Future Shock: 2020 & Beyond
Insurance Industry Trends, Challenges and Opportunities
Center for Insurance Studies
California State University Fullerton
Fullerton, CA
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The Global (Re)Insurance Industry is Very Sensitive to Economic and Geopolitical and Regulatory Environments
5 Major Categories for External Global Risks, Uncertainties and Fears: Insurance Solutions

1. Economic Risks
2. Geopolitical Risks
3. Environmental Risks
4. Technological Risks
5. Societal Risks

While risks can be broadly categorized, none are mutually exclusive.

Source: Adapted from World Economic Forum, *Global Risks 2014*; Insurance Information Institute.
Multitude of Exogenous Factors Influence Growth, Performance & Cyclicality

- Tepid growth in US, Europe
- Weakness in China/Emerging Economies
- Political uncertainty in the US, Brazil, Argentina
- UK “Brexit” concern
- Low/Negative Interest Rates
- Resurgent Terrorism Risk: ISIS & Other Groups
- Cyber Attacks
- Sabre Rattling (e.g., US-China, Russia)
- Severe Natural Disaster Losses → Supply Chain
- Nationalism
- International trade deals under siege
- (Over)Regulation: Systemic Risk?
- Strong dollar/Currency manipulation

Are “Black Swans” everywhere or does it just seem that way?

<table>
<thead>
<tr>
<th>Year</th>
<th>1st Risk</th>
<th>2nd Risk</th>
<th>3rd Risk</th>
<th>4th Risk</th>
<th>5th Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>Breakdown of critical Information infrastructure</td>
<td>Chronic disease in developed countries</td>
<td>Oil price shock</td>
<td>China economic hard landing</td>
<td>Asset price collapse</td>
</tr>
<tr>
<td>2008</td>
<td>Asset price collapse</td>
<td>Middle East instability</td>
<td>Failed and falling states</td>
<td>Oil and gas price spike</td>
<td>Chronic disease, developed world</td>
</tr>
<tr>
<td>2009</td>
<td>Asset price collapse</td>
<td>Slowing Chinese economy (&lt;6%)</td>
<td>Chronic disease</td>
<td>Global governance gaps</td>
<td>Retrenchment from globalization (emerging)</td>
</tr>
<tr>
<td>2010</td>
<td>Asset price collapse</td>
<td>Slowing Chinese economy (&lt;6%)</td>
<td>Chronic disease</td>
<td>Fiscal crises</td>
<td>Global governance gaps</td>
</tr>
<tr>
<td>2011</td>
<td>Storms and cyclones</td>
<td>Flooding</td>
<td>Corruption</td>
<td>Biodiversity loss</td>
<td>Climate change</td>
</tr>
<tr>
<td>2012</td>
<td>Severe income disparity</td>
<td>Chronic fiscal imbalances</td>
<td>Rising greenhouse gas emissions</td>
<td>Cyber attacks</td>
<td>Water supply crises</td>
</tr>
<tr>
<td>2013</td>
<td>Severe income disparity</td>
<td>Chronic fiscal imbalances</td>
<td>Fising greenhouse gas emissions</td>
<td>Mismanagement of population ageing</td>
<td>Cyber attacks</td>
</tr>
<tr>
<td>2014</td>
<td>Income disparity</td>
<td>Extreme weather events</td>
<td>Unemployment and underemployment</td>
<td>Climate change</td>
<td>High structural unemployment or underemployment</td>
</tr>
<tr>
<td>2015</td>
<td>Interstate conflict with regional consequences</td>
<td>Extreme weather events</td>
<td>Failure of national governance</td>
<td>State collapse or crisis</td>
<td>Interstate conflict with regional consequences</td>
</tr>
<tr>
<td>2016</td>
<td>Large-scale involuntary migration</td>
<td>Extreme weather events</td>
<td>Failure of climate-change mitigation and adaptation</td>
<td>Interstate conflict with regional consequences</td>
<td>Major natural catastrophes</td>
</tr>
</tbody>
</table>

Concerns Shift Considerably Over Short Spans of Time. 2016 Includes a Mix of Environmental Economic, Social and Environmental Risks.

