2015:H1

- 2005 ROE* = 9.6%
- 2006 ROE = 12.7%
- 2007 ROE = 10.9%
- 2008 ROE = 0.1%
- 2009 ROE = 5.0%
- 2010 ROE = 6.6%
- 2011 ROAS¹ = 3.5%
- 2012 ROAS¹ = 5.9%
- 2013 ROAS¹ = 10.2%
- 2014 ROAS¹ = 8.4%
- 2015:H1 ROAS = 9.2%

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

Sources: A.M. Best, ISO; Insurance Information Institute
Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2015E

*Profitability = P/C insurer ROEs. 2011-14 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.
Source: Insurance Information Institute; NAIC, ISO, A.M. Best, Conning

Sources: ISO, Fortune; Insurance Information Institute.
Commercial Lines is prone to more cyclical volatility than personal lines. Recently, growth has stabilized in the 4% to 5% range.

- **Economic Shocks:**
  - **1976:** 22.2%
  - **Tort Crisis:** 1986: 30.5%
- **Post-Hurricane Andrew Bump:** 1993: 6.3%
- **1988-2000:** Period of inter-cycle stability
- **Post Katrina Bump:** 2006: 7.7%
- **Great Recession:** 2009: -9.0%
- **Post-9/11:** 2002: 22.4%

Note: Data include state funds beginning in 1998.
Source: A.M. Best; Insurance Information Institute.
As Recently as 2001, Insurers Paid Out Nearly $1.16 for Every $1 in Earned Premiums

Heavy Use of Reinsurance Lowered Net Losses

Relatively Low CAT Losses, Reserve Releases

Higher CAT Losses, Shrinking Reserve Releases, Toll of Soft Market

As Recently as 2001, Insurers Paid Out Nearly $1.16 for Every $1 in Earned Premiums

Heavy Use of Reinsurance Lowered Net Losses

Relatively Low CAT Losses, Reserve Releases

Higher CAT Losses, Shrinking Reserve Releases, Toll of Soft Market


Sources: A.M. Best, ISO.
A 100 Combined Ratio Isn’t What It Once Was: Investment Impact on ROEs

Combined Ratio / ROE

A combined ratio of about 100 generates an ROE of ~7.0% in 2012/13, ~7.5% ROE in 2009/10, 10% in 2005 and 16% in 1979.

Combined Ratios Must Be Lower in Today’s Depressed Investment Environment to Generate Risk Appropriate ROEs

* 2008-2014 figures are return on average surplus and exclude mortgage and financial guaranty insurers. 2014 combined ratio including M&FG insurers is 97.0; 2013 = 96.1; 2012 =103.2, 2011 = 108.1, ROAS = 3.5%.
Source: Insurance Information Institute from A.M. Best and ISO Verisk Analytics data.
Return on Equity by Financial Services Sector vs. Fortune 500, 2004-2014*

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

Banks and Insurers Have Substantially Underperformed the Fortune 500 Since the Financial Crisis
Commercial lines have tended to be more profitable than personal lines over the past decade.

Return on Net Worth (RNW) All Lines: 2004-2013 Average

Source: NAIC; Insurance Information Institute.
Back to the Future: Profitability Peaks & Troughs in the P/C Insurance Industry, 1950 – 2015E*

1950-70: ROEs were lower in this period. Low interest rates, low inflation, “Bureau” rate regulation all played a role

1970-90: Peak ROEs were much higher in this period while troughs were comparable. High interest rates, rapid inflation, economic volatility all played roles

1990-2010s: Déjà vu. Excluding mega-CATs, this period is very similar to the 1950-1970 period

*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.
Distribution of Direct Premiums Written by Segment/Line, 2013

Distribution Facts

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

Sources: A.M. Best; Insurance Information Institute research.
The most profitable states over the past decade are widely distributed geographically, though none are in the Gulf region.

**Profitability Benchmark: All P/C**
US: 7.9%

Source: NAIC; Insurance Information Institute.
Some of the least profitable states over the past decade were hit hard by catastrophes.

Source: NAIC; Insurance Information Institute.
Return on Net Worth: Pvt. Passenger Auto, 10-Year Average (2004-2013*)

Top 25 States

Hawaii was the most profitable state for auto insurers from 2004-2013

*Latest available.
Sources: NAIC.
Return on Net Worth: Pvt. Passenger Auto, 10-Year Average (2004-2013*)

Bottom 25 States

Michigan was the least profitable state for auto insurers from 2004-2013

*Latest available. Sources: NAIC
Return on Net Worth: Homeowners Insurance, 10-Year Average (2004-2013*)

Top 25 States

Hawaii was the most profitable state for home insurers from 2004-2013 due to the absence of hurricanes during this period.

*Latest available.
Sources: NAIC.
Return on Net Worth: Homeowners Insurance, 10-Year Average (2004-2013*)

Bottom 25 States

Profitability in Florida’s over the past decades is still weighed down by the record storm losses of 2004/05

Hurricanes Katrina and Rita made Louisiana and Mississippi the least profitable states for home insurers from 2004-2013

*Latest available.
Sources: NAIC
Reserve releases are expected to gradually taper off, but will continue to benefit the bottom line and combined ratio ratio through at least 2016.

Source: A.M. Best; Barclays research for estimates.
How Is Profitability Affected by the President’s Political Party?
### P/C Insurance Industry ROE by Presidential Administration, 1950-2014*

<table>
<thead>
<tr>
<th>President</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carter</td>
<td>16.43%</td>
</tr>
<tr>
<td>Reagan II</td>
<td>15.10%</td>
</tr>
<tr>
<td>Obama II</td>
<td>9.00%</td>
</tr>
<tr>
<td>Nixon</td>
<td>8.93%</td>
</tr>
<tr>
<td>Clinton I</td>
<td>8.65%</td>
</tr>
<tr>
<td>G.H.W. Bush</td>
<td>8.35%</td>
</tr>
<tr>
<td>G.W. Bush II</td>
<td>8.33%</td>
</tr>
<tr>
<td>Clinton II</td>
<td>7.98%</td>
</tr>
<tr>
<td>Reagan I</td>
<td>7.68%</td>
</tr>
<tr>
<td>Nixon/Ford</td>
<td>6.98%</td>
</tr>
<tr>
<td>Truman</td>
<td>6.97%</td>
</tr>
<tr>
<td>Eisenhower I</td>
<td>5.43%</td>
</tr>
<tr>
<td>Eisenhower II</td>
<td>5.03%</td>
</tr>
<tr>
<td>G.W. Bush I</td>
<td>4.83%</td>
</tr>
<tr>
<td>Obama I</td>
<td>4.68%</td>
</tr>
<tr>
<td>Johnson</td>
<td>4.43%</td>
</tr>
<tr>
<td>Kennedy/Johnson</td>
<td>3.55%</td>
</tr>
</tbody>
</table>

**OVERALL RECORD: 1950-2014**

Democrats 7.72%
Republicans 7.85%

Party of President has marginal bearing on profitability of P/C insurance industry

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*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, 1950-2014

Source: Insurance Information Institute
Profitability and Growth in Florida P/C Insurance Markets

Analysis by Line and Nearby State Comparisons
P/C Insurer profitability in FL is above that of the US overall over the past decade

US: 7.9%
FL: 8.6%

Average 2004-2013
US: 7.1%
FL: 4.4%

Source: NAIC.
Commercial Auto profitability in FL is generally below the US average.

Average 2004-2013

US: 9.2%
FL: 4.7%

Source: NAIC.

Sources: NAIC.

Average 2004-2013
US: 8.9%
FL: 7.4%

(Percent)

Average 2004-2013
US: 6.6%
FL: -0.4%

Even With Returns Near 30 Percent for Much of the Decade, Florida Insurers Lost Money on Homeowners Line.

Sources: NAIC.
RNW Workers Comp: FL vs. U.S., 2004-2013

Average 2004-2013
US: 7.1%
FL: 10.5%

Sources: NAIC.
All Lines: 10-Year Average RNW FL & Nearby States

2004-2013

- Florida All Lines profitability is below the US average and above the regional average

- South Carolina: 11.4%
- Florida: 8.6%
- US: 7.9%
- Georgia: 5.3%
- Alabama: 2.5%
- Mississippi: -6.9%
- US: -10%
- -5%
- 0%
- 5%
- 10%
- 15%

Source: NAIC, Insurance Information Institute
Florida PP Auto profitability is below the US and regional average.

Source: NAIC, Insurance Information Institute
<table>
<thead>
<tr>
<th>Rank</th>
<th>Most expensive states</th>
<th>Average expenditure</th>
<th>Rank</th>
<th>Least expensive states</th>
<th>Average expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New Jersey</td>
<td>$1,219.93</td>
<td>1</td>
<td>Idaho</td>
<td>$534.56</td>
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<tr>
<td>2</td>
<td>D.C.</td>
<td>1,154.91</td>
<td>2</td>
<td>South Dakota</td>
<td>556.51</td>
</tr>
<tr>
<td>3</td>
<td>New York</td>
<td>1,152.45</td>
<td>3</td>
<td>Iowa</td>
<td>561.26</td>
</tr>
<tr>
<td>4</td>
<td>Florida</td>
<td><strong>1,127.93</strong></td>
<td>4</td>
<td>North Dakota</td>
<td>576.08</td>
</tr>
<tr>
<td>5</td>
<td>Louisiana</td>
<td>1,112.53</td>
<td>5</td>
<td>Maine</td>
<td>582.43</td>
</tr>
<tr>
<td>6</td>
<td>Delaware</td>
<td>1,065.37</td>
<td>6</td>
<td>Wisconsin</td>
<td>598.84</td>
</tr>
<tr>
<td>7</td>
<td>Michigan</td>
<td>1,048.87</td>
<td>7</td>
<td>North Carolina</td>
<td>611.48</td>
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<tr>
<td>8</td>
<td>Rhode Island</td>
<td>1,034.50</td>
<td>8</td>
<td>Nebraska</td>
<td>616.78</td>
</tr>
<tr>
<td>9</td>
<td>Connecticut</td>
<td>986.73</td>
<td>9</td>
<td>Wyoming</td>
<td>618.81</td>
</tr>
<tr>
<td>10</td>
<td>Massachusetts</td>
<td>976.65</td>
<td>10</td>
<td>Kansas</td>
<td>632.07</td>
</tr>
</tbody>
</table>

Florida ranked 4th as the most expensive state in 2012, with an average expenditure for auto insurance of $1,127.93.

