Challenge, Change & Opportunity: Growth and the Future of the P/C Insurance Industry in 2018 and Beyond

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The Case for Growth (and a Correction?) in the P/C Insurance Industry: 2018 and Beyond

- Drivers of Growth: Personal and Commercial Lines
  - Price
  - Exposure

- Role of the Economy and Shifting Demographics

- Pressure from Record Catastrophe Activity

- Industry Financial Performance
  - Pricing and capacity implications

- Financial Market Pressure

- Regulatory and External Influences

- A Look Ahead: Technology, Disruptors and Insurance
P/C Insurance Growth Overview and Outlook

Drivers of Growth in 2018

Economic Growth Fuels Exposure & Record CAT Losses Are Pressuring Rates

Price Competition Remains Rational

Net Written Premiums Fell 0.7% in 2007 (First Decline Since 1943) by 2.0% in 2008, and 4.2% in 2009, the First 3-Year Decline Since 1930-33.

Outlook
2017F: 3.1%
2018F: 3.0%

*Q2:2017 over Q2:2016. Shaded areas denote “hard market” periods
Y-o-Y Growth Rates, Direct Premiums Written, Commercial vs. Personal Lines,

2012:Q4 - 2017:Q2

Since 2014, personal lines Direct Premiums Written have generally grown faster than commercial lines DPW, and that growth has been less volatile.

Sources: NAIC, via SNL Financial; ISO; Insurance Information Institute calculations.
2016 Growth in Net Written Premium: Personal vs. Commercial

Annual Change in NWP

- **Personal Lines Predominating**: 5.3% (2015) to 5.7% (2016)
- **Diversified**: 3.3% (2015) to 3.1% (2016)
- **Commercial Lines Predominating**: 1.5% (2015) to -1.4% (2016)
- **All Insurers**: 3.5% (2015) to 2.7% (2016)

The divergence in growth between personal and commercial lines is large and has been expanding rapidly.

Source: ISO.
Business Investment Is a Potent Driver of Property Insurance Premium Growth*

Business fixed investment is forecast to grow at 5%–6% in 2017:2H and at 4.5%–5.5% in 2018.

Investment in equipment and software is expected to grow but investment in structures is expected to shrink.

*Commercial property direct premiums written (fire, allied lines, CMP, inland marine, burglary and theft); business fixed investment (structures, equipment, and software).

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

Sources: https://fred.stlouisfed.org/series/PNFI#0; National Bureau of Economic Research (recession dates); Insurance Information Institute.
2016: Components of Commercial DWP Growth

- Direct Written Premium (DWP) in US lines covered by ISO MarketStance grew 3.1 percent in 2016.

- Soft market conditions counteracted moderate 4.1 percent exposure growth.


Source: Verisk Insurance Solutions.
2016 Commercial Market Growth by Coverage

- Commercial auto rates increased as carriers reacted to ongoing challenges
- Property, Workers’ Compensation under most severe rate pressures
- Umbrella, excess, specialty lines liability growth may have reflected trading price for quantity (i.e. demand elasticity)
- Stand-alone cyber DWP, policies in force reported to NAIC doubled in 2016, and DWP>earned premiums, all signals of market growth

Source: Verisk Insurance Solutions.
M&A Trends

Consolidation Among P&C (Re)Insurers and Within Distribution Channels Will Likely Continue at a Modest Pace
M&A activity in the Distribution sector in 2016 totaled $4.2B, a steep (73.5%) drop from $18.7B in 2015

USI announced the acquisition of Wells Fargo Insurance Services on 6/26/16

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

Source: Conning proprietary database.
## Drivers of M&A Activity: P/C Insurers & Distribution

<table>
<thead>
<tr>
<th>P/C Insurers</th>
<th>Distribution Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soft Market Conditions/Limited Organic Growth Opportunities:</strong> Mostly</td>
<td><strong>Slow Growth:</strong> Acquisition provides surest and fastest path to growth</td>
</tr>
<tr>
<td>commercial lines and reinsurance</td>
<td></td>
</tr>
<tr>
<td><strong>Expense Ratios:</strong> Desire to lower ERs via realization of economies of scale</td>
<td><strong>Diverse Universe of Buyers:</strong> Agencies, brokerages, MGAs/MGUs, insurers, private equity firms, banks</td>
</tr>
<tr>
<td><strong>Interest Rates:</strong> Low yields continue to pressure longer-tailed lines but</td>
<td><strong>Lack of Succession:</strong> Avg. age of an insurance agent is now 59 and rising. Difficulty attracting younger generation of talent.</td>
</tr>
<tr>
<td>can encourage debt-financed M&amp;A</td>
<td></td>
</tr>
<tr>
<td><strong>Capital Management/Valuations:</strong> Prevalence of excess capital even after</td>
<td><strong>Scale and Efficiency:</strong> Need/desire to improve efficiency; New InsurTech start-ups active in the distribution segment.</td>
</tr>
<tr>
<td>share repurchases; View that M&amp;A may be more accretive to earns than share</td>
<td></td>
</tr>
<tr>
<td>repurchases</td>
<td></td>
</tr>
</tbody>
</table>