Concerns Over the Impacts of Societal Risks Remained High in 2016, but Economic, Environment and Geopolitical Risks Also Loom Large

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Events</td>
<td>22.6</td>
</tr>
<tr>
<td>Capital Markets</td>
<td>14.5</td>
</tr>
<tr>
<td>Political Events</td>
<td>13.4</td>
</tr>
<tr>
<td>Technology Companies</td>
<td>10.2</td>
</tr>
<tr>
<td>Big Data</td>
<td>9.1</td>
</tr>
<tr>
<td>Other</td>
<td>8.1</td>
</tr>
<tr>
<td>Product Innovation</td>
<td>5.9</td>
</tr>
<tr>
<td>Auto Technology</td>
<td>5.9</td>
</tr>
<tr>
<td>Terrorism</td>
<td>3.8</td>
</tr>
<tr>
<td>Population Demographics</td>
<td>3.2</td>
</tr>
<tr>
<td>Financial Technology</td>
<td>2.2</td>
</tr>
<tr>
<td>Global Warming</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Economic and political concerns are overwhelmingly viewed as the most likely to be disruptive to insurers; Concerns over technology disruptions lag.

Concerns 20-25 Years Ago: Out of Control Tort System, Asbestos, MegaCats (Hugo, Andrew, Northridge); Hillary Care; Exploding Residual Markets; Reinsurance Price/Availability; Banks & Insurance

A.M. Best Survey: Top Insurance Industry Concerns

Cyber risk and the low interest rates dominate industry concerns today.

Concerns 20-25 Years Ago: Out of Control Tort System, Asbestos, MegaCats (Hugo, Andrew, Northridge); Hillary Care; Exploding Residual Markets; Grumbling over Glass-Steagall→GLB

Globalization: The Global Economy Creates and Transmits Cycles & Risks

Globalization Is a Double Edged Sword—Creating Opportunity and Wealth But Potentially Creating and Amplifying Risk

Emerging vs. “Advanced” Economies
Emerging economies are expected to grow at a modest pace of 2.1% in 2016 and 2017. World output is forecast to grow by 3.4% in 2016 and 3.6% in 2017. The world economy shrank by 0.6% in 2009 amid the global financial crisis.

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

US growth should accelerate in 2016

The Eurozone remains weak but should improve

Growth in China has slowed but outpaces the US and Europe

“Brexit” impact will be negative

Growth in the UK is stronger than in the Eurozone

Germany’s growth mirrors the Eurozone overall

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

Sources: Blue Chip Economic Indicators (2/2016 issue); IMF (Jan. 2016); Insurance Information Institute.
World trade volume growth is expected to accelerate modestly by 2017 after dipping in 2015, 2016.

World Trade Volume Growth*, 2012 – 2017F

*Goods and services.
Source: International Monetary Fund, World Economic Outlook, April 2016; Insurance Information Institute.
World Trade Volume: IMPORTS
2010 – 2017F

Growth (%)

Advanced Economies

Import growth in Advanced Economies is expected to decelerate in 2016

Emerging Economies

Import growth in emerging economies outpaces Advanced Economies has been hit hard

Sources: IMF World Economic Outlook (April 2016); Insurance Information Institute.
World Trade Volume: EXPORTS 2010 – 2017F

Growth (%)

**Advanced Economies**

Export growth in advanced economies is expected to decelerate in 2016 before accelerating in 2017

**Emerging Economies**

Export growth in emerging economies has struggled but should improve in 2016-17

Sources: IMF *World Economic Outlook* (April 2016); Insurance Information Institute.
Global Insurance Premium Growth Trends

Growth Is Uneven Across Regions and Market Segments
Distribution of Global Insurance Premiums, 2012 ($ Trillions)

Total Premium Volume = $4.613 Trillion*

- Life, $2.62, 56.8%
- Non-Life, $1.99, 43.2%

Life insurance accounted for nearly 57% of global premium volume in 2012 vs. 43% for Non-Life

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

<table>
<thead>
<tr>
<th>Market</th>
<th>Life</th>
<th>Non-Life</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced</td>
<td>3.8</td>
<td>1.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Emerging</td>
<td>6.9</td>
<td>8.0</td>
<td>7.4</td>
</tr>
<tr>
<td>World</td>
<td>4.3</td>
<td>2.9</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Source: Swiss Re, *sigma*, No. 4/2015.
Global Real (Inflation Adjusted) Premium Growth: 1980-2013

Emerging market growth has exceeded that of industrialized countries in 30 of the past 34 years, including the entirety of the global financial crisis and subsequent recovery.

Premium growth is very erratic in part to inflation volatility in emerging markets as well as a lack of consistent cyclicality.

