Emerging Cost Drivers in Auto Insurance

Federal Advisory Committee on Insurance
January 5, 2017
“THE REPORTS OF MY DEATH HAVE BEEN GREATLY EXAGGERATED.”

MARK TWAIN
Perception vs. Reality

**Perception:** 70% of consumers think auto accidents are declining

**Reality:**

Source: PCI; SNL Financial
Multitude of Factors – Economy, Society and Technology

Strong correlations
- Traffic congestion
- Alcohol, speeding, distracted driving
- Miles driven/employment

Other frequency factors
- More older and younger drivers
- Weather/road conditions
- Use of marijuana and opioids

Other severity factors
- Vehicle technology
- Medical costs
- Speed limits
Economy
Unemployment and Underemployment Rates

Unemployment was 4.9% in August 2016. 4.5% to 5.5% is "normal."

U-6 was 9.7% in August 2016. 8.0% to 9.5% is "normal."

For U-6, 8.0% to 9.5% is "normal."

Unemployment went from 8.0% in March 2007 to 17.5% in October 2009.

Full-time vs. Part-time Employment 2003-2016


- Pre-recession, most new jobs were full-time
- Recession shifted employment growth from full-time to part-time
- New full-time peak
Wages Have Risen Faster Than Inflation

*Seasonally adjusted; year-over-year; Shaded area indicates recession.

Vehicle Sales Show Continued Strength

U.S. Light Vehicle Sales CY 2010 to CY 2016E

<table>
<thead>
<tr>
<th>Year</th>
<th>Used</th>
<th>New</th>
</tr>
</thead>
<tbody>
<tr>
<td>CY2010</td>
<td>11.58</td>
<td>36.91</td>
</tr>
<tr>
<td>CY2011</td>
<td>12.77</td>
<td>36.92</td>
</tr>
<tr>
<td>CY2012</td>
<td>14.49</td>
<td>37.58</td>
</tr>
<tr>
<td>CY2013</td>
<td>15.60</td>
<td>35.83</td>
</tr>
<tr>
<td>CY2014</td>
<td>16.53</td>
<td>36.24</td>
</tr>
<tr>
<td>CY2015</td>
<td>17.47</td>
<td>38.28</td>
</tr>
<tr>
<td>CY2016E</td>
<td>17.6</td>
<td>40.58</td>
</tr>
</tbody>
</table>

Source: Edmunds.com, Automotive News
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Gasoline Prices, Miles Driven and Claim Frequency

More People Working and Driving – More Collisions

Number Employed, Millions

- Number Employed (left scale)
- Collision Claim Frequency (right scale)

Overall Collision Claims Per 100 Insured Vehicles

Source: Insurance Information Institute Analysis of Seasonally Adjusted Employed from Bureau of Labor Statistics; Rolling Four-Qtr Avg. Frequency from Insurance Services Office.
States with Highest and Lowest Vehicle Damage Frequency Changes

Highest Frequency Change
- 7.3%
- 9.4%
- 6.7%
- 5.7%
- 4.2%
- 7.9%
- 6.1%
- 9.7%
- 7.9%
- 14.0%

Lowest Frequency Change
- 14.0%
- 11.3%
- 9.3%
- 4.7%
- 10.7%
- 6.5%
- 5.9%
- 8.9%
- 4.8%
- 5.4%
- 5.9%
- 9.7%
- 7.0%

Source: PCI; Society of Actuaries using PPA Fast Track Monitoring System data
More Miles Traveled in States With Higher Claim Frequency Growth

Note: Percent changes represent increases from YE Dec. 2014 to YE Dec. 2015.

Source: PCI; Federal Highway Association (FHWA)
Total Loss Frequency Rises

Non-Comprehensive Losses Total Loss Share of Claim Count

Source: CCC Information Services Inc. Copyright 2016 CCC Information Services Inc. Confidential & Proprietary All Rights Reserved
Severity Trends

Change since 2013

Highest Freq. Changes

14.7% Change

7.2% Change

7.0% Change

Change since 2013

Lowest Freq. Changes

8.0% Change

6.0% Change

-1.9% Change

Data points reflect year-end, rolling 4 quarters, vehicle damage coverages. Source: PCI; PPA Fast Track Monitoring System, ISS, NISS and ISO
Vehicle Damage = PD Liability + Collision coverages.