The Strength of the Economy Will Greatly Influence Growth in Insurers’ Exposure Base Across Most Lines

*How Will “Trumponomics” Impact the Industry?*
Animal Spirits: Unleashed from the Oval Office?

Source: https://twitter.com/realdonaldtrump
Awakening America’s “Animal Spirits”

Economic Policy and the Insurance Industry

Consumer and Business Confidence Are Key
**US Real GDP Growth**

**Real GDP Growth (%)**

- **Recession began in Dec, 2007**
- **The Q4:2008 decline was the steepest since the Q1:1982 drop of 6.8%**
- **2017/18 GDP forecasts were revised upwards by ~0.2% following Trump election. Tax reform could add 0.1% - 0.2% to real GDP growth in 2018**
- **First consecutive quarters of 3%+ GDP growth since 2014**

**Demand for Insurance Should Increase in 2017-18 as GDP Growth Continues at a Steady and Perhaps Accelerating Pace and Gradually Benefits the Economy Broadly**

*Estimates/Forecasts from Blue Chip Economic Indicators. Source: US Department of Commerce, Blue Economic Indicators 12/17; Insurance Information Institute.*
Direct Written Premiums track Nominal GDP—not quarter by quarter but overall fairly well.
Outlook: Consumers are optimistic about the future, which is consistent with expectations for stronger economic growth (consumers account for nearly 70% of all spending in the economy). Should positively influence business investment.

Source: The Conference Board; Wells Fargo Research.
The NFIB’s Index of Small Business Optimism is at recent highs. Tax reform, reduced regulations and strong sales will drive investment, hiring and exposures.

Outlook: Small businesses are much more optimistic about the future.

Source: National Federal of Independent Business; Wells Fargo Research.
Small business capital spending is close to post-crisis highs;

Tax cuts and accelerated depreciation could push capital spending higher—and commercial insurance exposures—along with it.

Small business optimism is translating into more capital spending which will increase insurable commercial exposures.

Source: National Federal of Independent Business; Wells Fargo Research.
Manufacturing activity remains near its cyclical high, which bodes well for commercial exposures.
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.

Job growth and improved credit market conditions boosted auto sales to near record levels in recent years.

Sales have returned to pre-crisis levels.

Truck, SUV purchases remain strong but have slumped a bit.

Yearly car/light truck sales are slowing slightly, as demand tapers following the recovery from the recession. PP Auto premium might grow by 3.5% - 5%.

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (12/17 for 2017-18; 10/17 for 2018-23F; Insurance Information Institute.)
Private (but not public) construction spending remains relatively strong. Public construction spending could benefit from a boost in infrastructure investment.
New Private Housing Starts, 1990-2023F

(Millions of Units)

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

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

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 (12/17 for 2017-18; 10/17 for 2018-23F; Insurance Information Institute.)
Economic Outlook:
Labor Market Focus

Labor Markets Are Healthy:
*Favorable Implications for Workers, Comp and Many Other Lines*
US Unemployment Rate Forecast

2007:Q1 to 2018:Q4F*

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

Unemployment forecasts have been revised modestly downwards. Optimistic scenarios put the unemployment as low as 3.7 by Q4 2018.

Jobless figures have been revised downwards for 2018

The Nov. 2017 unemployment rate was 4.1%, a 17-year low

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (12/17 edition); Insurance Information Institute.
Hourly earnings fell in October, but should soon begin to respond to tightening labor market conditions.

Wages Are Responding to Tight Labor Market Conditions in More Cities

Workers in cities with unemployment rates below the national average are seeing accelerating wage gains—WC insurers will benefit as well.

18 states and 20 cities increased their minimum wage as of Jan. 1, 2018—increasing payrolls by $5 billion!

Catastrophe Loss Update: Major Driver of Rate Pressure

2017 Was One of the Costliest Years Ever for US Insurers

*Hurricanes Harvey, Irma and Maria, California Wildfires Exact a Huge Toll*
Global Insured Catastrophe Losses, 2000 – 2017E

($ Billions, $ 2017)

2017 was one of the top 3 costliest years ever for insurers on a global scale.