Emerging market shares rose rapidly over the past 50 years.
Enormous population shifts will impact insurance demand over the next half century

Africa is expected to be the fastest population growth over the next 50 years, but no expectation now of Asia-like growth in economies or insurance demand

<table>
<thead>
<tr>
<th>Region</th>
<th>1962</th>
<th>1987</th>
<th>2012</th>
<th>2023</th>
<th>2062</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central and Eastern Europe</td>
<td>21.4%</td>
<td>21.7%</td>
<td>19.5%</td>
<td>18.0%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Advanced Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>North America, Western Europe and Oceania*</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>China</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Africa</td>
<td></td>
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<tr>
<td>Emerging Asia, Excl China</td>
<td></td>
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<tr>
<td>Latin America and Caribbean</td>
<td></td>
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</tr>
</tbody>
</table>

* excluding Turkey

Source: Swiss Re, *sigma*, No. 3/2013 from United Nations Department of Economic and Social Affairs, Population Division.
Relationship Between Real GDP and Real Life and Non-Life Premium Growth, 2012

The was a clear but highly relationship between real GDP growth and real premium growth in advance markets in 2012.

The correlation between real GDP growth and real premium growth in emerging markets was much stronger than in advanced markets in 2012.

Source: Swiss Re, sigma, No. 3/2013.

**Advanced Markets**

- Spending and penetration are generally much higher in advanced markets, though growth is fastest in emerging markets.

**Emerging Markets**

- Chinese spending on insurance is very similar to Russia, but Russian spending is mostly non-life and in China the majority is life.

Source: Swiss Re, sigma, No. 3/2013.
The Unfortunate Nexus: Opportunity, Risk & Instability

Most of the Global Economy’s Future Gains Will be Fraught with Much Greater Risk and Uncertainty than in the Past
Terrorism remains a greater concern in the Middle East, Africa and South Asia. Latin and South America have modest terrorist threats though Brazil is elevated.
The fastest growing markets are generally also among the politically riskiest, including East and South Asia and Africa. Latin and South America also present insurers with growth opportunities but political instability has increased markedly. Problems in the Ukraine will intensify political risk in several former Soviet republics.

Source: Aon PLC; Insurance Information Institute.
Country Shares of World Merchandise Exports

The US, China, Japan and Western Europe lead the world in merchandise exports

Growth in US Insurance Markets

Investment Performance is a Key Driver of Profitability

Depressed Yields Will Necessarily Influence Underwriting & Pricing

(Percent)

1975-78

1984-87

2000-03

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
2016F: 3.9%
2017F: 3.8%

2015: 3.4%
2014: 4.2%
2013: 4.4%
2012: +4.2%

Shaded areas denote “hard market” periods
Note: Data through 1934 are based on stock companies only. Data include state funds beginning in 1998.
Source: A.M. Best; Insurance Information Institute.
Direct Premiums Written: Total P/C
Percent Change by State, 2007-2014

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

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

P/C premium growth in California has lagged behind the nation as a whole

Sources: SNL Financial LC.; Insurance Information Institute.
Top 25 States

Growth Benchmarks: PPA
US: 16.4%

Sources: SNL Financial LC.; Insurance Information Institute.
Pvt. Passenger Auto premium growth in CA was among the slowest in the country between 2007 and 2014 as the Great Recession took its toll.

Top 25 States

44 states showed commercial lines growth from 2007 through 2015

Growth Benchmarks: Commercial
US: 9.0%

Sources: NAIC via SNL Financial; Insurance Information Institute.

Bottom 25 States

Eight states still write less commercial business than they did in 2007

Sources: NAIC via SNL Financial; Insurance Information Institute.
Direct Premiums Written: Workers’ Comp Percent Change by State, 2007-2015*

Top 25 States

27 states showed positive growth in the workers comp line from 2007 – 2015 (up from 13 through 2013 and 5 through 2012).

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

Sources: NAIC data, sourced from S&P Global Market Intelligence; Insurance Information Institute.
States with the poorest performing economies also produced some of the most negative net change in premiums of the past 8 years.

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

Sources: NAIC data, sourced from S&P Global Market Intelligence; Insurance Information Institute.
Investment Performance is a Key Driver of Profitability

Depressed Yields Will Necessarily Influence Underwriting & Pricing
Yields on 10-Year U.S. Treasury Notes have been essentially below 5% for more than a decade.

Despite the Fed’s December 2015 rate hike, yield remain low though short-term yields have seen some gains.

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. The Fed’s plan to raise interest rates in late 2015 has pushed up some yields, albeit quite modestly.

Estimated book yield in 2016 is down about 140 BP from pre-crisis levels

Sources: A.M. Best; 2015E-2016P figures from A.M. Best P/C Review and Preview, Feb. 2016; Insurance Information Institute
Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014 but showed a small (1.9%) increase in 2015—a trend that may continue.

1 Investment gains consist primarily of interest and stock dividends. Sources: ISO; Insurance Information Institute.
A full normalization of interest rates is unlikely until 2019, more than a decade after the onset of the financial crisis.