(1) Based on average automobile insurance expenditures.

Florida Commercial Auto profitability is below the US and regional average.
Florida Commercial Multi-Peril profitability is below the US average and above the regional average.
Homeowners: 10-Year Average RNW FL & Nearby States

Florida Homeowners profitability is below the US average and above the regional average.

Source: NAIC, Insurance Information Institute
Top Ten Most Expensive And Least Expensive States For Homeowners Insurance, 2012 (1)

Florida ranked as the most expensive state for homeowners insurance in 2012, with an average expenditure of $2,084.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Most expensive states</th>
<th>HO average premium</th>
<th>Rank</th>
<th>Least expensive states</th>
<th>HO average premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Florida</td>
<td>$2,084</td>
<td>1</td>
<td>Idaho</td>
<td>$538</td>
</tr>
<tr>
<td>2</td>
<td>Louisiana</td>
<td>1,742</td>
<td>2</td>
<td>Oregon</td>
<td>567</td>
</tr>
<tr>
<td>3</td>
<td>Texas</td>
<td>1,661</td>
<td>3</td>
<td>Utah</td>
<td>580</td>
</tr>
<tr>
<td>4</td>
<td>Oklahoma</td>
<td>1,501</td>
<td>4</td>
<td>Wisconsin</td>
<td>631</td>
</tr>
<tr>
<td>5</td>
<td>Mississippi</td>
<td>1,314</td>
<td>5</td>
<td>Washington</td>
<td>648</td>
</tr>
<tr>
<td>6</td>
<td>Alabama</td>
<td>1,248</td>
<td>6</td>
<td>Nevada</td>
<td>674</td>
</tr>
<tr>
<td>7</td>
<td>Rhode Island</td>
<td>1,233</td>
<td>7</td>
<td>Delaware</td>
<td>678</td>
</tr>
<tr>
<td>8</td>
<td>Kansas</td>
<td>1,213</td>
<td>8</td>
<td>Arizona</td>
<td>691</td>
</tr>
<tr>
<td>9</td>
<td>Connecticut</td>
<td>1,160</td>
<td>9</td>
<td>Ohio</td>
<td>721</td>
</tr>
<tr>
<td>10</td>
<td>New York</td>
<td>1,158</td>
<td>10</td>
<td>Maine</td>
<td>741</td>
</tr>
</tbody>
</table>

(1) Includes policies written by Citizens Property Insurance Corp. (Florida) and Citizens Property Insurance Corp. (Louisiana), Alabama Insurance Underwriting Association, Mississippi Windstorm Underwriting Association, North Carolina Joint Underwriting Association and South Carolina Wind and Hail Underwriting Association. Other southeastern states have wind pools in operation and their data may not be included in this chart. Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides “all risks” coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written.

(2) The Texas Department of Insurance developed home insurance policy forms that are similar but not identical to the standard forms. In addition, due to the Texas Windstorm Association (which writes wind-only policies) classifying HO-1, 2 and 5 premiums as HO-3, the average premium for homeowners insurance is artificially high.

Note: Average premium=Premiums/exposure per house years. A house year is equal to 365 days of insured coverage for a single dwelling. The NAIC does not rank state average expenditures and does not endorse any conclusions drawn from this data.

Source: ©2014 National Association of Insurance Commissioners (NAIC). Reprinted with permission. Further reprint or distribution strictly prohibited without written permission of NAIC.
Workers Comp: 10-Year Average RNW FL & Nearby States

2004-2013

Florida Workers Comp profitability is above the US average and above the regional average.

Source: NAIC, Insurance Information Institute
All Lines DWP Growth: FL vs. U.S., 2005-2014

Source: SNL Financial.
Comm. Lines DWP Growth:
FL vs. U.S., 2005-2014

Average 2005-2014
US: 1.4%
FL: 2.0%

Source: SNL Financial.

Average 2005-2014
US: 2.6%
FL: 3.4%

Source: SNL Financial.

Source: SNL Financial.

(Percent)

Average 2005-2014
US: 4.8%
FL: 6.3%

Source: SNL Financial.
Investment Performance is a Key Driver of Profitability

Depressed Yields Will Necessarily Influence Underwriting & Pricing
Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014.

1 Investment gains consist primarily of interest and stock dividends. *2015 figure is estimated based on annualized data through Q2.

Sources: ISO; Insurance Information Institute.
Distribution of Invested Assets: P/C Insurance Industry, 2013

- Bonds, 62%
- Stocks, 22%
- Cash, Cash Equiv. & ST Investments, 6%
- All Other, 10%

Total Invested Assets = $1.5 Trillion


Yields on 10-Year U.S. Treasury Notes have been essentially below 5% for a full decade.

U.S. Treasury yields plunged to historic lows in 2013. Longer-term yields rebounded then sank fell again.

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

*Monthly, constant maturity, nominal rates, through August 2015.
Treasury yield curve remains near its most depressed level in at least 45 years. Investment income is falling as a result. Even when the Fed begins to raise rates, yields unlikely to return to pre-crisis levels anytime soon.

The Fed is actively signaling that it is likely to begin raising rates later in 2015 but only very gradually.

Source: Federal Reserve Board of Governors; Insurance Information Institute.
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.

*2015 figure is the average of the four quarters ending in 2015:Q2.
Sources: SNL Financial; Insurance Information Institute
A full normalization of interest rates is unlikely until the 2020s, more than a decade after the onset of the financial crisis.

Sources: Blue Chip Economic Indicators (10/15 for 2015 and 2016; for 2017-2021 10/15 issue); Insurance Info. Institute.
Annual Inflation Rates, (CPI-U, %), 1990–2016F

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

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

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

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.
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 Q2 2015.
Sources: A.M. Best, ISO, SNL, Insurance Information Institute.
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 Q2 2015.
Sources: ISO, SNL; Insurance Information Institute.
Volatility is endemic to stock markets—and may be increasing—but there is no persistent downward trend over long periods of time.

Source: NYU Stern School of Business: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html
The main shift over these years has been from bonds with longer maturities to bonds with shorter maturities. The industry first trimmed its holdings of over-10-year bonds (from 24.6% in 2003 to 15.5% in 2012) and then trimmed bonds in the 5-10-year category (from 31.3% in 2003 to 27.6% in 2012). Falling average maturity of the P/C industry’s bond portfolio is contributing to a drop in investment income along with lower yields.

Sources: SNL Financial; Insurance Information Institute.
Capital Accumulation Has Multiple Impacts

Alternative Capital Impacts?
The P/C insurance industry entered 2015 in very strong financial condition.

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.

Sources: ISO, A.M. Best.

Surplus as of 6/30/15 was a near-record $672.4, down 0.3% from the record $674.7 of 12/31/14 but up 53.8% ($235.3B) from the crisis trough of $437.1B at 3/31/09.

“Surplus” is a measure of underwriting capacity. It is analogous to “Owners Equity” or “Net Worth” in non-insurance organizations.

The Premium-to-Surplus Ratio Stood at $0.76:$1 as of 6/30/15, a Near Record Low (at Least in Recent History).

*As of 6/30/15.
The larger surplus is in relation to premiums—the lower the P:S ratio—and the greater the industry’s capacity to handle the risk it has accepted.

The Premium-to-Surplus Ratio Stood at $0.73:$1 as of 12/31/14, a Record Low (at Least in Recent History)

* As of 12/31/14.
### P/C Industry: Loss Reserve-to-Surplus Ratio, 1971-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Reserve-to-Surplus Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>1.2</td>
</tr>
<tr>
<td>1974</td>
<td>1.4</td>
</tr>
<tr>
<td>1977</td>
<td>1.9</td>
</tr>
<tr>
<td>1980</td>
<td>1.9</td>
</tr>
<tr>
<td>1983</td>
<td>1.9</td>
</tr>
<tr>
<td>1986</td>
<td>2.1</td>
</tr>
<tr>
<td>1989</td>
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<td>1992</td>
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<tr>
<td>2007</td>
<td>2.1</td>
</tr>
<tr>
<td>2010</td>
<td>1.0</td>
</tr>
<tr>
<td>2013</td>
<td>0.9</td>
</tr>
</tbody>
</table>

**Inflation, Liability Crisis**
- Increased Reserves
- Plunging Stock Prices Depleted Surplus

**RBC requirements**
- took effect with 1994 Annual Statement.

The property/casualty industry has become less leveraged since 1994.

The property/casualty industry adjusted its risk portfolio in response to risk-based capital requirements implemented in 1994.

Source: Calculations from A.M. Best and ISO data by 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.
Source: Aon Benfield Analytics; Insurance Information Institute.
Alternative Capital as a Percentage of Traditional Global Reinsurance Capital

2014 data is as of June 30, 2014.
Source: Aon Benfield Analytics; Insurance Information Institute.


2014 data is as of June 30, 2014.
Source: Aon Benfield Analytics; Insurance Information Institute.
Collateralized Re’s Growth Has Accelerated in the Past Three Years.

Collateralized Reinsurance and Catastrophe Bonds Currently Dominate the Alternative Capital Market.

2014 data is as of June 30, 2014.
Source: Aon Benfield Analytics; Insurance Information Institute.
Cat Bond Issuance Appears to Be Slowing Down in 2015 from 2014’s Record Pace. Lower Yields on Bonds Explain Some of the Contraction.

Source: Guy Carpenter.

Source: Artemis.bm; Insurance Information Institute.
Reinsurance Pricing: Change in Rate on Line for Cat Business

Catastrophe Prices Fell 11 Percent on January 1 Renewals, Driven by Emergence of New Capital, Mild Catastrophe Losses.

2014 reflects change through June 30 from prior year end. 2015 is for January 1 renewals.

Source: Guy Carpenter; Insurance Information Institute.
Terms Are Shifting Away From ‘Objective’ Triggers (Favored by Investors) Toward Indemnity Trigger (Favored by Insurers).