*Estimate
Sources: Swiss Re, RMS, Barclays Research.
U.S. Insured Catastrophe Losses, 1989 – 2017 YTD*

($ Billions, $ 2015)

2017 is likely to become the second costliest year ever for insured CAT losses in the US


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.
YTD insured CAT losses in the US totaled $72 billion by late 2017, the second costliest year on record, led by Hurricanes Maria, Irma and Harvey.

Not all insured losses in 2017 were due to hurricanes. More than $15B in other losses occurred from coast-to-coast.
Top 18 Most Costly Disasters in U.S. History—Katrina Still Ranks #1

(Insured Losses, 2017 Dollars, $ Billions)*

Harvey, Irma and Maria combined caused an estimated $55B in privately insured losses in the US

15 of the 18 Most Expensive Insurance Events in US History Have Occurred Since 2004—3 of those in 2017

*2017 values are as of Nov. 14, 2017.

Sources: PCS, RMS, Karen Clark & Co; USC Center for Risk and Uncertainty Management adjustments to 2017 dollars using the CPI.
Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1997–2016

1. Catastrophes are defined as events causing direct insured losses to property of $25 million or more in 2016 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.

Wind losses, by far, cause the most catastrophe losses, even if hurricanes/TS are excluded.

Insured cat losses from 1997-2016 totaled $421.2B, an average of $21.1B per year or $1.76B per month.

- Hurricanes & Tropical Storms, $161.1
- Tornadoes (2), $168.1
- Winter Storms, $28.2
- Other Wind/Hail/Flood (3), $29.7
- Fires (4), $8.4
- Other (5), $0.8
- Terrorism, $25.0
- Other (5), $0.8

Winter storm losses were much above average in 2014/15 pushing this share up.

Tornado share of CAT losses is rising.

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Origins of Pricing Pressure Arising from Near-Record CAT Activity

Retrocessional Reinsurance

Property Catastrophe Reinsurance

Primary Insurance: Commercial and Personal Lines

+10% to +20%*

+5% to +15%**

+3% to +10%

Retrocessional Reinsurance markets (reinsurance for reinsurance companies) is pushing pressure through the reinsurance markets and into both commercial and personal lines

*Some programs above and below this range.
**Higher end of range applies to loss-affected accounts.
Sources: Adapted from Barclay's Capital research.
US Property Catastrophe Rate-on-Line Index: 1990 – 2018*

*As of January 1 each year. 2018 is a full-year estimate (Center for Risk and Uncertainty Management, Univ. of South Carolina.

Near-Record CATs in 2017 will likely lead US reinsurance prices in 2018 to increase

US Reinsurance Pricing Is Sensitive to CAT Activity and Ultimately Impacts Primary Insurance Pricing, Terms and Conditions
Catastrophe Claims and Hard Markets

<table>
<thead>
<tr>
<th>Year</th>
<th>CAT claims over $35 billion ($2016, billions)</th>
<th>Growth of (NWP-GDP) in following year</th>
<th>Hard Market?</th>
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<tbody>
<tr>
<td>1992</td>
<td>$39.6</td>
<td>0.9%</td>
<td>No</td>
</tr>
<tr>
<td>2001</td>
<td>$36.4</td>
<td>12.0%</td>
<td>Yes</td>
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<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>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>$80+</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

Contrary to conventional wisdom, heavy CAT activity does not generally precipitate a hard market.

Source: Insurance Information Institute.
### Policyholder Surplus (Capacity) and Hard Markets

<table>
<thead>
<tr>
<th>Year</th>
<th>Surplus decline</th>
<th>Growth of (NWP-GDP) 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>&gt;0%?</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

Declines in surplus (capacity) are a less reliable predictor of hard markets.

Source: Insurance Information Institute.
## P/C Insurance Industry ROE and Hard Markets

<table>
<thead>
<tr>
<th>Year</th>
<th>P/C Industry ROE less than 4%</th>
<th>Growth of (NWP-GDP) 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>&lt;4%</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

Depressed ROEs are a historically reliable predictor of hard markets.

