Milliman

InsTech – Disruption and Innovation in the Insurance Space

Casualty Actuaries of Greater New York
May 17, 2017

Presenters:

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Agenda

- Introduction
- Key Terminology
- Who is "InsTech" and Why?
- Hurdles to Success
- The Old Guard
- Don't Believe the Hype?
- Possible New Frontiers
- What Does the Future Hold?

The Land Rush is On…

- According to research firm CB Insights, investors poured $1.7B into insurance technology (InsTech) start-ups globally in 2016.
- The number of InsTech funding deals has risen by more than 500% since 2011 to over 170 deals in 2016.
- In 2015, Non-Life insurance innovators received 80% of new funding and insurance automation projects accounted for 67% of all deals.
- The majority of InsTech funding (over 60%) is focused in the U.S.

Why Now?

- Technological advances and insurance seen as a "highly antiquated, regulated, and entrenched industry, which makes it both appealing and problematic for start-ups" according to the digital news outlet Quartz.
- In summary – a perfect alignment of:
    - Technology
    - Talent
    - Treasure
    - Tempting Target

Terminology to Get Started

FinTech vs. InsTech

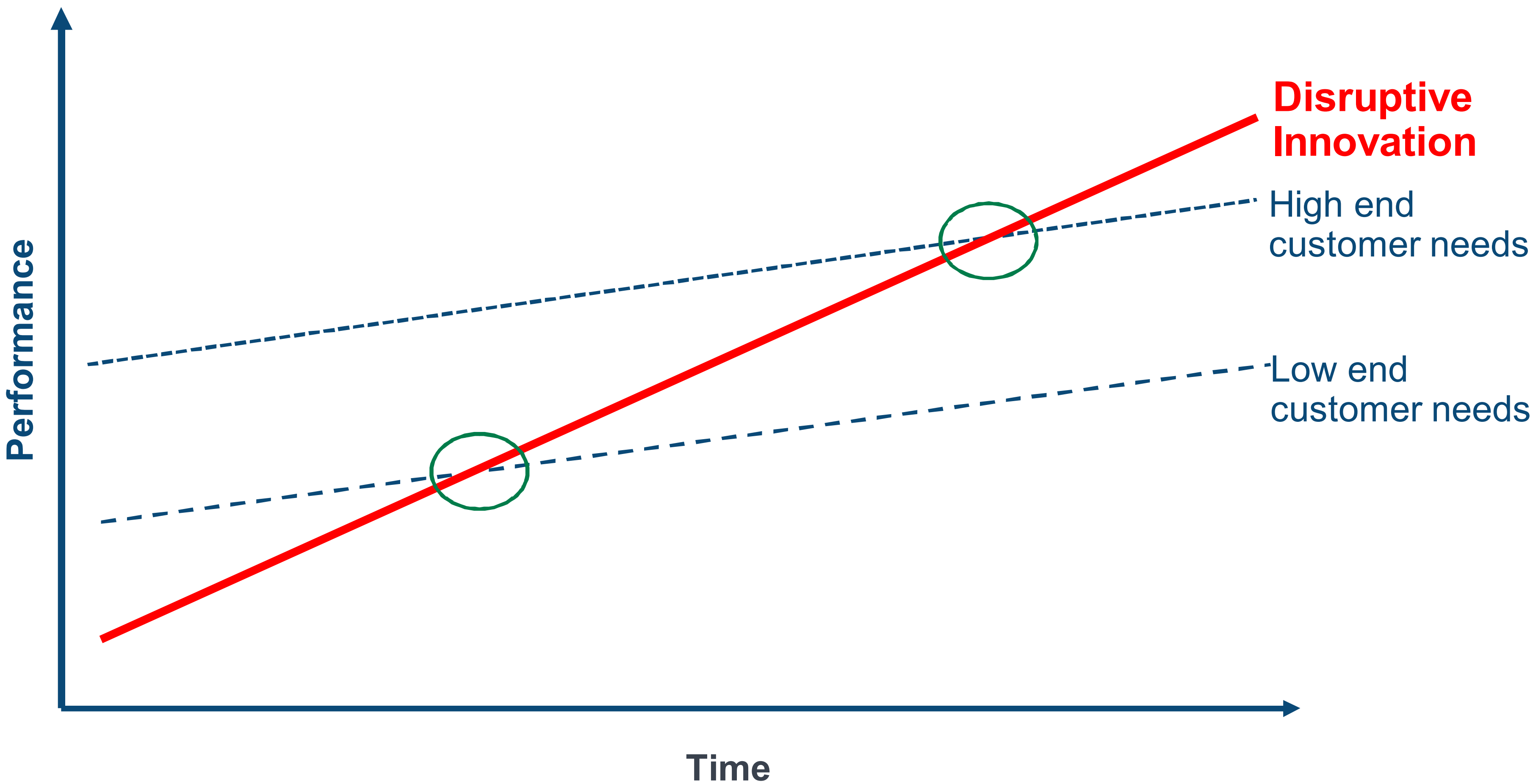
- FinTech = Finance + Technology: Evolving intersection of financial services and technology.
- InsTech (aka InsurTech):
  - Off shoot of FinTech specifically addressing insurance related services often misused to describe only startups.
  - General approach within insurance space of entities with:
    - Faster/smarter technology – no anchor to legacy systems;
    - Culture of innovation and creativity;
    - Dedication to improving customer experiences; and
    - Cool one word names.