Source: Artemis.bm; Insurance Information Institute.
Questions Arising from Influence of Alternative Capital

- What Will Happen When Investors Face Large-Scale Losses?
- What Happens When Interest Rates Rise?
- Does ILS Have a Higher Propensity to Litigate?
- How Much Lower Will Risk Premiums Shrink/ROLs Fall?
- Will There Be Spillover Into Casualty Reinsurance?
- Will Alternative Capital Drive Consolidation?
4. M&A UPDATE: 
A PATH TO GROWTH?

Are Capital Accumulation, Drive for Growth and Scale Stimulating M&A Activity?
M&A activity in the P/C sector was up sharply in 2014 but remains well below pre-crisis or late 1990s levels. M&A activity in 2015 will likely reach its highest level since 1998.

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

Source: Conning proprietary database.
Update: Alleghany Corp. announced in May 2015 that it is considering the sale of TransAtlantic Holding Co. (TransRe).

*Source: Conning; Insurance information Institute.

<table>
<thead>
<tr>
<th>Acquirer</th>
<th>Target</th>
<th>Transaction Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE (Switzerland)</td>
<td>Chubb (US)</td>
<td>$28,300</td>
</tr>
<tr>
<td>Exor (Italy)</td>
<td>PartnerRe Ltd. (Bermuda)</td>
<td>$6,900</td>
</tr>
<tr>
<td>Zurich (Switzerland)</td>
<td>RSA (UK)</td>
<td>8,000</td>
</tr>
<tr>
<td>XL Group plc (Ireland)</td>
<td>Catlin Group Ltd. (Bermuda)</td>
<td>4,200</td>
</tr>
<tr>
<td>RenaissanceRe Holdings Ltd. (Bermuda)</td>
<td>Platinum Underwriters Holdings Ltd. (Bermuda)</td>
<td>1,900</td>
</tr>
<tr>
<td>Fairfax Financial Holdings Ltd. (Canada)</td>
<td>Brit Insurance Holdings NV (Netherlands)</td>
<td>1,880</td>
</tr>
<tr>
<td>Desjardins Financial Corp. (Canada)</td>
<td>State Farm's property/casualty and life insurance operations in Canada (Canada)</td>
<td>1,500</td>
</tr>
<tr>
<td>TPG Capital LP</td>
<td>The Warranty Group, Inc. (Canada)</td>
<td>1,500</td>
</tr>
<tr>
<td>Fosun International Ltd. (China)</td>
<td>Caixa Seguros e Saude SGPA SA (Portugal)</td>
<td>1,360</td>
</tr>
<tr>
<td>Progressive Corp.</td>
<td>ARX Holding Corp.</td>
<td>875</td>
</tr>
<tr>
<td>Assured Guaranty Ltd. (Bermuda)</td>
<td>Radian Asset Assurance, Inc.</td>
<td>810</td>
</tr>
<tr>
<td>Mapfre S.A. (Spain)</td>
<td>German and Italina operations of Direct Line Insurance Group plc (Germany/Italy)</td>
<td>701</td>
</tr>
<tr>
<td>Validus Holdings Ltd. (Bermuda)</td>
<td>Western World Insurance Group, Inc.</td>
<td>690</td>
</tr>
<tr>
<td>ACE Ltd. (Switzerland)</td>
<td>P&amp;C business from Itau Seguros S.A. (Brazil)</td>
<td>685</td>
</tr>
</tbody>
</table>
## Recent M&A Transactions Involving Lloyd's and Bermuda Re/Insurers

<table>
<thead>
<tr>
<th>Date</th>
<th>Acquirer</th>
<th>Target</th>
<th>Deal Value $ Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2012</td>
<td>Aquiline</td>
<td>Equity Redstar</td>
<td>0.1</td>
</tr>
<tr>
<td>Jun 2013</td>
<td>Enstar/Stone Point</td>
<td>Atrium</td>
<td>0.2</td>
</tr>
<tr>
<td>Jul 2013</td>
<td>Enstar/Stone Point</td>
<td>Torus</td>
<td>0.7</td>
</tr>
<tr>
<td>Aug 2013</td>
<td>Ian Beaton and Management</td>
<td>Ark Syndicate Management</td>
<td>0.4</td>
</tr>
<tr>
<td>Aug 2013</td>
<td>Lancashire</td>
<td>Cathedral</td>
<td>0.4</td>
</tr>
<tr>
<td>Aug 2013</td>
<td>AmTrust</td>
<td>Sagicor</td>
<td>0.1</td>
</tr>
<tr>
<td>Sep 2013</td>
<td>ANV</td>
<td>Jubilee Managing Agency</td>
<td>N/A</td>
</tr>
<tr>
<td>Dec 2013</td>
<td>Sompo</td>
<td>Canopius</td>
<td>1.0</td>
</tr>
<tr>
<td>Feb 2014</td>
<td>Qatar Insurance Company</td>
<td>Antares</td>
<td>0.2</td>
</tr>
<tr>
<td>Jul 2014</td>
<td>BTG Pactual</td>
<td>Ariel Re</td>
<td>0.4</td>
</tr>
<tr>
<td>Nov 2014</td>
<td>RenaissanceRe</td>
<td>Platinum Underwriters</td>
<td>1.9</td>
</tr>
<tr>
<td>Dec 2014</td>
<td>XL Group</td>
<td>Catlin</td>
<td>4.1</td>
</tr>
<tr>
<td>Jan 2015</td>
<td>PartnerRe</td>
<td>AXIS</td>
<td>11.0*</td>
</tr>
<tr>
<td>Feb 2015</td>
<td>Fairfax Financial Holdings</td>
<td>Brit</td>
<td>1.9</td>
</tr>
</tbody>
</table>

*Deal was not complete as of 6/4/15 and a rival bid from Italian investment firm Exor was still under consideration.
Source: Swiss Re sigma 3/2015; Insurance information Institute.
What’s Driving Global Insurance M&A Activity and Will It Continue?

- Excess Capital in Global Reinsurance and Primary Commercial Insurance in US
  - (Re)Insurers, like corporations in many industry, are sitting are large amounts of cash accumulated since the Global Financial Crisis that earns very little

- Alternative Capital

- Slow Top Line (Premium) Growth

- Slowdown in Pace of Earnings Growth/ROE

- Low Interest Rates Make Debt Financing for Acquisitions Attractive
  - Concern that interest rates in US may soon rise so best to act now

- Desire to Achieve Economies of Scale

- Peer Pressure/Momentum
  - Management concerns about being “left out”
Growth

Premium Growth Rates Vary Tremendously by State and Over Time, But…
Net Premium Growth (All P/C Lines): Annual Change, 1971—2015:H1

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975-78</td>
<td></td>
</tr>
<tr>
<td>1984-87</td>
<td></td>
</tr>
<tr>
<td>2000-03</td>
<td></td>
</tr>
</tbody>
</table>

Shaded areas denote “hard market” periods

- **1950-70:** Extended period of stability in growth and profitability. Low interest rates, low inflation, “Bureau” rate regulation all played a role.
- **1970-90:** Peak premium growth was much higher in this period while troughs were comparable. Rapid inflation, economic volatility, high interest rates, tort environment all played roles.
- **1985/86:** Post-Crisis, Inflation: 22.2%
- **1988-2000:** Period of inter-cycle stability
- **2002:** Post-9/11, 2002: 15.3%
- **2010:** Great Recession: 2010: -4.9%
- **2015E:** 4.1%

Note: Data through 1934 are based on stock companies only. Data include state funds beginning in 1998.
Source: A.M. Best; Insurance Information Institute.
Top 25 States

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

Growth Benchmarks: Total P/C
US: 13.0%

Sources: SNL Financial LC.; Insurance Information Institute.
Direct Premiums Written: Total P/C Percent Change by State, 2007-2014

Bottom 25 States

Florida experienced almost no net growth between 2007 and 2014

Growth was negative in 4 states and DC between 2007 and 2014

Sources: SNL Financial LC.; Insurance Information Institute.
Direct Premiums Written: Comm. Lines
Percent Change by State, 2007-2014

Top 25 States

43 states showed commercial lines growth from 2007 through 2014

Growth Benchmarks: Commercial
US: 5.9%

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.
Direct Premiums Written: Workers’ Comp Percent Change by State, 2007-2014*

Top 25 States

Only 21 states have seen works comp premium volume return to pre-crisis levels

*Excludes monopolistic fund states: ND, OH, WA, WY as well as WV, which transitioned to a competitive structure during this period.

Sources: SNL Financial LC.; Insurance Information Institute.
States with the poorest performing economies also produced some of the most negative net change in premiums of the past 7 years.

Florida’s construction dependent economy was devastated when the housing bubble collapsed, causing payrolls and WC premium volumes to plunge.

*Excludes monopolistic fund states: ND, OH, WA, WY as well as WV, which transitioned to a competitive structure during this period.

Sources: SNL Financial LC.; Insurance Information Institute.
Pricing Trends

Survey Results Suggest Commercial Pricing Has Flattened Out but Personal Lines Are Up
Commercial Lines Rate Change by Month (vs. Year Earlier), July 2001 – Sep. 2015

- July 2002, 33%
- February 2005, 0%
- December 2007, -16%
- October 2011, 0%
- September 2013, 5%
- July 2015, 1%
- September 2015: -1.5%

Not Much of A Hard Market, By Historic Standards

79 Months of Rates < 0%

Commercial Insurance Rate Changes Are Fairly Stable

CIAB: Average Commercial Rate Change, All Lines, (1Q:2004–2Q:2015)

(Percent)

Q2 2011 marked the last of 30th consecutive quarter of price declines

Pricing as of Q2:2015 had remained (slightly) negative

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
Change in Commercial Rate Renewals, by Account Size: 1999:Q4 to 2015:Q1

Percentage Change (%)

Peak = 2001:Q4 +28.5%

Pricing Turned Negative in Early 2004 and Remained that way for 7 ½ years

KRW : No Lasting Impact

Pricing turned positive in Q3:2011, the first increase in nearly 8 years

Trough = 2007:Q3 -13.6%

Rate trends are roughly flat, some carriers reporting small gains, others flat, others small declines

Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.