Source: Insurance Information Institute.
**Hard Markets: Conclusion & Implications for 2018**

- **Low ROE** is the best predictor of a hard market (likely well below 4% in 2017), but does this mean a hard market is a sure thing?
  - *No…but some “correction” is likely*

- **Surplus** in 2017 was flat or down slightly from a vastly overcapitalized peak.
  - *Capacity remains generally abundant and seems likely to grow—not drop—due to asset value growth, implying that a true hard market is unlikely to develop.*

- **CAT Losses**: 2017 was one of the worst years on record for cat losses—implying a hard market—but this predictor does not appear to be an accurate one, at least in isolation
  - *Greatest impacts are driven through property cat reinsurance and retro markets on loss impacted areas and accounts*
P/C Insurance Industry
Financial Overview

CATS, Non-CAT Underwriting Losses
Impacted Insurer Balance Sheets

Industry Remains Strong, But Only Risk-Appropriate
Premiums Can Ensure Long-Term Strength

- 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 ROAS = 8.4%
- 2016 ROAS = 6.2%
- 2017E ROAS = 0.0%*

• 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; 2016E is annualized figure based actual figure through Q3 of $31.8B.

Sources: A.M. Best, ISO; USC RUM Center estimate (2017 based on actual NIAT of $15.5B though Q2 and ROAS of 4.4% adj. for Q3/4 activity).

Net income will fell sharply in 2017 as high CAT losses took their toll.
Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2017E

ROEs in 2017 plunged to their lowest levels since 2001 and 9/11. This creates extreme pricing pressure.

*Est. for 2017 based on actual ROAS of 4.45 through Q2; Profitability = P/C insurer ROEs. 2011-16 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers. Source: NAIC, ISO, A.M. Best, Conning, USC RUM Center estimates.
**ROE: Property/Casualty Insurance by Major Event, 1987–2017E**

- **2017 Estimate based on actual ROAS through Q2 of 4.4% with USC Center for Risk and Uncertainty Management estimate for the full year.**
- **Sources:** ISO, *Fortune*; USC RUM Center.

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**P/C Profitability Is Influenced Both by Cyclicality and Volatility**

1. **Hurricane Hugo**
2. **Andrew, Iniki**
3. **Northridge**
4. **Lowest CAT Losses in 15 Years**
5. **Sept. 11**
6. **4 Hurricanes**
7. **Katrina, Rita, Wilma**
8. **Low CATs**
9. **Sandy**
10. **Financial Crisis***
11. **Record Tornado Losses**
12. **Harvey, Irma, Maria, CA Wildfires**

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*2017 Estimate based on actual ROAS through Q2 of 4.4% with USC Center for Risk and Uncertainty Management estimate for the full year.
Sources: ISO, *Fortune*; USC RUM Center.*
P/C Insurance Industry
Combined Ratio, 2001–2017E*

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

Sharply higher CATs are driving large underwriting losses and pricing pressure

Best Combined Ratio Since 1949 (87.6)

Cyclical Deterioration

Sandy Impacts

Lower CAT Losses


Sources: A.M. Best, ISO (2014-2015); Figure for 2010-2013 is from A.M. Best P&C Review and Preview, Feb. 16, 2016.
Personal Lines Combined Ratio: 2006–2017E

Personal Lines Underwriting Losses Rose in 2017 Due to Record CATs and Adverse Auto Severity

Commercial Lines Combined Ratio, 1990-2017F*

Commercial lines underwriting performance deteriorated materially in 2017 as record CATs. Diminishing prior year reserves, rising loss cost trends and pricing pressure in some lines are pushing combined ratios higher.


($ Billions)

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.

Drop due to near-record 2011 CAT losses

Surplus (Capacity) as of 12/31/17 is likely to fall by $20 to $30 billion

Capacity/Capital “shocks” typically drive a firming of the pricing environment

Sources: ISO, A.M. Best; 2018 estimate from the Center for Risk and Uncertainty Management, University of South Carolina.
Investment Performance is a Key Driver of Insurer Profitability

The “Trump Bump” Has Lifted Stock Markets and Interest Rates

Will the Gains Help Insurers?
S&P 500 Index Returns, 1950 – 2017*

Stock markets rose sharply following the 2016 election and continued to rise throughout 2017.

Trump Bump: Sharp surge in stock post-election

Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014 but showed a small (1.7%) increase in 2015—though 2016 experienced another decline. ~ Flat in 2017.

Investment earnings in 2017E were still ~14% below their 2007 pre-crisis peak.

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

*2017 estimate based on annualized $23.4B actual figure for 1st Half 2017.

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

Late 2016 “Trump Bump” in the aftermath of the 2016 election—shrank in 2017

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.


The yield on invested assets remains low relative to pre-crisis yields. Fed rate increases beginning in late 2015 have pushed up some yields, albeit quite modestly.

Investment yields in 2016 were down about 150 BP from pre-crisis levels.