Terminology to Get Started (2)

Disruptive Innovation

- Likely only term misused more often than InsTech…
- The theory of "disruptive innovation" was introduced in 1995 in the Harvard Business Review and, according to its authors, may now be a victim of its own success. It is often used too broadly to discuss innovation and any situation in which an industry is shaken up.
- Classic definition of "Disruption" – "A process where a smaller company with fewer resources is able to successfully challenged established incumbent businesses."
- Is Uber "Disruptive Innovation"? No! According to the theory:
  - Disruptive innovations originate in low-end or new market footholds; and
  - Disruptive innovations don't catch on with mainstream customers until quality catches up to their standards.

Disruptive Innovation



C Christensen, *Innovator's Dilemma*

What are "InsTech" Companies Doing?

- Most InsTech start-ups focus on non-risk bearing aspects of insurance:
  - Front End Policy Services
  - Back End Claims Services
  - Customer Experience
  - Business Intelligence
    - New sources of relevant data
    - Unique tools to analyze data
    - Using data to mitigate risks

Examples of InsTech Entities

Tyche – Uses analytics to help clients estimate value of legal claims

Insurify – Virtual insurance agent – consumers text a photo of their license plate to get insurance quotes

Trov – Sells item-by-item insurance for possessions for duration of insureds choosing, via an app. Launches in US in 2017 with Munich Re as U/W.

Mnubo – Provides analytics that generate insights from sensor-based data and external data sources

Snapsheet – Developing virtual automobile claims technology and services

Examples of InsTech Entities (Cont'd)

NeuroSky Body and Mind. Quantified.

Neurosky – Provides next generation of wearable sensors that can detect ECG's, stress levels and brainwaves

CoverHound – Aggregator which allows customers to compare prices from many different carriers

Hippo Insurance – Provides on-line Homeowners insurance quotes in 60 seconds based on 3 simple questions. Partnering with TOPA and Swiss Re.