Source: Council of Insurance Agents and Brokers; Barclay’s Capital; Insurance Information Institute.
Change in Commercial Rate Renewals, by Line: 2015:Q2

Major Commercial Lines Renewals Were Mixed to Flat in Q2:2015; EPL, D&O and Commercial Auto Led the Way

Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
Source: Council of Insurance Agents and Brokers; Insurance Information Institute.
How the Risk Dollar is Spent
(U.S. Firms with Revenues Under $1 Bill)

- Total Property Premiums, 21%
- Total Liability Premium, 19%
- Total Management Liability Costs, 6%
- Total Professional Liability Costs, 9%
- Total Workers Comp. Premiums, 10%
- Workers Comp Retained Losses, 9%
- Total Med. Mal. Costs, 10%
- Total Administrative Costs, 6%
- Total Marine and Aviation Costs, 4%
- Total Fidelity, Surety & Crime Costs, 1%
- Property Retained Losses, 1%
- Liability Retained Losses, 4%

Source: 2015 RIMS Benchmark Survey; Insurance Information Institute.
Monthly Change in Auto Insurance Prices, 1991–2015*

*Cyclical peaks in PP Auto tend to occur roughly every 10 years (early 1990s, early 2000s and likely the early 2010s)

“Hard” markets tend to occur during recessionary periods

Pricing peak occurred in late 2010 at 5.3%, falling to 2.8% by Mar. 2012

July 2015 reading of 5.4% is up from 4.2% a year earlier

*Percentage change from same month in prior year; through July 2015; seasonally adjusted
Note: Recessions indicated by gray shaded columns.
Sources: US Bureau of Labor Statistics; National Bureau of Economic Research (recession dates); Insurance Information Institutes.
Underwriting Performance
Homeowners Insurance Combined Ratio: 1990–2015F

Homeowners Performance in 2011/12 Impacted by Large Cat Losses. Extreme Regional Variation Can Be Expected Due to Local Catastrophe Loss Activity

Sources: A.M. Best (1990-2014F); Conning (2015F); Insurance Information Institute.
Homeowners Multi-Peril Loss & ALAE Ratio, 2014: Highest 25 States

MT had the worst loss ratio in 2014, followed by NE and SD...

Sources: SNL Financial; Insurance Information Institute.
Homeowners Multi-Peril Loss & ALAE Ratio, 2014: Lowest 25 States and DC

OC and FL had the best performances in 2014. Traditionally high cat-loss states did well last year due to unusually low cat activity.

Sources: SNL Financial; Insurance Information Institute.
Florida Citizens Exposure to Loss, 2002 – 2015* ($ Billions)

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

*As of October 6, 2015.
Florida Citizens Policy Count, 2003 – 2015*
(Thousands)

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

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

Private Passenger Auto Underwriting Performance Is Exhibiting Remarkable Stability

Sources: A.M. Best (1990-2014); Conning (2015F – 2017F); Insurance Information Institute.
Florida Average No-Fault Claim Severity, 2009:Q1 - 2015:Q2*

The Average Cost of No-Fault Claims in Florida Rose Rapidly Until mid-2012 but Has Dropped in Recent Years

*All figures are the average of the most recent four quarters ending in each period.
Source: ISO/PCI Fast Track data; Insurance Information Institute.
Florida No-Fault Paid Claim Frequency, 2015:Q2*

The Frequency of No-Fault Claims in Florida Is Rising Once Again

*All figures are the average of the most recent four quarters ending in each period.
Source: ISO/PCI Fast Track data; Insurance Information Institute.
Collision Coverage: Severity & Frequency Trends Are Both Higher in 2015*

Annual Change, 2005 through 2015*

The Recession, High Fuel Prices Helped Temper Frequency and Severity, But this Trend Will Likely Be Reversed Based on Evidence from Past Recoveries

*2015 figure is for the 4 quarters ending with 2015:Q2.
Source: ISO/PCI Fast Track data; Insurance Information Institute
Commercial Lines Combined Ratio, 1990-2016F*

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

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

Commercial Auto is Expected to Improve Only Slowly as Rate Gains Barely Offset Adverse Frequency and Severity Trends

Sources: A.M. Best (1990-2014); Conning (2015F); Insurance Information Institute.
Commercial Property Combining Ratio: 2007–2016F

Commercial Property Underwriting Performance Has Been Volatile in Recent Years, Largely Due to Fluctuations in CAT Activity

Source: Conning Research and Consulting.
General Liability Combined Ratio: 2005–2016F

Commercial General Liability Underwriting Performance Has Been Volatile in Recent Years

Source: Conning Research and Consulting.

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.
Commercial Multi-Peril Underwriting Performance is Expected to Remain Stable in 2015 Assuming Normal Catastrophe Loss Activity

*2015F-2016F figures are Conning figures for the combined liability and non-liability components. Sources: A.M. Best; Conning; Insurance Information Institute.
**Inland Marine Combined Ratio: 2004–2015F**

<table>
<thead>
<tr>
<th>Year</th>
<th>Combined Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>82.5</td>
</tr>
<tr>
<td>2005</td>
<td>89.9</td>
</tr>
<tr>
<td>2006</td>
<td>77.3</td>
</tr>
<tr>
<td>2007</td>
<td>79.5</td>
</tr>
<tr>
<td>2008</td>
<td>93.3</td>
</tr>
<tr>
<td>2009</td>
<td>89.3</td>
</tr>
<tr>
<td>2010</td>
<td>86.2</td>
</tr>
<tr>
<td>2011</td>
<td>97.1</td>
</tr>
<tr>
<td>2012</td>
<td>96.1</td>
</tr>
<tr>
<td>2013</td>
<td>83.7</td>
</tr>
<tr>
<td>2014</td>
<td>83.3</td>
</tr>
<tr>
<td>2015</td>
<td>82.2</td>
</tr>
</tbody>
</table>

Inland Marine Underwriting Performance Has Been Consistently Strong for Many Years

Insured Catastrophe Losses

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

Winter Storm Losses Far Above Average in 2014 and 2015
U.S. Insured Catastrophe Losses

($ Billions, $ 2014)

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

*Through 9/30/15 in 2015 dollars.

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

Sources: Property Claims Service/ISO; Insurance Information Institute.
US Insured CAT Losses Through Q3 to Date:
30 Events =$11 Billion in Claims

PCS Cat Activity 2015

- 30 cats YTD
- $10.977B thru 3rd Quarter
- 7 winter storms
- 19 wind and thunderstorms
- 2 wildland fires
- 1 tropical storm
- 1 riot

Average

- 27 designated cats
- $21B in insured loss
- More peril diversity

Thunderstorms Drive 2015 Activity

Source: PCS; Insurance information Institute.
### Top 10 Insured CAT Losses Through 2015 Q3: 30 Events = $11 Bill. in Claims

<table>
<thead>
<tr>
<th>Period</th>
<th>States</th>
<th>Storm Family</th>
<th>Estimated Loss $</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 16-22</td>
<td>CT, DC, DE, IL, KY, MA, MD, ME, MI, NC, NH, NJ, NY, OH, PA, RI, SC, TN, VA, VT</td>
<td>Winter Storm</td>
<td>$2,063,412,300</td>
</tr>
<tr>
<td>April 7-10</td>
<td>AR, IA, IL, IN, KS, KY, MI, MO, NC, OH, OK, PA, TN, TX, WI, WV</td>
<td>Wind and Thunderstorm</td>
<td>$1,121,098,000</td>
</tr>
<tr>
<td>May 23-28</td>
<td>AR, CO, GA, KS, LA, OH, OK, SC, TX</td>
<td>Wind and Thunderstorm</td>
<td>$1,039,700,000</td>
</tr>
<tr>
<td>April 18-21</td>
<td>AL, AR, FL, GA, KS, LA, MS, NC, OK, PA, SC, TN, TX</td>
<td>Wind and Thunderstorm</td>
<td>$939,147,000</td>
</tr>
<tr>
<td>June 21-25</td>
<td>CO, CT, DE, IA, IL, MD, MI, ND, NJ, NY, PA, SD, VA, WI</td>
<td>Wind and Thunderstorm</td>
<td>$804,557,000</td>
</tr>
<tr>
<td>May 6-13</td>
<td>CO, IA, KS, NE, OK, SD, TX</td>
<td>Wind and Thunderstorm</td>
<td>$771,195,000</td>
</tr>
<tr>
<td>April 24-28</td>
<td>AL, FL, GA, KY, LA, MS, TX</td>
<td>Wind and Thunderstorm</td>
<td>$686,805,000</td>
</tr>
<tr>
<td>February 14-15</td>
<td>CT, DE, MA, MD, NH, NJ, NY, PA, RI, VA</td>
<td>Winter Storm</td>
<td>$466,200,300</td>
</tr>
<tr>
<td>June 3-8</td>
<td>CO, IL</td>
<td>Wind and Thunderstorm</td>
<td>$370,220,000</td>
</tr>
<tr>
<td>March 25-26</td>
<td>AR, KS, MO, OK</td>
<td>Wind and Thunderstorm</td>
<td>$340,591,000</td>
</tr>
</tbody>
</table>

**Source:** PCS; Insurance information Institute.
## Top 10 Largest NFIP Flood Claim Payout Events

<table>
<thead>
<tr>
<th>Rank</th>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>Number of paid losses</th>
<th>Amount paid ($ millions)</th>
<th>Average paid loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aug. 2005</td>
<td>Hurricane Katrina</td>
<td>AL, FL, GA, LA, MS, TN</td>
<td>167,971</td>
<td>$16,316</td>
<td>$97,134</td>
</tr>
<tr>
<td>2</td>
<td>Oct. 2012</td>
<td>Superstorm Sandy</td>
<td>CT, DC, DE, MA, MD, ME, NC, NH, NJ, NY, OH, PA, RI, VA, VT, WV</td>
<td>129,235</td>
<td>7,946</td>
<td>61,482</td>
</tr>
<tr>
<td>3</td>
<td>Sep. 2008</td>
<td>Hurricane Ike</td>
<td>AR, IL, IN, KY, LA, MO, OH, PA, TX</td>
<td>46,589</td>
<td>2,689</td>
<td>57,713</td>
</tr>
<tr>
<td>4</td>
<td>Sep. 2004</td>
<td>Hurricane Ivan</td>
<td>AL, DE, FL, GA, LA, MD, MS, NJ, NY, NC, OH, PA, TN, VA, WV</td>
<td>28,290</td>
<td>1,612</td>
<td>56,964</td>
</tr>
<tr>
<td>5</td>
<td>Aug. 2011</td>
<td>Hurricane Irene</td>
<td>CT, DC, DE, MA, MD, ME, NC, NH, NJ, NY, PA, RI, VA, VT</td>
<td>44,228</td>
<td>1,337</td>
<td>30,226</td>
</tr>
<tr>
<td>6</td>
<td>Jun. 2001</td>
<td>Tropical Storm Allison</td>
<td>FL, LA, MS, NJ, PA, TX</td>
<td>30,784</td>
<td>1,107</td>
<td>35,955</td>
</tr>
<tr>
<td>7</td>
<td>May 1995</td>
<td>Louisiana Flood</td>
<td>LA</td>
<td>31,343</td>
<td>585</td>
<td>18,667</td>
</tr>
<tr>
<td>8</td>
<td>Aug. 2012</td>
<td>Tropical Storm Isaac</td>
<td>AL, FL, LA, MS</td>
<td>11,992</td>
<td>548</td>
<td>45,728</td>
</tr>
<tr>
<td>9</td>
<td>Sep. 2003</td>
<td>Hurricane Isabel</td>
<td>DE, MD, NJ, NY, NC, PA, VA, WV</td>
<td>19,931</td>
<td>500</td>
<td>25,072</td>
</tr>
<tr>
<td>10</td>
<td>Sep. 2005</td>
<td>Hurricane Rita</td>
<td>AL, AR, FL, LA, MS, TN, TX</td>
<td>9,528</td>
<td>475</td>
<td>49,820</td>
</tr>
</tbody>
</table>