Sources: NAIC data, sourced from S&P Global Market Intelligence; Insurance Information Institute.
Average yields in 2016 dropped to 3.1%, their lowest level since the mid-1960s.
Commercial Lines Growth, Underwriting Performance & Pricing Cyclicality

Cyclicality in Growth, Price Are the Norm

*Rising Rates Are a Normal Part of Adjustment Process*
Commercial lines NPW Premium Growth: 1975 – 2017E

Economic Shocks, Inflation: 1976: 22.2%
Tort Crisis 1986: 30.5%

Post-9/11 2002: 22.4%
Post Katrina Bump: 2006: 7.7%
1988-2000: Period of inter-cycle stability

Commercial lines is prone to far more cyclical volatility that personal lines.

Recessions: 1982: 1.1%
Post-Hurricane Andrew Bump: 1993: 6.3%
Great Recession: 2009: -9.0%

Commercial lines premium growth has been sluggish for years, reflecting weak pricing environment. Large underwriting losses will necessarily pressure rates upward in 2018

Note: Data include state funds beginning in 1998.
Source: A.M. Best; Insurance Information Institute. 2017 estimate: Univ. of South Carolina Center for Risk and Uncertainty Management.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Rate Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q11</td>
<td>-2.9%</td>
</tr>
<tr>
<td>2Q11</td>
<td>-0.1%</td>
</tr>
<tr>
<td>3Q11</td>
<td>-1.5%</td>
</tr>
<tr>
<td>4Q11</td>
<td>-2.9%</td>
</tr>
<tr>
<td>1Q12</td>
<td>-2.3%</td>
</tr>
<tr>
<td>2Q12</td>
<td>-6%</td>
</tr>
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<td>1Q18</td>
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<td>2Q18</td>
<td>3.9%</td>
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<td>3Q18</td>
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<td>4Q18</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

*Latest available.

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; Center for Risk and Uncertainty Management, Univ. of South Carolina.
Change in Commercial Rate Renewals, by Line: 2017:Q3

Percentage Change (%)

-2.3%  -0.8%  -0.7%  -0.4%  0.1%  0.1%  0.4%  0.4%  0.7%  0.9%  7.3%

Workers Comp  General Liability  Cyber  Umbrella  Surety  Business Interruption  Construction  D&O  EPL  Commercial Property  Commercial Auto

Commercial Property, Business Interruption will need to reflect record CAT losses and pressure from reinsurance markets

Commercial Auto was only major line with materially positive renewals in 2017

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; USC Center for Risk and Uncertainty Management.
Commercial Lines with Largest Demand Increase, 2017:Q3

Cyber is seeing the largest increases in demand

Percentage Indicating Increase

- Cyber: 81%
- Flood: 64%
- Construction Risks: 46%
- Commercial Property: 41%
- Commercial Auto: 34%

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; USC Center for Risk and Uncertainty Management.
Commercial Lines with Largest Capacity Increase: 2017:Q3

Cyber is seeing the largest capacity increases in capacity

- Cyber: 52%
- Workers' Comp: 44%
- Comm'1 Prop: 25%
- Const’n Risks: 19%
- Umbrella: 16%

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; USC Center for Risk and Uncertainty Management.
Commercial Auto Combined Ratio: 1993–2017F

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

Direct Premiums Written: Commercial Auto, Percent Change by State, 2007-2016

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

ND’s energy boom has fueled growth in every line

Top 25 States
Direct Premiums Written: Commercial Auto, Percent Change by State, 2007-2016

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.
D&O Pressure: Number of Federal Securities Class Actions, 2013 – 2017*

The number of securities class actions is rising sharply, putting pressure on D&O coverage.

*As of Nov. 16, 2017.
Workers Comp Spotlight

Underwriting Results Remain Strong

Exposure Outlook Is Outstanding as Job Growth Continues and Wage Gains Accelerate
Workers Compensation Combined Ratio: 1994–2016P

Workers Comp Is an Example of a Line that Was Recently Restored to Health Through the Return of Rate Adequacy

Sources: A.M. Best (1994-2009); NCCI (2010-2016P) and are for private carriers only.
Workers Compensation Premium: Flat in 2016 After 5 Years of Increase

Net Written Premium

$ Billions

State Funds ($ B)
Private Carriers ($ B)

Pvt. Carrier NWP growth was 0% in 2016, +2.9% in 2015, +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.
While growth rates varied widely, overall growth for private carriers was up very slightly in 2016.

