P/C Insurance Industry Overview & Outlook
Casualty Actuaries of Greater New York
May 24, 2018

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Who We Are and What We Do

The mission of the Insurance Information Institute is to improve public understanding of insurance—what it does and how it works.

We Are…

- A voice for the property/casualty insurance industry.
- The go-to source for credible and unbiased insurance information for the media, the industry and consumers.
- Dedicated to ensuring the media covers our business fairly and accurately.
- Ready to assist our member companies with their communications, research and planning needs.

We do not lobby.
P/C Financials, 2017 Q4
Net Written Premium by Year

Steady Growth Since Last Recession – Following Overall Economic Trends.

Premium Growth Continues to Follow Economic Growth and Inflation Trends.


Through fourth quarter. Adjusted for inflation using the BLS CPI calculator, to 2017 dollars. Sources: NAIC data, sourced from S&P Global Market Intelligence; Insurance Information Institute.
P/C Insurance Industry
Combined Ratio, 2000-2017*

Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012=103.2; 2013=96.1; 2014=97.0.
Harvey, Irma and Maria Losses Made 2017 a Record Cat Year.
Yields Have Been Falling for Over a Decade, Reflecting the Long Downward Trend in Prevailing Interest Rates.

Sources: NAIC data, sourced from S&P Global Market Intelligence.
Key sources of P/C insurer profits

Data are before taxes and exclude extraordinary items.

Source: NAIC data, sourced from S&P Global Market Intelligence.

Worst Underwriting Result in Six Years – Best Investment Gain in Over a Decade.
Sources of Investment Gains

Investment Income Holds Steady – But a Great Year for Capital Gains.

Source: NAIC data, sourced from S&P Global Market Intelligence.
Policyholder Surplus

($ Billions)


Cap Gains, Tax Reform Drove Surplus Up $33B in Q4

The industry now has $1 of surplus for every $0.73 of NPW, 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 is, in 2017, in very strong financial condition.

Sources: ISO, A.M. Best.
Commercial Rates
Rate Changes Worldwide

Rates Soft/Flat, Especially in Reinsurance

Sources: Marsh Insurance Market Index, JLT Re.
Commercial Lines Rate Change

We’re in a Long Period of Flat Rates Overall.

Sources: Willis Towers Watson, MarketScout.
Liability Rate Changes
Slight Softening, Though Local Markets Vary

U.S. Casualty

U.S. Financial and Prof Liab

SOURCE: Marsh Insurance Market Index.
Property/Cyber Rate Changes
Slight Softening, Though Local Markets Vary

SOURCE: Marsh Insurance Market Index.
General Liability Rate Change (vs. Year Earlier)
Umbrella/Excess Rate Change (vs. Year Earlier)
Commercial Auto Rate Change (vs. Year Earlier)

Sources: MarketScout, Insurance Information Institute.
Workers Comp Rate Change (vs. Year Earlier)

Sources: MarketScout, Insurance Information Institute.

Workers Comp Rates Often Have Their Own Dynamic Apart from Market
D&O Liability Rate Change
(vs. Year Earlier)

Sources: MarketScout, Insurance Information Institute.
Hard Market/Soft Market
Three “Hard Markets” in the Last 45 Years

The three “hard markets” in this 45-year span were in 1976–77, 1985–86, and 2001–03.

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I.I.I. Hypothesis
What causes a hard market?

- Return on equity falls to 4% or below?
- Surplus drops due to financial market declines and/or significant underwriting losses?
- Unusually large losses due to catastrophes?
# P/C Industry ROE and Hard Markets

<table>
<thead>
<tr>
<th>Year</th>
<th>ROE</th>
<th>NWP-GDP Growth in Following Year</th>
<th>Hard Market?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>2.4%</td>
<td>10.7%</td>
<td>Yes</td>
</tr>
<tr>
<td>1984</td>
<td>1.8%</td>
<td>14.6%</td>
<td>Yes</td>
</tr>
<tr>
<td>2001</td>
<td>-1.2%</td>
<td>12.0%</td>
<td>Yes</td>
</tr>
<tr>
<td>2002</td>
<td>2.1%</td>
<td>5.1%</td>
<td>Yes</td>
</tr>
<tr>
<td>2017</td>
<td>5.0%</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>
## Policyholder Surplus and Hard Markets