(1) Includes events from 1978 to June 30, 2015, as of August 21, 2015. Defined by the National Flood Insurance Program as an event that produces at least 1,500 paid losses. Stated in dollars when occurred.

Loss Events in the US, 1980 – 2014
Overall and Insured Losses

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

2015 First Half:
$8.2 Billion Insured Losses
$12.0 Overall Losses

Source: Property Claim Services, MR NatCatSERVICE.

*Losses adjusted to inflation based on CPI.
The number of NFIP policies in force has plunged by 549,000 or 9.6% since 2009, even as coastal development surges and sea levels rise.
Take-Up Rates for Various Types of Insurance in the U.S.

Take-Up Rate

Take-up rates vary widely by type of coverage

- CA Earthquake: 10%
- Flood: 14%
- Renters: 40%
- Cyber: 52%
- Terrorism: 62%
- Pvt. Passenger Auto: 87%
- Home: 95%
- Workers Comp: 99%

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

(Insured Losses, 2014 Dollars, $ Billions)

Storm Sandy in 2012 was the last mega-CAT to hit the US

Includes Tuscaloosa, AL, tornado
Includes Joplin, MO, tornado

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

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

Source: ISO (1960-2010); A.M. Best (2011-15E) Insurance Information Institute.
Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1995–2014

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

Source: ISO’s Property Claim Services Unit.
**Top 5 Insured Catastrophe Losses in 2015***

As in 2014, a “Polar Vortex” event was the most costly cat through the first half of 2015 with $1.84 billion in insured losses.

In 2015, Winter Storm cat events resulting in $2.3 billion in insured losses, little changed from $2.4 billion in 2013. These figures are about double the long-term average.

*Through June 10, 2015.

Sources: PCS unit of Verisk Analytics; Insurance Information Institute.
Three of the four most costly years ever for insured losses from winter storms and damage occurred in the 1990s, led by the “Storm of the Century” in 1993.

2015 insured winter storm losses totaled $2.3B, similar to 2014 and about double the long-run average.

*Winter storms include winter damage, blizzard, snow storm and cold wave

**Losses adjusted to inflation based on country CPI

Source: Property Claim Services, MR NatCatSERVICE.
## Natural Disaster Losses in the U.S., First Half 2015

*Source: Property Claim Services (PCS) as of 7/7/2015; Munich Re.*

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Events</th>
<th>Fatalities</th>
<th>Estimated Overall Losses (US $m)</th>
<th>Estimated Insured Losses (US $m)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe Thunderstorm</td>
<td>38</td>
<td>66</td>
<td>7,000</td>
<td>5,100</td>
</tr>
<tr>
<td><strong>Winter Storms &amp; Cold Waves</strong></td>
<td>11</td>
<td>80</td>
<td>3,800</td>
<td>2,900</td>
</tr>
<tr>
<td>Flood, Flash Flood</td>
<td>10</td>
<td>4</td>
<td>500</td>
<td>150</td>
</tr>
<tr>
<td>Earthquake &amp; Geophysical</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tropical Cyclone</td>
<td>2</td>
<td>4</td>
<td>Loss est. in progress</td>
<td>Loss est. in progress</td>
</tr>
<tr>
<td>Wildfire, Heat Waves, &amp; Drought</td>
<td>18</td>
<td>-</td>
<td>1,300</td>
<td>Minor market loss</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>80</strong></td>
<td><strong>154</strong></td>
<td><strong>12,600</strong></td>
<td><strong>8,200</strong></td>
</tr>
</tbody>
</table>
## Natural Disaster Losses in the US, 2014

Based on perils

<table>
<thead>
<tr>
<th>As of January, 2015</th>
<th>Number of Events</th>
<th>Fatalities</th>
<th>Estimated Overall Losses (US $m)</th>
<th>Estimated Insured Losses (US $m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe Thunderstorm</td>
<td>62</td>
<td>98</td>
<td>17,000</td>
<td>12,300</td>
</tr>
<tr>
<td><strong>Winter Storm, winter damage, cold wave, snow storm</strong></td>
<td>13</td>
<td>115</td>
<td>3,700</td>
<td>2,300</td>
</tr>
<tr>
<td>Flood, flash flood, storm surge</td>
<td>20</td>
<td>5</td>
<td>1,800</td>
<td>500</td>
</tr>
<tr>
<td>Earthquake &amp; Geophysical, landslides</td>
<td>11</td>
<td>45</td>
<td>750</td>
<td>150</td>
</tr>
<tr>
<td>Tropical Cyclone</td>
<td>2</td>
<td>1</td>
<td>95</td>
<td>Minor market losses</td>
</tr>
<tr>
<td>Wildfire, Heat, &amp; Drought</td>
<td>11</td>
<td>2</td>
<td>1,700</td>
<td>Minor market losses</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>119</td>
<td>266</td>
<td>25,000</td>
<td>15,300</td>
</tr>
</tbody>
</table>

Source: Munich Re.
The World is Warmer...With One Big Exception!

**HIGHLIGHTS**

- **2014** was the warmest year across global land and ocean surfaces since records began in 1880.
- 9 of the 10 warmest years in the 135-year period of record have occurred in the 21st century. 1998 currently ranks as the fourth warmest year on record.
- **January to May 2015** warmest first five months on record!

Source: NOAA; Munich Re.
# Top 11 Insured Loss Events from Riots and Civil Commotion

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
<th>Date</th>
<th>State</th>
<th>Insured Loss When Occurred</th>
<th>Insured Losses (2014 $MM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>14</td>
<td>Apr 29 - May 4</td>
<td>CA</td>
<td>775,000,000</td>
<td>1,307.7</td>
</tr>
<tr>
<td>1980</td>
<td>62</td>
<td>May 17 - 19</td>
<td>FL</td>
<td>65,250,000</td>
<td>187.5</td>
</tr>
<tr>
<td>1967</td>
<td>48</td>
<td>Jul 23 - 31</td>
<td>MI</td>
<td>41,500,000</td>
<td>294.2</td>
</tr>
<tr>
<td>1965</td>
<td>87</td>
<td>11-Aug</td>
<td>CA</td>
<td>38,000,000</td>
<td>285.6</td>
</tr>
<tr>
<td>1977</td>
<td>99</td>
<td>Jul 13 - 14</td>
<td>NY</td>
<td>28,000,000</td>
<td>109.4</td>
</tr>
<tr>
<td>1967</td>
<td>47</td>
<td>Jul 12 - 21</td>
<td>NJ</td>
<td>11,000,000</td>
<td>78.0</td>
</tr>
<tr>
<td>1966</td>
<td>20</td>
<td>12-Jul</td>
<td>IL</td>
<td>4,000,000</td>
<td>29.2</td>
</tr>
<tr>
<td>2015</td>
<td>0</td>
<td>Apr 18 – May 1</td>
<td>MD</td>
<td>23,900,000</td>
<td>23.9*</td>
</tr>
<tr>
<td>1971</td>
<td>63</td>
<td>Jun 13 - 15</td>
<td>NM</td>
<td>3,000,000</td>
<td>17.5</td>
</tr>
<tr>
<td>1977</td>
<td>11</td>
<td>Jul 13 - 14</td>
<td>NY</td>
<td>2,000,000</td>
<td>7.8</td>
</tr>
</tbody>
</table>

April 2015 Baltimore riots were designated a PCS CAT event on April 29 (first PCS designation for a riot in 23 years) as of 6/10/15 insured losses totaled $23.9 million (2014 Ferguson riots did not receive PCS designation)

*As of 6/10/15.
Source: PCS unit of Verisk Analytics; Insurance Information Institute
Insurance Coverage for Riots and Civil Commotions: Home, Auto and Business

- Auto, homeowners, and business insurance policies generally include coverage for property losses caused by riots and civil commotions.

- Homeowners policies pay to repair, or rebuild, an insured home if its structure is damaged or destroyed as the result of a riot or civil commotion, as well as to replace the homeowner’s personal belongings if they are damaged or stolen during the event.
  - If the home is rendered uninhabitable by the damage caused by a riot or civil commotion, policyholders can file an additional living expenses (ALE) claim to finance their temporary housing expenses until the residence has been repaired.

- The optional comprehensive coverage on an auto insurance policy reimburses losses to a vehicle due to damage caused by falling objects, fire, riots and vandalism, among other things.

- Standard business property insurance policies provide coverage for the structure of the building as well as the contents inside, and cover losses arising from riots or civil commotion. Business interruption (BI) coverage, whereby the policyholder can file a claim for lost income, is usually only triggered when the insured business incurs direct physical damage.