Sources: Blue Chip Economic Indicators (4/16 for 2016 and 2017; for 2018-2021 3/16 issue); Insurance Info. Institute.
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.
P/C Insurance Industry Profitability Trends

2015: Second-Best Year in the Post-Crisis Era but Low Interest Rates Weigh Heavily

- Net income in 2015 was on par with 2014; ROE unchanged at 8.4%

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

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

*Profitability = P/C insurer ROEs. 2011-15 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
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

Relatively Low CAT Losses, Reserve Releases

Avg. CAT Losses, More Reserve Releases

Sandy Impacts

Lower CAT Losses

3 Consecutive Years of U/W Profits: First Time Since 1971-73


Sources: A.M. Best, ISO (2014-2015); Figure for 2010-2013 is from A.M. Best P&C Review and Preview, Feb. 16, 2016.
Profitability & Politics

How Is Profitability Affected by the President’s Political Party?
*Truman administration ROE of 6.97% based on 3 years only, 1950-52.
Source: Insurance Information Institute
## Trump vs. Clinton: Issues that Matter to P/C Insurers

<table>
<thead>
<tr>
<th>Issue</th>
<th>Trump</th>
<th>Clinton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economy</td>
<td><strong>Supply Side-Like Philosophy:</strong> Lower taxes→Faster real GDP growth; Deficits likely grow as tax cuts are combined with targeted increased spending on Homeland Security, Defense, etc.</td>
<td><strong>Keynesian Philosophy:</strong> More government spending on infrastructure, education, social services; Deficits likely increase as tax increases likely difficult to pass</td>
</tr>
<tr>
<td>Interest Rates</td>
<td>May trend higher with larger deficits; Shift from monetary policy to fiscal focus (tax cuts, government spending)</td>
<td>Status quo at the Fed; Net impact on interest rates unclear</td>
</tr>
<tr>
<td>Taxes</td>
<td>Favors lower tax rates for corporate and personal income tax rates; Tax code overhaul?</td>
<td>Unlikely to reduce taxes or embark on major overhaul of tax code</td>
</tr>
<tr>
<td>International Trade</td>
<td>Protectionist Tendencies (appeal primarily to manufacturing sector)</td>
<td>Has criticized Trans-Pacific Partnership but is a realist on international matters</td>
</tr>
<tr>
<td>Tort System</td>
<td>Doesn’t like trial lawyers but seems to like filing lawsuits</td>
<td>Status Quo</td>
</tr>
<tr>
<td>Health Care</td>
<td>ACA should be repealed &amp; replaced</td>
<td>Incremental Change</td>
</tr>
</tbody>
</table>
2015 Property and Casualty Insurance Regulatory Report Card

Not Graded: District of Columbia

Source: R Street Insurance Regulation Report Card, December 2015
GLOBAL M&A UPDATE: A PATH TO GROWTH & PROFIT?

Are Capital Accumulation, Drive for Growth and Scale Stimulating M&A Activity?
M&A activity in 2015 will likely reach its highest level since 1998. Globally, across all sectors, M&A activity exceeded $200B.

M&A activity in the P/C sector was up sharply in 2015.

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

Global M&A Activity Tends to Follow Equity Market Performance

The number and volume of insurance M&A deals was up globally in 2015.

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

The share of M&A deal volume that was cross-border more than doubled in 2015

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

Asian, N. American deal volumes were up sharply in 2015

M&A: Deal Rationale by Dollar Amount

Scale drives most deals (excluding health sector)

The Insurance Industry Is on the Cutting Edge of Providing Technology-Driven Risk Management and Insurance Solutions
Interest in Technology Issues and Insurance Is Surging: Presents Opportunity

- Insurers are at the intersection of many of the most important technological innovations of the early 21st century
  - Problem → Solution → Opportunity

- Industry is too often depicted as a technology laggard

- I.I.I. is highlighting the industry as being on the technological cutting edge—an innovative, nimble industry with solutions for managing countless new risks of the current era:
  - Sharing economy  |  Cyber  |  Auto Technology
  - Supply Chain  |  Climate Risk  |  Drones
  - Wearable devices  |  The “Internet of Things”

- Positions industry well with customers, investors, current and prospective workers/Millennials, regulators/legislators and (tech) media
Cyber Risk is a Rapidly Emerging Exposure for Businesses Large and Small in Every Industry
The 781 reported data breaches in 2015 was virtually unchanged form the record 783 reported in 2014. The number of exposed records soared to 169.1 million, and increase of 97.5%.