*Excludes monopolistic fund states (in gray): OH, ND, WA and WY.
Source: NCCI.
As Hiring Gains Continue, WC Exposures Follow

(000s at quarter-end)

Employment in the three industries that are the heart of workers composition exposure is not quite back yet to the level reached before the Great Recession.

Sources: U.S. Department of Commerce, Census Bureau; Insurance Information Institute.
Direct Premiums Written Growth: Workers Comp Percent Change by State, 2007-2016

Top 25 States

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.
Direct Premiums Written Growth: Workers Comp Percent Change by State, 2007-2016

Bottom 25 States

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.
Rate and Exposure are Both Presently Important Growth Drivers
Top Growth Factors: Personal Lines

- **Rate:** Favorable rate trends in both auto and home
  - Record CAT losses in 2017 will further pressure property lines
  - Adverse severity trends are pressuring personal auto

- **Economic Strength:** Economic growth, supported by low unemployment and rising consumer confidence are supporting strength in new auto sales and new home construction

- **Household Formation:** Millennials are finally becoming home and car buyers in larger numbers, driving exposures upward

- **High Net Worth Consumers:** This segment has seen consistent (and profitable) growth as the “wealth effect” grows

- **Tax Cuts:** Will tax reform fuel additional growth?

- **Market Discipline:** Major personal lines insurers remain generally price disciplined
Monthly Change in Auto Insurance Prices, 1991–2017*

Cyclical peaks in PP Auto tend to occur roughly every 7-10 years (early 1990s, early 2000s, early and late 2010s)

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

"Hard" markets often tend to occur during recessionary periods

Nov. 2017 reading of 8.0% is up from 6.7% a year earlier. Current rate trend is strongest since 2002-03.

*Percentage change from same month in prior year; through Nov. 2017; 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.
Private Passenger Auto Insurance Net Written Premium, 2000–2018F

PP Auto premiums written continue to recover from a period of flat growth attributable to the weak economy impacting new vehicle sales, car choice, and increased price sensitivity among consumers.

PPA NWP volume in 2017 was up an estimated $62.8B or 39.9% since the 2009 trough; By 2017 the gain is expected to be $76.8B or 48.9%

PPA will generate $10B - $14B in new premiums annually through 2018

Sources: A.M. Best (1990-2016); USC RUM (2017F-2018F).

Top 25 States

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.
Direct Premiums Written: Pvt. Passenger Auto
Percent Change by State, 2007-2016

Bottom 25 States

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.
Homeowners insurance NWP continues to rise (up 152% 2000-2017E) despite very little unit growth during the real estate crash. Reasons include rate increases, especially in coastal zones, ITV endorsements (e.g., “inflation guards”), compulsory for mortgaged properties and resumption of home building activity.

The Homeowners line will generate about $1.5B in new premiums annually through 2018.

Sources: A.M. Best; USC RUM Center.
To Rent or to Buy?

Millions of renter-occupied housing units

Since 2004 the number of renter-occupied housing units has grown by about 10.5 million units (+34%), but there has been no growth in the number of owner-occupied housing units in 12 years. Did this streak end in 2017?

Sources: U.S. Census Bureau at [http://www.census.gov/housing/hvs/data/histtabs.html](http://www.census.gov/housing/hvs/data/histtabs.html), Table 8; Insurance Information Institute.
Direct Premiums Written: Homeowners MP
Percent Change by State, 2007-2016

Top 25 States

Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.
### Direct Premiums Written: Homeowners MP

#### Percent Change by State, 2007-2016

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</tbody>
</table>

**Source:** NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.
Auto Frequency and Severity Are an Immediate Challenge

*Homeowners Majorly Impacted by CATs in 2017*

Homeowners is Now Outperforming Pvt.Pass. Auto and P-C Industry as a Whole. HO Volatility is Associated Primarily With Coastal Exposure Issues

Average RNW: 1990-2016*
All P-C Lines: 7.7%
PP Auto: 7.6%
Homeowners: 4.9%**

*Latest available.
**Excludes 1992, the year of Hurricane Andrew. If 1992 is included the resulting homeowners RNW is 2.2%
Sources: NAIC; Insurance Information Institute.
Homeowners Performance Had Improved Markedly Since 2011/12’s Large Cat Losses…until 2017’s Record Catastrophe Loss Activity.

Sources: A.M. Best (1990-2016); USC RUM Center (2017E).