Haven Life – MassMutual direct sales to customers

Google Compare (RIP)…

Some Exceptions to the "No Risk" Rule…

- Lemonade
  - Making "lemonade" out of lemons (the current insurance experience…)
  - New "Peer-to-Peer" insurer based in New York
  - Invites users to form small groups of policyholders who pay premiums into a pool to pay claims, with members' designee (charity, school, etc.) receiving a share of profits (if they exist) at the end of the policy period.
  - Recently licensed with first policies sold in September 2016
  - Initial focus on NY homeowners and rental insurance policies with plans to expand in 2017

- Metromile
  - Pay-per-mile auto insurer – flat monthly fee (typically $35) plus $0.05 per mile (fees vary based on location, years driving and other factors)
  - New automated claims service allow customers to file a claim entirely from their mobile phone or on-line dashboard with some claims resolved in under an hour
  - Established Metromile Insurance Co. in September 2016, licensed nationwide but currently only underwriting in seven states
  - Led by former Progressive executives with funding from Mark Cuban and others

What Hurdles do “InsTech” Companies Face?

- Key hindrance to InsTech progress as risk bearing entities – regulation and capital requirements
    - Regulation
        - Sometimes confusing system of regulation on statewide basis with varying rules and regulations
    - Capital Requirements
        - Regulators require lots of capital when entities take on risk
        - Tech investors are usually very thrifty with their money

How are Established Legacy Insurers Reacting?

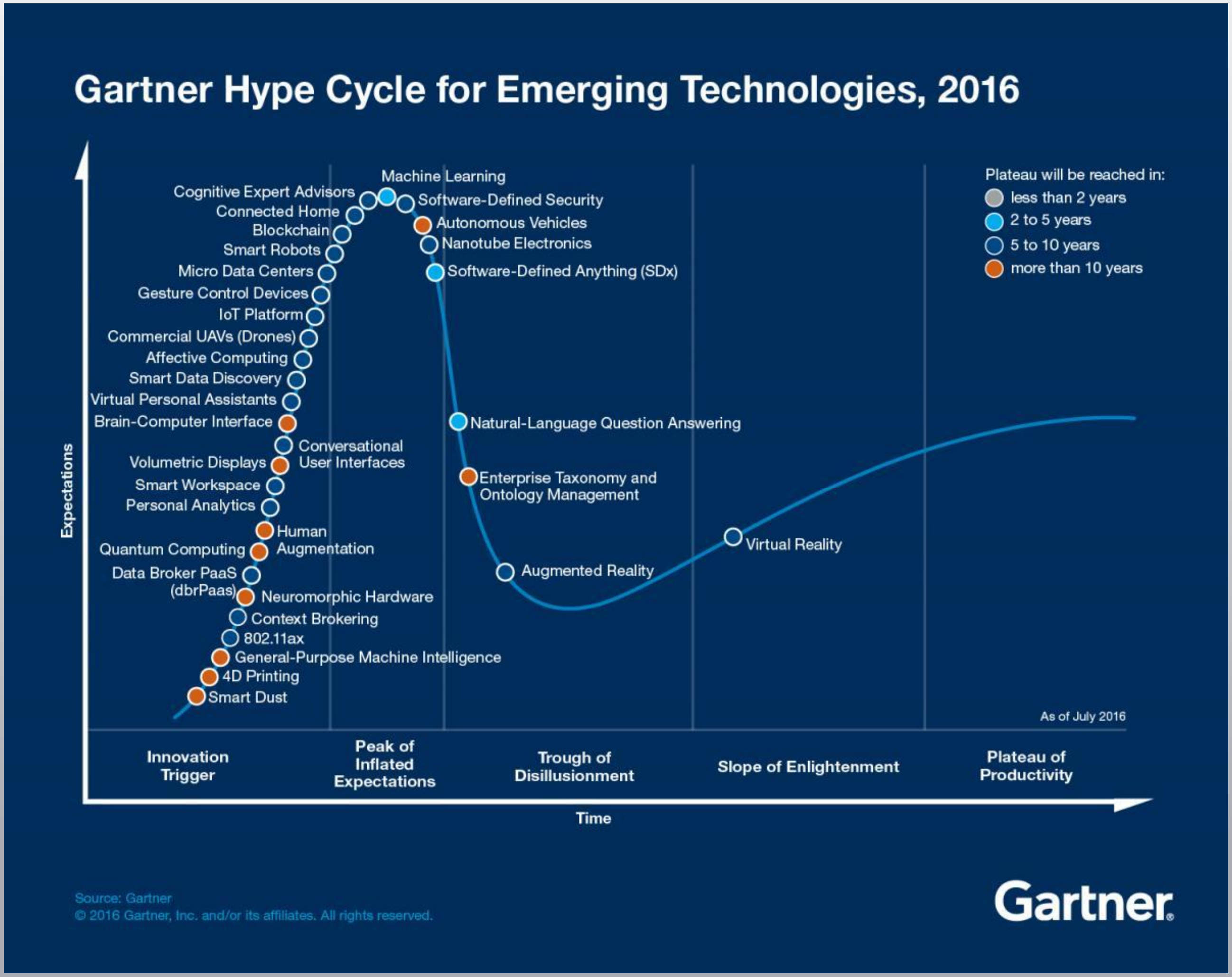
- 90% of insurers fear they will lose business to a tech start-up according to a PwC survey
- Main advantage of established insurers has always been many years of detailed risk data. As the amount of alternative data explodes, is this advantage sustainable?
- Shifting view of InsTech entities from competitors to partners:
  - Many insurers team up with start-ups or other players outside the sector to speed up digital innovation
  - Many are forming venture capital arms to invest in start-ups
    - USAA Ventures, Munich Re/HSB Ventures, AXA Strategic Investors, Liberty Mutual Strategic Ventures, XL Innovate
- Some insurers seem not to be doing anything at all (Prudent or the next Blockbuster Video?)