Loss events in the US, 1980 – 2014

Number of events

The number of loss events surged from 2006 – 2010, though insured losses remained elevated through 2012

Number of Events

2014 Total: 119 Events

2015 First Half: 80 Events

- **Geophysical events**
  (Earthquake, tsunami, volcanic activity)

- **Meteorological events**
  (Tropical storm, extratropical storm, convective storm, local storm)

- **Hydrological events**
  (Flood, mass movement)

- **Climatological events**
  (Extreme temperature, drought, forest fire)

Source: Geo Risks Research, NatCatSERVICE
Convective Loss Events in the US
Overall and insured losses, 1980 – 2014

The period from 2008-2014 has been the most expensive on record for insured losses from “Convective Events” (severe thunderstorms, tornado, hail, lightning and flash flood)

2015 First Half:
$5.1 Billion Insured Losses
$7.0 Overall Losses

*Losses adjusted to inflation based on CPI
Source: Geo Risks Research, NatCatSERVICE

Analysis contains:
severe storm, tornado, hail, flash flood and lightning
Federal Disaster Declarations Patterns: 1953-2015

Disaster Declarations Set New Records in Recent Years
There have been 2,244 federal disaster declarations since 1953. The average number of declarations per year is 36 from 1953-2014, though there haven’t been that few recorded since 1995.

The number of federal disaster declarations set a new record in 2011, with 99, shattering 2010’s record 81 declarations.

41 federal disasters have declared so far in 2015*

The Number of Federal Disaster Declarations Is Generally Rising and Set New Records in 2010 and 2011 Before Dropping in 2012-2014

*Through October 25, 2015.

Federal Disasters Declarations by State, 1953 – 2015: Highest 25 States*

Over the past 62 years, Florida has had the 5th highest number of Federal Disaster Declarations

Federal Disasters Declarations by State, 1953 – 2015: Lowest 25 States*

Over the past 60 years, Wyoming and Utah had the fewest number of Federal Disaster Declarations.

Natural Hazard Risk Scores, 2014
Highest 25 States*

Florida received the highest Natural Hazard Risk Score

Note: Score is based on data on 9 natural hazards: flood, wildfire, tornado, storm surge, earthquake, straight-line wind, hurricane, wind, hail and sinkhole.

*Analysis Includes DC. Excludes Alaska and Hawaii due to limited natural hazard risk data.

Sources: CoreLogic release “CoreLogic Identifies US States at Highest Risk of Property Damage Loss from Natural Hazards,” Sept. 10, 2014; Insurance Information Institute.
Natural Hazard Risk Scores, 2014
Bottom 24 States*

Note: Score is based on data on 9 natural hazards: flood, wildfire, tornado, storm surge, earthquake, straight-line wind, hurricane, wind, hail and sinkhole.

*Analysis Includes DC. Excludes Alaska and Hawaii due to limited natural hazard risk data.

Sources: CoreLogic release “CoreLogic Identifies US States at Highest Risk of Property Damage Loss from Natural Hazards,” Sept. 10, 2014; Insurance Information Institute.
Workers Compensation Operating Environment

Workers Comp Results Have Improved Substantially in Recent Years
Nonfarm Payroll (Wages and Salaries): Quarterly, 2005–2015:Q1

Prior Peak was 2008:Q3 at $6.54 trillion

Recent trough (2009:Q1) was $6.23 trillion, down 5.3% from prior peak

Latest (2015:Q1) was $7.66 trillion, a new peak--$1.34 trillion above 2009 trough

Growth rates
2011:Q1 over 2010:Q1: 5.5%
2012:Q1 over 2011:Q1: 4.2%
2013:Q1 over 2012:Q1: 2.5%
2014:Q1 over 2013:Q1: 4.3%
2015:Q1 over 2014:Q1: 4.4%

Note: Recession indicated by gray shaded column. Data are seasonally adjusted annual rates.
Sources: [http://research.stlouisfed.org/fred2/series/WASCUR](http://research.stlouisfed.org/fred2/series/WASCUR); National Bureau of Economic Research (recession dates); Insurance Information Institute.
Payroll vs. Workers Comp Net Written Premiums, 1990-2014P

Payroll Base*
$Billions

WC NWP
$Billions

Payroll vs. Workers Comp Net Written Premiums, 1990-2014P

Payroll Base*
$Billions

WC NWP
$Billions

WC premium volume dropped two years before the recession began

WC net premiums written were down $14B or 29.3% to $33.8B in 2010 after peaking at $47.8B in 2005

Continued Payroll Growth and Rate Gains Suggest WC NWP Will Grow Again in 2015

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

WC results have improved markedly since 2011

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

Sources: A.M. Best (1994-2009); NCCI (2010-2014P) and are for private carriers only; Insurance Information Institute.
Workers Compensation Premium: Fourth Consecutive Year of Increase

Net Written Premium

$ Billions

State Funds ($ B)

Private Carriers ($ B)

Pvt. Carrier NWP growth was +4.3% in 2014, +5.1% in 2013 and 8.7% in 2012

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.
PRIVATE CARRIERS: Overall 2014 Growth = +4.6%

While growth rates varied widely, most states experienced positive growth in 2014.

*Excludes monopolistic fund states (in gray): OH, ND, WA and WY. Source: NCCI.
2013 Workers Compensation Direct Written Premium Growth, by State*

PRIVATE CARRIERS: Overall 2013 Growth = +5.4%

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

*Excludes monopolistic fund states (in white): OH, ND, WA and WY.
Source: NCCI.
### Workers Compensation Components of Written Premium Change, 2013 to 2014

<table>
<thead>
<tr>
<th>Written Premium Change from 2013 to 2014</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Written Premium—Countrywide</td>
<td>+4.6%</td>
</tr>
<tr>
<td>Direct Written Premium—Countrywide</td>
<td>+4.6%</td>
</tr>
<tr>
<td>Direct Written Premium—NCCI States</td>
<td>+4.5%</td>
</tr>
</tbody>
</table>

### 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)**

| Percent | 12.1 | 7.4 | 10.0 | 2.9 | -6.4 | -3.2 | -6.0 | -8.0 | -5.4 | -2.6 | 3.5 | 1.2 | 4.9 | 6.6 | -6.0 | -6.5 | -8.8 | -7.8 | -3.2 | -2.1 | -1.2 | 0.4 | 2.2 | 0.5 | -2.2 |
| Calendar Year | 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 | 15p |

*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.
While growth rates varied widely, most states experienced positive growth in 2014.

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

Source: NCCI.
Note: Premium level changes are approved changes are approved or filed and pending changes in advisory rates, loss costs and rating values as of 4/24/15 as filed by applicable rating organization, relative to those previously approved. SC is filed and pending. IN and NC are in cooperation with state rating bureaus. Source: NCCI.
Workers Compensation Lost-Time Claim Frequency Declined in 2014

**Cumulative Change of −51.1%**
(1994–2013 adj.)

**Frequency Change: 2007—2012**
Contracting: 7.9→7.1  -9.3%
Manufacturing: 13.6→12.0  -11.8%

*Adjustments primarily due to significant audit activity.
Source: NCCI Financial Call data, developed to ultimate and adjusted to current wage and voluntary loss cost level; Excludes high deductible policies; 1994-2013: Based on data through 12/31/13. Data for all states where NCCI provides ratemaking services, excluding WV.
Frequency is the number of lost-time claims per $1M pure premium at current wage and voluntary loss cost level.
Workers Comp Indemnity Claim Costs: Modest Increase in 2014

Average Indemnity Cost per Lost-Time Claim

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

Cumulative Change = 141% (1991-2014p)

1991-2013: Based on data through 12/31/2013, developed to ultimate
Based on the states where NCCI provides ratemaking services including state funds, excluding WV; Excludes high deductible policies.
WC Indemnity Severity vs. Wage Inflation, 1995 -2014p

Indemnity severities usually outpace wage gains.

WC indemnity severity turned positive again in 2011.


Source: NCCI
Workers Compensation Medical Severity: Moderate Increase in 2014

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

Cumulative Change = 263% (1991-2014p)

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.
The change in lost-time medical severities from 2009-2013 ranged from a low of -6% to a high of 9%.

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

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

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

Workers Compensation
Change in Medical Severity
Comparison to Change in Medical Consumer Price Index (CPI)

Percent Change

Change in Lost-Time Medical Claim Severity
Change in US Medical CPI

Average Annual Change: 1994—2014
Lost-Time Medical Severity: +6.4%
US Medical CPI: +3.7%

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.
WC Medical Severity Generally Outpaces the Medical CPI Rate

Average annual increase in WC medical severity from 1995 through 2014 was well above the medical CPI (6.4% vs. 3.7%), but the gap has narrowing. Lost-time medical severities appear to on the rise again.

Though moderating, medical inflation will continue to exceed inflation in the overall economy.

Average Annual Growth Average 1995 – 2013
Healthcare: 3.8%
Total Nonfarm: 2.4%

*July 2014 compared to July 2013.
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.

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

Health care expenditures as a share of GDP rose from 5.8% in 1965 to 18.0% in 2013 and are expected to reach 19.9% of GDP by 2022.

Since 2009, health expenditures as a % of GDP have flattened out at about 18%--the question is why and will it last?

The Strength of the Economy Will Greatly Influence Insurer Exposure Base Across Most Lines
Demand for Insurance Should Increase in 2016 as GDP Growth Continues at a Steady, Albeit Moderate Pace and Gradually Benefits the Economy Broadly

* Estimates/Forecasts from Blue Chip Economic Indicators.
Source: US Department of Commerce, Blue Economic Indicators 10/15; Insurance Information Institute.
Growth in the West is finally beginning to pick up

The economic outlook for most of the US is generally positive, though flat-to-negative for 10 states, several of them energy dependent

North Dakota was the economic growth juggernaut of the US in 2014—by far

Only 7 states experienced growth in excess of 3% in 2014, which is a growth rate we would see nationally in a more typical recovery

Growth Benchmarks: Real GDP
US: 2.2%

*Advance statistics
Sources: U.S. Bureau of Economic Analysis; Insurance Information Institute.
Real GDP by State Percent Change, 2014*:
Lowest 25 States

Growth rates in 16 states were still below 1% in 2014, including in AL.

Mississippi and Alaska were the only states to shrink in 2014.