Private Passenger Auto Underwriting Performance Is Showing the Strains of Rising Frequency (and Severity) Trends in Many States

Sources: A.M. Best (1990-2016); USC RUM Center (2017E).
Claim Trends in Private Passenger Auto Insurance

Rising Frequencies and Severities in Many Coverages
Will that Pattern Be Sustained?
The Recession, High Fuel Prices Helped Temper Frequency and Severity, But this Trend Has Clearly Reversed, Consistent with Experience from Past Recoveries

*Four quarters ending with 2017 Q2.
Source: ISO/PCI Fast Track data; Insurance Information Institute
Collision Loss Ratio Trending Upward: Private Passenger Auto, 2010 – 2017*

Loss Ratio

2010 2011 2012 2013 2014 2015 2016 2017*

Collision Loss RatiosWere Trending Steadily Upward Until Early 2017

*2017 figure is for the 4 quarters ending in 2017:Q2
Source: ISO/PCI Fast Track data; Insurance Information Institute
Bodily Injury: Severity Trend Is Up, Frequency Decline Has Ended—For Now…

Annual Change, 2005 through 2017*

<table>
<thead>
<tr>
<th>Year</th>
<th>Severity</th>
<th>Frequency</th>
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</thead>
<tbody>
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<td>-5.4%</td>
<td>-5.4%</td>
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<tr>
<td>2006</td>
<td>-3.8%</td>
<td>-3.8%</td>
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<tr>
<td>2007</td>
<td>-4.0%</td>
<td>-4.0%</td>
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<tr>
<td>2008</td>
<td>-4.2%</td>
<td>-4.2%</td>
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<tr>
<td>2009</td>
<td>2.0%</td>
<td>2.0%</td>
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<tr>
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<td>2011</td>
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<td>4.7%</td>
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<td>2016</td>
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<td>0.0%</td>
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<tr>
<td>2017*</td>
<td>7.7%</td>
<td>-1.1%</td>
</tr>
</tbody>
</table>

*2017 figure is for the 4 quarters ending 2017:Q2.
Source: ISO/PCI Fast Track data; Insurance Information Institute

BI Severity Trend is a Major Cost Driver
Property Damage Liability: Severity and Frequency Are Up

Annual Change, 2005 through 2017*

Severity/Frequency Trends Have Been Volatile, But Rising Severity since 2011 Is a Concern

*2017 figure is for the 4 quarters ending 2017:Q2.
Source: ISO/PCI Fast Track data; Insurance Information Institute
Comprehensive Coverage: Frequency and Severity Trends Are Volatile

Annual Change, 2005 through 2017*

Weather Creates Volatility for Comprehensive Coverage. Enormous Comprehensive Losses Are Expected in Q3:2017 Due to Hurricanes Harvey and Irma

*2017 figure is for the 4 quarters ending with 2017:Q2.
Source: ISO/PCI Fast Track data; Insurance Information Institute
A Few Factors Driving Adverse Private Passenger Auto Loss Trends

More Jobs, Better Economy, More People Driving, Lower Gas Prices, More Expensive Cars, Higher Speed Limits…
America is Driving More Again: 2000-2016

Percent Change, Miles Driven*

<table>
<thead>
<tr>
<th>Year</th>
<th>Change</th>
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<tbody>
<tr>
<td>2000</td>
<td>2.5%</td>
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<td>2004</td>
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<tr>
<td>2016</td>
<td>3.5%</td>
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Sources: Federal Highway Administration; National Bureau of Economic Research (recession dates); Insurance Information Institute.

Tremendous Growth In Miles Driven. The More People Drive, The More Frequently They Get Into Accidents.
The correlation between miles driven and collision claim frequency is very tight. Will technology weaken this correlation in the years ahead?

Sources: Federal Highway Administration; Rolling four-quarter average frequency from Fast Track Monitoring System; Insurance Institute for Highway Safety; Insurance Information Institute.
How Might the Trump Presidency Impact the Insurance Industry?
Trumponomics: The Essential Elements

- **5 Elements**
  - Tax Reform
  - Deregulation
  - Infrastructure Investment
  - Healthcare
  - Fair Trade
  - Immigration Reform/Enforcement

- Most of these have direct impacts for insurers
Tax Reform…and More

Tax Reform Could Have Could Favorably Impact the Insurance Industry
Tax Reform Implications for P/C Insurers and Reinsurers

- **Reduction of Corporate Tax Rate from 35% to 21%...**

- **All Insurers Benefit...But Not Equally**
  - Companies generating most of their profits from underwriting income now taxed at 35% benefit the most
  - Companies generating proportionately more or the Net Investment Income from (taxable) Corporate Bonds benefit more than companies with heavier muni bond holdings
    - In P/C industry, insurers with underwriting losses tend to hold proportionately more in corporates
  - **Leveling the Playing Field:** Domestic (re)insurers taxed at 35% will benefit relative to (re)insurers domiciled in Bermuda, etc.
    - Diminished advantage for foreign-owned insurers that cede premium offshore
Tax Reform Implications for Select Industries