Data points reflect year-end, and combined rolling four quarters for 2016(2Q).

Source: PCI; PPA Fast Track Monitoring System, ISS, NISS and ISO
Auto Medical Increasing + Worse Than Medical CPI

Auto Injury Severity and Medical Cost CPI Indices

<table>
<thead>
<tr>
<th>Year</th>
<th>Med CPI</th>
<th>BI Sev</th>
<th>PIP Sev</th>
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</thead>
<tbody>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>7.3%</td>
<td>6.7%</td>
<td>5.1%</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: PCI using
1. Auto: PPA Fast Track Monitoring System, ISS, NISS and ISO
Auto Deaths/Injuries Increasing

2015

- 8% increased in auto deaths
- 4% increased death rate per mile

2016 through June

- 10% increased auto deaths
- 6% increased death rate per mile
Rise in Auto Deaths
Annual Percent Change

Source: PCI; NHTSA
Auto injuries up 26% since 2009

Source: PCI; National Safety Council, Medically consulted auto injuries, indexed by PCI
Higher Speed Limits Problematic

8%

increase in fatality rates on interstates and freeways for every 5 mph increase in maximum state speed limits

4%

increase on other roads

Speed Limit Impact on Severity

Vehicle Damage Claim Severity 2013-2015

- States w/ Same Limits
- States that Raised Speed Limits

Injury Claim Severity 2013-2015

- States w/ Same Limits
- States that Raised Speed Limits

Note: States that raised their speed limits since 2013 are AK, GA, ID, IL, KY, ME, NH, NC, OH, PA, SD, UT and WY. Those that changed in 2015 are not included since their new limits have been in effect for only a short time. States with same limits did not make any changes during 2011-2015.
Safety Awareness Poll

70% of Americans think car safety technology has reduced the number of motor vehicle accidents, but in reality auto accidents are increasing.

85% of Americans think that distracted driving is contributing to more motor vehicle accidents than driving under the influence of alcohol.

90% of Americans agree that distracted walking is a major, emerging problem.
Cellphone Use Declines – Texting and Emailing Grows

## What We Say vs. What We Do

<table>
<thead>
<tr>
<th></th>
<th>AAA</th>
<th>True Motion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
<td>42%</td>
<td>71%</td>
</tr>
<tr>
<td>Phone</td>
<td>66%</td>
<td>92%</td>
</tr>
<tr>
<td>Reported</td>
<td>6.3 m</td>
<td>Estimated</td>
</tr>
<tr>
<td>Crashes</td>
<td>6.3 m</td>
<td>17-29 m</td>
</tr>
</tbody>
</table>
Top 10 Distracted Driving Apps

1. Google Maps
2. Pokemon Go
3. Android Messaging
4. Facebook
5. YouTube
6. Waze
7. Amazon Music
8. Chrome
9. Pandora
10. Netflix

Source: True Motion
Distracted Walking – A Rising Risk

Emergency room visits

Source: Consumer Product Safety Commission/WSJ Research | WSJ.com
Colorado Traffic Deaths Related to Marijuana*

*Number of Fatalities Involving Operators Testing Positive for Marijuana

Marijuana in Colorado

Source: Colorado State Highway Patrol, March 2015; 2016 marijuana dispensaries: Colorado Dept. of Revenue
Technology
Standard Options on a Base F-150 Pickup, 1985-2015

- Standard options have changed over 30 years
- Many options now required by NHTSA
Safety Systems

E-Class (213) Control Units

Advanced safety systems requiring more cameras and sensors in high-impact areas
Summary

• Economy and gas price levels will continue to produce heightened miles driven per vehicle

• New vehicle sales placing more costly complex cars in the market

• Technology in vehicles points to longer-term fewer but more expensive repairs

• Medical cost inflation will continue
Policy Recommendations

• Laws/enforcement against distracted driving
• Robust drunk/drugged driving limits
• Responsible speed limits
• Education and awareness
  • help the policymakers understand trends
  • help the public receive timely and useful information