Data/Privacy Breach: Many Potential Costs Can Be Insured

- Costs of notifying regulatory authorities
- Costs of notifying affecting individuals
- Defense and settlement costs
- Lost customers and damaged reputation
- Cyber extortion payments
- Forensic costs to discover cause
- Business Income Loss
- Regulatory fines at home & abroad
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.
Estimated Cyber Insurance Premiums Written, 2014 – 2020F

Cyber insurance premiums written could more than triple to $7.5 billion by 2020


Source: Advisen (2014 est.); PwC (2015, 2020); Insurance Information Institute.
Technology, Society and the Economy Are All Changing at a Rapid Pace

Thoughts on the Future
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.
On-Demand/Sharing/Peer-to-Peer Economy Impacts Many Lines of Insurance

- The “On-Demand” Economy is or will impact many segments of the economy important to P/C insurers
  - Auto (personal and commercial)
  - Homeowners/Renters
  - Many Liability Coverages
  - Professional Liability
  - Workers Comp
- Many unanswered insurance questions
- Insurance solutions are increasingly available to fill the many insurance gaps that arise
Ridesharing Regulation/Legislation and Status of ISO Filings as of 9/30/15

Status Ride Sharing Legislation/Regulation

Status of ISO Filings

Source: ISO.
The Sharing Economy: An Update

The On-Demand Economy Will Transform the American Workforce and the P/C Insurance Industry Too
The Sharing Economy Has Grown—And Attracted Political Scrutiny
"Many Americans are making extra money renting out a spare room, designing a website ... even driving their own car. This on demand or so called 'gig' economy is creating exciting opportunities and unleashing innovation, but it's also raising hard questions about workplace protections and what a good job will look like in the future."

--Hillary Clinton, July 13, 2015
A driver for Uber is an employee, not a contractor, according to a California Ruling that eventually could push up costs for the smartphone-based ride hailing service and hurt the closely watched start-up's valuation.

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

--Reuters, June 18, 2015
Percent of Americans Who Have Engaged in the “Gig/Sharing Economy” by Transaction

About 22% of Americans have offered services in the sharing economy.

Americans Who Offer Services in the Sharing/Gig Economy Are Statistically More Prone to Workplace Injury

Offerers

- **61%**
  - **47%** All others

- **55%**
  - **34%** Members of a racial or ethnic minority

- **51%**
  - **28%** Younger (18–34)

- **41%**
  - **32%** Residents of an urban area

Young, urban minority males are the most likely to offer their services in the sharing economy.

Opinions Are Split on Whether the Sharing Economy Needs More Regulation

The most frequent offerers of services though online platforms are equally divided over the need for more regulation.

<table>
<thead>
<tr>
<th>FAVOR REGULATION</th>
<th>DON’T KNOW</th>
<th>OPPOSE REGULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivated offerers*</td>
<td>47%</td>
<td>4%</td>
</tr>
<tr>
<td>Casual offerers*</td>
<td>36%</td>
<td>15%</td>
</tr>
<tr>
<td>General population</td>
<td>37%</td>
<td>28%</td>
</tr>
</tbody>
</table>

THE ‘INTERNET OF THINGS’

Capturing Economic Value Amid a Shifting Insurer Value Chain
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?

The ‘Internet of Things’ and ‘The Insurance-Net of Things’
The Insurance Industry’s Future Is in the Cloud…
The Insurance Industry’s Future Is in the Cloud…

- Aviation
- Rail & Public Transport
- Trucking & Fleet Vehicles
- Marine Transport
- Private Motor Vehicles
- Human Beings
Hacking Your Ride: Transportation Safety and Risk

#RiskyRide

SXSW
March 13, 2016, Austin, TX
INSURANCE TECHNOLOGY: FIN TECH ZEROES IN

Number and Value of Deals is Increasing

*In Search of the Elusive Insurance ‘Unicorn’*
Insurance Technology Financing Trend: Change Is Coming

Investment in insurance tech is rising

Insurance tech deals reached a new record in 2016:Q1

Insurance Tech Activity by Area of Interest, 2013 – 2016:Q1

With the ACA in the rear view window, non-health insurance tech accounts for the majority of investment

Silicon Valley and the venture capital community have the insurance industry in their sights. Most will fail. Some will succeed.

Source: CB Insights at [https://www.cbinsights.com/blog/insurance-tech-overview-q1-2016/](https://www.cbinsights.com/blog/insurance-tech-overview-q1-2016); Insurance Information Institute.
Thank You and…

- *Hasta La Vista, Baby*
- *I’ll Be Back*
Thank you for your time and your attention!

Twitter: twitter.com/bob_Hartwig

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