- All Industries
  - Reduction in corporate income tax rate from 35% to 21% is an unambiguous boost to virtually US corporations, including insurers

- Financial Services
  - Tax bill is generally favorable
  - Amplifies lightening of regulatory burden with scaling back of Dodd-Frank, FSOC SIFI designations, CFPB, Fiduciary Rule

- Manufacturing
  - Immediate expensing of capital investments for next 5 years

- Energy:
  - House bill repeals some energy tax credits, including on renewables; Senate preserves most energy credits
Tax Reform Implications for Select Industries

Healthcare

- Hospitals and others upset about repeal of the ACA’s individual mandate requirement
- CBO estimates that 15 million fewer people will be insured over time
- Providers argue they’ll be stuck with the tab for uncompensated care for people who drop coverage but still seek care
- House bill would reduce the ability of many hospitals to float in tax-advantaged debt (Advanced Refunding Bonds)
Trump Administration: Likely Issues Impacting Insurers

Dodd-Frank

♦ TRUMP DODD-FRANK QUOTES
  – Dodd-Frank is a “disaster”
  – Vowed to “do a big number” on the Act

♦ NEW: Financial CHOICE Act (June 2017 in House)
  – Ends authority of the FSOC to designate non-bank SIFIs
    ▪ MetLife, Prudential and even AIG SIFI designations rescinded
  – Repeal Volker Rule
  – Some loosening of liquidity requirements for well-capitalized financial institutions; Less frequent stress tests
  – Weaken Consumer Financial Protection Bureau
Trump Administration: Likely Issues Impacting Insurers

- **Infrastructure Spending**
  - Insurance industry could benefit from stepped-up infrastructure spending as promised by Trump
  - Competition for federal dollars will be fierce
  - Privatization of government infrastructure could provide growth opportunity for commercial insurers
  - If infrastructure spending materializes, will benefit all major commercial lines:
    - WC
    - Commercial Property
    - Commercial Liability
    - Surety
    - Commercial Auto
Technology, Society and the Economy Are All Changing at a Rapid Pace

*Reality vs. Drinking the Silicon Valley Kool Aid*
The Internet of Things and the Insurance Industry

- The “Internet of Things” will create trillions in economic value throughout the global economy by 2025
- What opportunities, challenges will this create for insurers?
- What are the impact on the insurance industry “value chain”?

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

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

Distribution Trends

Distribution by Channel Type Continues to Evolve Around the World
Independent agents steadily lost market share from the early 1980s through the early 2000s across all P/C lines, made some games in the mid-2000s, but then lost share again in the late 2000s. Loss rate has slowed in the 2010s. Direct channels include exclusive agency companies, direct marketers and direct sales (e.g., internet).
Independent agents have lost significant personal lines market share since the early 1970s. That trend slowed from 2000-2007, but accelerated during the financial crisis, though it may be slowing again.

Source: Insurance Information Institute; based on data from Conning and A.M. Best.
Commercial Lines Distribution Channels, Direct vs. Independent Agents, 2011-2015

Independent agent market share in commercial lines has held steady in recent years.

Source: Calculations based on data from A.M. Best.
INSURANCE TECHNOLOGY: 
FIN TECH ZEROES IN

Number and Value of Deals Is Increasing

An Industry that Has Always Been Accepting of Change and Innovation
Insurance tech deals reached a new record in 2016 but funding was higher in 2015.

2 out of every 3 InsurTech deals in 2016 was at the early stage!
Top 25 P/C Insurers by Direct Written Premium, 2015

Are large P/C insurers more likely to invest in InsurTech start-ups?

Sources: NAIC from CB Insights at https://www.cbinsights.com/blog/largest-pc-insurers-rank-startup-investments/
Start-Up InsurTech Investments by Top 25 P/C Insurers, 2015 - 2017*

*As of June 23, 2017.

Sources: NAIC from CB Insights at https://www.cbinsights.com/blog/largest-pc-insurers-rank-startup-investments/

USAA and AmFam lead in P/C InsurTech investment

10 of the Top 25 P/C insurers have made InsurTech start-up investments since 2015.—but there is little correlation between size and number of investments within this group.
Thank you for your time and your attention!

Twitter: twitter.com/bob_hartwig

For a copy of this presentation, email me at robert.hartwig@moore.sc.edu