<table>
<thead>
<tr>
<th>Year</th>
<th>Surplus Decline</th>
<th>NWP-GDP Growth in Following Year</th>
<th>Hard Market?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>-2.7%</td>
<td>14.6%</td>
<td>Yes</td>
</tr>
<tr>
<td>1999</td>
<td>-0.9%</td>
<td>-1.5%</td>
<td>No</td>
</tr>
<tr>
<td>2000</td>
<td>-4.7%</td>
<td>5.1%</td>
<td>Yes</td>
</tr>
<tr>
<td>2001</td>
<td>-8.0%</td>
<td>12.0%</td>
<td>Yes</td>
</tr>
<tr>
<td>2008</td>
<td>-12.5%</td>
<td>-2.2%</td>
<td>No</td>
</tr>
<tr>
<td>2011</td>
<td>-0.8%</td>
<td>0.2%</td>
<td>No</td>
</tr>
<tr>
<td>2017</td>
<td>+7.4%</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>
## CAT Claims and Hard Markets

<table>
<thead>
<tr>
<th>Year</th>
<th>CAT Claims Over $25 billion (2016 Adjusted)</th>
<th>NWP-GDP Growth in Following Year</th>
<th>Hard Market?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>$39.6</td>
<td>0.9%</td>
<td>No</td>
</tr>
<tr>
<td>1994</td>
<td>$27.7</td>
<td>-1.2%</td>
<td>No</td>
</tr>
<tr>
<td>2001</td>
<td>$36.4</td>
<td>12.0%</td>
<td>Yes</td>
</tr>
<tr>
<td>2004</td>
<td>$36.4</td>
<td>-6.2%</td>
<td>No</td>
</tr>
<tr>
<td>2005</td>
<td>$77.1</td>
<td>-3.1%</td>
<td>No</td>
</tr>
<tr>
<td>2008</td>
<td>$30.7</td>
<td>-2.2%</td>
<td>No</td>
</tr>
<tr>
<td>2011</td>
<td>$35.2</td>
<td>0.2%</td>
<td>No</td>
</tr>
<tr>
<td>2012</td>
<td>$36.8</td>
<td>1.3%</td>
<td>No</td>
</tr>
<tr>
<td>2017</td>
<td>$90.5</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>
Hard Market in 2017?

- **Strong indicator: \( \leq 4\% \) ROE**
  - Consistent hard markets in years comparisons.

- **Indifferent indicator: Surplus Increase/Decrease**
  - Inconsistent hard/soft markets in years comparisons.

- **Weak indicator: Large Cat Losses**
  - Consistent non-movement; even with 2017 potentially being one of the worst years on record.
Marijuana and Auto Insurance
Support for Legalization Grows

“Do You Think the Use of Marijuana Should Be Made Legal, Or Not?”

No survey in years where no data appears.
Support for Legalization Grows

% Saying Yes

- Democrats
- Independents
- Republicans

“Do You Think the Use of Marijuana Should Be Made Legal, Or Not?”

Cannabis in the USA
Legalization is Accelerating

Congressional Cannabis Caucus

Rohrbacher (CA)
Bluemenauer (OR)
Young (AK)
Polis (CO)
Driving While High – the Legal Framework
Illegal Everywhere, but What Makes You High?

RI: ‘Zero Tolerance (Medical Exception).’ Rest of NE: ‘Incapable of Driving Safely.’

SOURCE: National Conference of State Legislators, National Organization for Reform of Marijuana Laws (NORML),
Blood Levels vs. Intoxication

BAC and ‘feeling drunk’ rise and fall in lockstep

THC levels in blood and ‘feeling high’ rise and fall at different rates

It Is Difficult to Use Blood Test to Measure Whether Someone is High.

THC on the Road

% THC-Positive Drivers (WA)

Any Time of Day
- Before Legal Sales: 14.6%
- After 6 Months: 19.4%
- After 1 Year: 21.4%

Nighttime
- Before Legal Sales: 17.5%
- After 6 Months: 19.8%
- After 1 Year: 22.2%

Daytime
- Before Legal Sales: 7.8%
- After 6 Months: 18.4%
- After 1 Year: 18.9%

Legalization Put More Drivers With THC in Their System on the Road.