*Advance statistics
Sources: US Bureau of Economic Analysis; Insurance Information Institute.
Percent Change in Real GDP by State, 2013

Sources: US Bureau of Economic Analysis; Insurance Information Institute.
Massive Job Losses Sapped the Economy and Commercial/Personal Lines Exposure, But Trend Has Greatly Improved
Unemployment and Underemployment Rates: Still Too High, But Falling

January 2000 through September 2015, Seasonally Adjusted (%)

"Headline" Unemployment Rate U-3

Unemployment + Underemployment Rate U-6

Stubbornly high unemployment and underemployment constrain overall economic growth, but the job market is continuing to improve.

Monthly Change in Private Employment

January 2007 through Sept. 2015 (000s, Seasonally Adj.)

3,042,000 jobs were created in 2014, the most since 1997

Private Employers Added 13.03 Million Jobs Since Jan. 2010 After Having Shed 5.01 Million Jobs in 2009 and 3.76 Million in 2008 (State and Local Governments Have Shed Hundreds of Thousands of Jobs)

US Unemployment Rate Forecast

2007:Q1 to 2016:Q4F*

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

Jobless figures have been revised downwards for 2015/16

Unemployment forecasts have been revised modestly downwards. Optimistic scenarios put the unemployment as low as 5.0% by Q4 of 2015.

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (10/15 edition); Insurance Information Institute.

* = actual; = forecasts
In September, 37 states and the District of Columbia had over-the-month unemployment rate decreases, 6 states had increases, and 7 states had no change.

*Provisional figures for September 2015, seasonally adjusted.

Unemployment Rates by State, September 2015: Lowest 25 States*

In September, 37 states and the District of Columbia had over-the-month unemployment rate decreases, 6 states had increases, and 7 states had no change.

*Provisional figures for September 2015, seasonally adjusted.
The Construction Sector Is Critical to the Economy and the P/C Insurance Industry
Private Construction Activity Is Moving in a Positive Direction though Remains Well Below Pre-Crisis Peak; Residential Dominates

New Construction peaks at $911.8 in 2006

Trough in 2010 at $500.6B, after plunging 55.1% ($411.2B)

2015: Value of new pvt. construction hits $788.0B as of Aug. 2015, up 57.5% from the 2010 trough but still 13.5% below 2006 peak

*2015 figure is a seasonally adjusted annual rate as of August.
Sources: US Department of Commerce [http://www.census.gov/construction/c30/c30index.html](http://www.census.gov/construction/c30/c30index.html) ; Insurance Information Institute.
**Value of Construction Put in Place, August 2015 vs. August 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

Source: U.S. Census Bureau, [http://www.census.gov/construction/c30/c30index.html](http://www.census.gov/construction/c30/c30index.html); Insurance Information Institute.
Private Construction Activity is Up in Most Segments in the Second Half of 2015; Expansion Should Continue

*seasonally adjusted
Source: U.S. Census Bureau, [http://www.census.gov/construction/c30/c30index.html](http://www.census.gov/construction/c30/c30index.html); Insurance Information Institute.
Value of Public Construction Put in Place, by Segment, Aug. 2015 vs. Aug. 2014*

Public sector construction activity finally up in most segments after many months of decline, pushing up public entity risk exposures

Residential, Commercial and Conservation lead public sector construction

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

*seasonally adjusted
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 June; [http://www.census.gov/construction/c30/historical_data.html](http://www.census.gov/construction/c30/historical_data.html)
Sources: US Department of Commerce; Insurance Information Institute.
Construction Employment, Jan. 2010—Sept. 2015*

Construction employment is +948,000 above Jan. 2011 (+17.4%) trough

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

The "Great Recession" and housing bust destroyed 2.3 million construction jobs.

Construction employment troughed at 5.435 million in Jan. 2011, after a loss of 2.291 million jobs, a 29.7% plunge from the April 2006 peak.

Construction employment as of Sept. 2015 totaled 6.396 million, an increase of 961,000 jobs or 17.7% from the Jan. 2011 trough.

Gap between pre-recession construction peak and today: 1.33 million jobs.


Note: Recession indicated by gray shaded column.
New Private Housing Starts, 1990-2021F

(Millions of Units)

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

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

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 (10/15); Insurance Information Institute.
For the U.S. as a whole, the trend toward multi-unit housing projects (vs. single-unit homes) is recent. Commercial insurers with Workers Comp, Construction risk exposure, and Surety benefit.

*January through April 2015; April is preliminary; calculations based on seasonally adjusted at annual rates

Sources: U.S. Census Bureau, New Residential Construction in April 2015 and earlier releases; next release June 16, 2015; Insurance Information Institute calculations.
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%).

Q. Do you have renters insurance? ¹

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

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

¹Asked of those who rent their home.

Source: Insurance Information Institute Annual Pulse Survey.
Before the 2001 recession, rental vacancy rates were 8% or less. We’re below those levels now. => More multi-unit construction?

ENERGY SECTOR: OIL & GAS
INDUSTRY FUTURE IS BRIGHT
BUT VOLATILE

US Is Becoming an Energy
Powerhouse but Fall in Prices
Will Have Negative Impact
Crude oil production in the U.S. is expected to increase by 90.6% from 2008 through 2016—and could overtake Saudi Arabia as the world’s largest oil producer.
The U.S. is already the world’s largest natural gas producer—recently overtaking Russia. This is a potent driver of commercial insurance exposures.

Oil and gas extraction employment was up 28.8% by Oct. 2014 but falling energy prices have taken their toll.

Employment in the O&G segment is down 5.2% since its Oct. 2014 peak.

*Seasonally adjusted
The U.S. Was Experiencing a Mini Manufacturing Renaissance but Headwinds from Weak Export Markets and Strong Dollar Hurt
The manufacturing sector expanded for 62 of the 64 months from Jan. 2010 through Apr. 2015. Pace of recovery has been uneven due to economic turbulence in the U.S., Europe and China and the high dollar.

Manufacturing Growth for Selected Sectors, 2015 vs. 2014*

Manufacturing of durable goods is stronger than nondurables in 2015

Impact of falling energy prices

Durables: +3.0%
Non-Durables: -9.7%

Manufacturing is expanding in many sectors but declining energy prices are dragging down industry figures. Continued growth across a number of sectors that will contribute to growth in insurable exposures including: WC, Commercial Property, Commercial Auto and many liability coverages.

New auto/light truck sales fell to the lowest level since the late 1960s. Forecast for 2014-15 is still below 1999-2007 average of 17 million units, but a robust recovery is well underway.

Yearly car/light truck sales will likely continue at current levels, in part replacing cars that were held onto in 2008-12. New vehicles will generate more physical damage insurance coverage but will be more expensive to repair. PP Auto premium might grow by 5% - 6%.

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (10/15); Insurance Information Institute.
Manufacturing Employment, Jan. 2010—Sept. 2015*

Since Jan 2010, manufacturing employment has been a surprising source of strength in the economy. Employment was at a multi-year high until recently. But has slipped in recent months as economies abroad weaken, hurting exports of manufactured goods.

Manufacturing employment has been a surprising source of strength in the economy. Employment was at a multi-year high until recently.

*Seasonally adjusted.
Monthly shipments in March 2015 are similar to pre-crisis (July 2008) peak but has declined in recent months due to the strong US dollar and weakness abroad. Manufacturing is energy-intensive and growth leads to gains in many commercial exposures: WC, Commercial Auto, Marine, Property, and various Liability Coverages.

* Seasonally adjusted; Data published May 4, 2015.
Index of Total Industrial Production:*  
A Near Peak as of December 2014

Many economists expect business investment to rise in 2015

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
Recovery in Capacity Utilization is a Positive Sign for Commercial Exposures

March 2001 through March 2015

The US operated at 78.4% of industrial capacity in Feb. 2015, well above the June 2009 low of 66.9% but is still below pre-recession levels.

The closer the economy is to operating at “full capacity,” the greater the inflationary pressure.

Capacity utilization is falling due to strong dollar and falling energy prices.

Index of Total Industrial Production:*
Strong Dollar Is a Headwind

Many economists expect business investment to rise in 2015

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 March 2015 (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.
Cyber Risk is a Rapidly Emerging Exposure for Businesses Large and Small in Every Industry
Data Breaches 2005-2015, by Number of Breaches and Records Exposed

# Data Breaches/Millions of Records Exposed

The total number of data breaches (+27.5%) hit a record high of 783 in 2014, exposing 85.6 million records. Through June 30, this year has seen 117.6 million records exposed in 400 breaches.*

## High Profile Data Breaches, 2014-2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Company</th>
<th>Description of Breach</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2015</td>
<td>OPM</td>
<td>Hackers broke into U.S. Government Personnel Office stealing personal identifying information of as many as 14 million civilian U.S. government employees.</td>
</tr>
<tr>
<td>Mar 2015</td>
<td>Premera Blue Cross</td>
<td>Data breach compromises financial and medical records of 11 million customers.</td>
</tr>
<tr>
<td>Feb 2015</td>
<td>Anthem, Inc</td>
<td>Massive data breach after hackers gained access to corporate data base containing personal information of as many as 80 million current and former U.S. customers and employees.</td>
</tr>
<tr>
<td>Dec 2014</td>
<td>Sony Pictures</td>
<td>Hacker break-in involving theft of unreleased motion pictures, and theft of more than 25 gigabytes of sensitive data on tens of thousands of Sony employees, including social security numbers, medical and salary information.</td>
</tr>
<tr>
<td>Nov 2014</td>
<td>Staples</td>
<td>Point-of-sale (POS) malware attack and breach exposing customer data, and resulting in compromise of 1.2 million records.</td>
</tr>
<tr>
<td>Sept 2014</td>
<td>Home Depot</td>
<td>Huge data breach exposes 56 million credit and debit cards and 53 million email addresses.</td>
</tr>
<tr>
<td>Aug 2014</td>
<td>Community Health Systems</td>
<td>Cyber attack originating in China resulted in data breach, compromising 4.5 million patient records. Hackers broke into company’s computer system by exploiting Heartbleed bug.</td>
</tr>
<tr>
<td>June 2014</td>
<td>PF Changs</td>
<td>Security breach affected customers at 33 restaurants located in 16 states, with potential credit and debit card data stolen.</td>
</tr>
<tr>
<td>May 2014</td>
<td>eBay</td>
<td>Massive data breach exposed records of site’s 233 million customers, including names, email addresses, physical addresses, phone numbers and birthdates.</td>
</tr>
<tr>
<td>Feb 2014</td>
<td>Michaels Stores</td>
<td>Possible fraudulent activity on some U.S. payment cards used at Michaels stores suggests it may have experienced data security attack, exposing 2.6 million records.</td>
</tr>
<tr>
<td>Jan 2014</td>
<td>Snapchat</td>
<td>Security breach compromises phone numbers and usernames for 4.6 million accounts.</td>
</tr>
<tr>
<td>Jan 2014</td>
<td>Neiman Marcus</td>
<td>Hacker break-in exposed unknown no. of customer cards, compromising est. 1.1 million records.</td>
</tr>
<tr>
<td>Nov/Dec 2013</td>
<td>Target</td>
<td>Malware stored on Target’s checkout registers led to theft of data from about 40 million credit and debit card accounts and the personal information of up to 70 million customers.</td>
</tr>
</tbody>
</table>

Sources: Identity Theft Resource Center; Insurance Information Institute (I.I.I.) research.
Cybersecurity Spending Is Rising Sharply, Up by About 8%+ Annually through 2016—a Projected Increase of $12.1 Billion from 2014 to 2016

Top 10 Global Business Risks for 2015

Cyber is one of the most significant movers in this year’s Risk Barometer rankings, gaining five percentage points to move into the top 5 global business risks for the first time.