Driving While High
The Science

Review of Literature

- Conclusive evidence
  - Improves the lot of adults in chronic pain.

- Substantial evidence
  - Increases the risk of motor vehicle crashes.

Marijuana and Driving Skills
What the Studies Say

Cognitive Studies

- ‘Impairment in every performance area that can reasonably be connected with safe driving’

Culpability Studies

- Suffer from
  - Sampling delay
  - Reliance on carboxy-THC

Experimental Research

- ‘Marijuana users tend to overestimate their impairment, and consequently employ compensatory strategies.’

Case Control Studies

- Hard to create a good control group (accidents that didn’t happen)

Accident Probability


Chance of Accident Rises Sharply As Consumption Rises.

WA ‘per se’ limit
But Blood Tests Aren’t Perfect
Blood Test vs. Drug Recognition Experts (DREs)

<table>
<thead>
<tr>
<th>THC Concentration (ng/mL)</th>
<th>Sensitivity (“Catches the Bad Guys”)</th>
<th>Specificity (“Frees the Good Guys”)</th>
<th>Overall Accuracy (“Gets It Right”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80.4%</td>
<td>70.2%</td>
<td>77.0%</td>
</tr>
<tr>
<td>2</td>
<td>72.3</td>
<td>75.2</td>
<td>73.3</td>
</tr>
<tr>
<td>3</td>
<td>60.1</td>
<td>78.0</td>
<td>66.1</td>
</tr>
<tr>
<td>5</td>
<td>39.7</td>
<td>84.2</td>
<td>54.8</td>
</tr>
<tr>
<td>7</td>
<td>29.7</td>
<td>89.9</td>
<td>50.0</td>
</tr>
<tr>
<td>10</td>
<td>14.1</td>
<td>95.0</td>
<td>41.5</td>
</tr>
</tbody>
</table>

SOURCE: AAA Foundation, An Evaluation of Data from Drivers Arrested for Driving Under the Influence in Relation to Per se Limits for Cannabis, March 2016.
Marijuana + Alcohol
A Killer Combination

**Studies Agree**

- Cannabis Hurts Automatic Functions (Lane Usage) More Than Complex Tasks
- Alcohol Does the Opposite
- Cannabis Users Become Less Daring
- Alcohol Users Become More Daring

**Cannabis Doesn’t Supplant Drinking**

Liquor Tax Collection, % Change from Year Earlier

<table>
<thead>
<tr>
<th>Year</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2.0%</td>
</tr>
<tr>
<td>2011</td>
<td>7.0%</td>
</tr>
<tr>
<td>2012</td>
<td>6.0%</td>
</tr>
<tr>
<td>2013</td>
<td>5.0%</td>
</tr>
<tr>
<td>2014</td>
<td>3.0%</td>
</tr>
<tr>
<td>2015</td>
<td>4.0%</td>
</tr>
<tr>
<td>2016</td>
<td>3.0%</td>
</tr>
<tr>
<td>2017</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

SOURCES: Colorado Department of Revenue. (Data for first 10 months of year to allow like-to-like comparisons.)
Legal Sales Lead to More Accidents

Look at ‘Real World’ Crashes

All Measures Statistically Significant

‘Overall’ Measure a Good Proxy for What Will Happen in Any State

* Vs. Neighboring States.

SOURCE: Highway Loss Data Institute.
Pedestrian Deaths and Cannabis
Walking While High?

First six months of year.
SOURCE: Governors State Highway Association
I.I.I. Survey: Cannabis vs. Alcohol

Would You Ride With a Driver Who Drank Too Much?

- Yes: 3%
- No: 97%

Would You Ride With a Driver Who Was High?

- Yes: 27%
- No: 73%

Respondents Seem Much More Tolerant of High Driver, Even Though They Understand the Risk.

Summary

- Catastrophes Led to a Weak Underwriting Result in 2017 – but Capital Gains Helped Overall Results.
- Rates Are Flat Overall, With Variability by Line of Business.
- Evidence is Weak That Hard Market Will Emerge This Year.
- With Marijuana and Driving, We Need
  - Greater Awareness
  - More Research
  - Understanding of Greater Costs (Training and Testing)
The Insurance Information Institute

Improving public understanding of insurance...

...what it does and how it works
Thank you for your time and your attention!

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