Source: Allianz Risk Barometer on Business Risks 2015
The majority of the 783 data breaches in 2014 affected business and medical/healthcare organizations, according to the Identity Theft Resource Center.

Business, 258 (33.3%)

Medical/Healthcare, 333 (42.5%)

Educational, 57 (7.3%)

Govt/Military, 92 (11.7%)

Banking/Credit/Financial, 43 (5.5%)
Evolving Threats: Cyber Crime and Cyber Terrorism

State sponsored groups:
- Foreign government sponsored
- Sophisticated and well-funded

Organized cyber criminals:
- Traditional organized crime groups
- Loosely organized global hacker crews

Hacktivists:
- Politically-motivated hackers
- Increasing capabilities

Insiders:
- Easy access to sensitive information
- Difficult to detect

Terrorists:
- Destruction of physical and digital assets

Malicious or criminal attacks are most often the cause of data breach globally. Some 42 percent of incidents concern a malicious or criminal attack, while 30 percent concern a negligent employee or contractor (human factor).

*The most common types of malicious or criminal attacks include malware infections, criminal insiders, phishing/social engineering and SQL injection.

Source: 2014 Cost of a Data Breach Study: Global Analysis, the Ponemon Institute, sponsored by IBM, May 2014
Malicious code, denial of service and web-based attacks account for more than 55 percent of the total annualized cost of cyber crime experienced by 59 U.S. companies.

Information theft (40%) and business disruption or lost productivity (38%) account for the majority of external costs due to cyber crime.

* Other costs include direct and indirect costs that could not be allocated to a main external cost category.

Data/Privacy Breach: Many Potential Costs Can Be Insured

Costs of notifying affecting individuals

- Costs of notifying regulatory authorities
- Regulatory fines at home & abroad
- Forensic costs to discover cause

Defense and settlement costs

- Lost customers and damaged reputation
- Cyber extortion payments

Business Income Loss

Source: Zurich Insurance; Insurance Information Institute
Cyber risk management today involves three essential components, each designed to reduce, mitigate or avoid loss. An increasing number of cyber risk products offered by insurers today provide all three.

Source: Insurance Information Institute research.

- Provides information on cyber threats and insurance market solutions
- Global cyber risk overview
  - Quantification of threats by type and industry
- Cyber security and cost of attacks
- Cyber terrorism
- Cyber liability
- Insurance market for cyber risk

http://www.iii.org/white-paper/cyber-risks-threat-and-opportunities-100715
PWC Survey: Cybercrime Costs Greater for U.S. Companies

U.S. organizations are more at risk of suffering financial losses in excess of $1 million due to cybercrime.

Source: 2014 Global Economic Crime Survey, PWC.
Marsh: Percentage of U.S. Companies Purchasing Cyber Insurance Increased in 2014

Ever larger numbers of insureds seek financial protection via cyber insurance. The percentage of U.S. companies buying cyber insurance rose to 16 percent in 2014.

*Take-up rate refers to the overall percentage of clients that purchased standalone cyber insurance.

Average limits purchased for cyber risk rose to $12.8 million for all industries and all company sizes in 2014. **Power and utility companies witnessed the sharpest percentage increase in average limits, at 59 percent.**

($ Millions)

Among larger companies, average cyber insurance limits purchased increased by 22 percent to $34.1 million in 2014, from $27.8 million in 2013.

($ Millions)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Avg. 2013 Limits</th>
<th>Avg. 2014 Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Industries</td>
<td>$27.8 million</td>
<td>$34.1 million</td>
</tr>
<tr>
<td>Comms, Media &amp; Technology</td>
<td>$40.3 million</td>
<td>$40.4 million</td>
</tr>
<tr>
<td>Education</td>
<td>$7.6 million</td>
<td>$9 million</td>
</tr>
<tr>
<td>Financial Institutions</td>
<td>$53.5 million</td>
<td>$57 million</td>
</tr>
<tr>
<td>Health Care</td>
<td>$11.2 million</td>
<td>$26.4 million</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>$17.6 million</td>
<td>$25 million</td>
</tr>
<tr>
<td>Power and Utilities</td>
<td>$44.4 million</td>
<td>$44.4 million</td>
</tr>
<tr>
<td>Retail/Wholesale</td>
<td>$20.8 million</td>
<td>$31.4 million</td>
</tr>
<tr>
<td>Services</td>
<td>$57 million</td>
<td>$41.2 million</td>
</tr>
</tbody>
</table>

Cyber Liability: Historical Rate (price per million) Changes

Cyber insurance premiums were generally volatile in 2014 due to increased frequency and severity of losses. Average rate increases at renewal for both primary layers and total programs were lower in Q4 2014 than in Q1.

INDUSTRY DISRUPTORS

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

Will Insurers Keep Pace?
Technology and Insurance

Rapid Technological Innovations Are Impacting Many Segments of the P/C Insurance Industry
MEDIA IS OBSESSED WITH DRIVERLESS VEHICLES: OFTEN PREDICTING THE DEMISE OF AUTO INSURANCE

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.
The “On-Demand” Economy is or will impact many segments of the economy important to P/C insurers:

- Auto (personal and commercial)
- Homeowners/Renters
- Many Liability Coverages
- Professional Liability
- **Workers Comp**

Many unanswered insurance questions

Insurance solutions are increasingly available to fill the many insurance gaps that arise
A Few Thoughts on the Future of Auto Insurance

- Global auto insurance premiums written total about $600B
  - ~80% personal, 20% commercial
  - US accounts for more than 1/3 of this total (about $210B in 2014)

- Innovations in automobile safety will, over time, reduced claim frequency but severities could still rise as repair costs escalate
  - Claim activity clearly not immune to economy

- Frequency declines could lead price declines, aiding profitability

- More cars, not fewer will be on highways in the US, world
  - Exposure (insured car years) grows even as frequency declines

- Timeline for large numbers of mass produced autonomous vehicles on American highways is wildly optimistic
  - Mid-2030s is more likely timeframe; Transition occurring through mid-century
  - Tech media is enamored with anything involving Google, Apple

- Auto insurance will be the largest, most important of all P/C lines for many years to come
Will YOUR job be reduced to an app?
The concern was that TNCs were seeking to offload risk on to personal auto insurers. An increasing number of personal auto insurers have developed solutions to ensure that coverage gaps are minimized.
Ridesharing Regulation/Legislation and Status of ISO Filings as of 9/30/15

Status of ISO Filings

ISO TNC Filing Approved – (17) – A
ISO TNC Filing Pending – (7) – P

Status Ride Sharing Legislation/Regulation

Adopted/Enacted
Pending
Failed
TNC Model – ★
Send in the Drones: Potential Rapid Adoption in Industry; Media Loves It

- Drones or Unmanned Aerial Vehicle (UAV) technology is seeing rapid adoption rate in many industries, including insurance
- ~700,000 drones in US by year-end
- FAA granting Section 333 exemptions for commercial use and testing of UAS
- FAA will require most drones to be registered by year-end 2015.
- At least 5 insurers have received permission to test
- Wide variety of applications: claims, pre-event property inspections...
- Insurers partnering with construction industry to guide R&D and regulation of UAV use via Property Drone Consortium: www.propertydrone.org
Shifting Legal Liability & Tort Environment

Will the Tort Pendulum Swing Against Insurers?
Over the Last Three Decades, Total Tort Costs as a % of GDP Appear Somewhat Cyclical, 1980-2013E

Tort costs in dollar terms have remained high but relatively stable since the mid-2000s, but are down substantially as a share of GDP.

Deepwater Horizon Spike in 2010

2.21% of GDP in 2003 = pre-tort reform peak

1.68% of GDP in 2013

Sources: Towers Watson, 2011 Update on US Tort Cost Trends, Appendix 1A
Commercial Lines Tort Costs: Insured vs. Self-(Un)Insured Shares, 1973-2010

Tort Costs and the Share Retained by Risks Both Grew Rapidly from the mid-1970s to mid-2000s, When Tort Costs Began to Fall But Self-Insurance Shares Continued to Rise.

The Share of Tort Costs Retained by Risks Has Been Steadily Increasing for Nearly 40 Years. This Trend Contributes Has Left Insurers With Less Control Over Pricing.

Average Personal Injury Jury Award, 2009 – 2013

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

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

The share of $1MM+ jury awards has returned to its pre-crisis high.*

*Latest available.

Source: *Current Award Trends in Personal Injury, 53rd and 54th Editions*; Insurance Information Institute.
Many causes of action can give rise to catastrophic casualty claims, including motor vehicle claims.

## Business Leaders Ranking of Liability Systems in 2015

### Best States

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

### New in 2015
- Vermont
- New Hampshire
- North Carolina
- South Dakota

### Worst States

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

### Drop-offs
- Minnesota
- Kansas
- Virginia
- North Dakota

### 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

Illinois Madison County

Assignment of Benefits issue looms large in FL

West Virginia

New York City Asbestos Litigation

Florida

Source: American Tort Reform Association; Insurance Information Institute
Insurance Information Institute Online:

www.iii.org

Thank you for your time and your attention!

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