New Frontiers

- The "Outcome Economy"
  - Insurers sell solutions and results rather than traditional products and services
  - Desired outcomes are reduced or avoided risk
  - Transforming insurance products into advisory or service solutions that add value to policyholders
- Internet of Thing (IoT) technology
  - Creating "smart" home monitoring systems
  - May enable carriers to evolve into primarily insurers of safety

Don’t Believe the Hype?

- “You should never doubt what nobody is sure about” – W. Wonka



Don’t Believe the Hype? (Cont’d)

- Millennials
  - In 2015, Millennials (those born between 1981-1997) overtook Baby Boomers and are the largest current “generation”
  - No interest in homeownership and driving? The myth of the Millennial as cultural rebel..
  - What do they want?
    - Ease of transactions
    - Data security
- Home Monitoring Systems
  - Controlling heat, appliances, lighting, etc.
  - Sounds great – but these systems:
    - Could create all new, expensive claims for insurers – similar to those for auto insurers of “smart” cars
    - Could magnify cybersecurity and privacy threats in the home
  - Growth in demand has flattened in 2016 - the technology is just not there yet

What Does the Future Hold for InsTech?

- Winners and losers – How to define?
- Could this be a re-play of the dot-com bubble of the late 1990's? Likely not yet as most InsTech entities are still privately held. Beware of public offerings…
- Number of deals may have peaked in Q1 2016 (59 deals for $783M) but market appears to still be active (38 deals in Q1 2017 for $283M).
- But, at the end of the day, we will likely be left with an overall better, more efficient experience for risk management – hopefully…

Questions?


Y RISK
INSURING TOMORROW'S ECONOMY
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- Introduction
- Overview of the Sharing Economy
- Sharing Economy Sectors
- Y-Risk Overview
- Challenges
- Appeal to Actuaries
- Questions

Sharing Economy - Definition

- The Sharing Economy is an economic model that uses a technology enabled platform or marketplace to match supply and demand for a product or service
- Matching of an underutilized asset (e.g., time, vehicles, things) with someone seeking to use that asset
  - Ride Sharing
  - Car Sharing
  - Space Sharing
  - On-Demand Service

A Sharing Economy is an economic model in which individuals are able to borrow or rent assets owned by someone else. The Sharing Economy model is most likely to be used when the price of a particular asset is high and the asset is not fully utilized all the time.[(1)]

A Sharing Economy company typically operates a platform that facilitates the sharing of assets or services among unrelated individuals.[(2)]

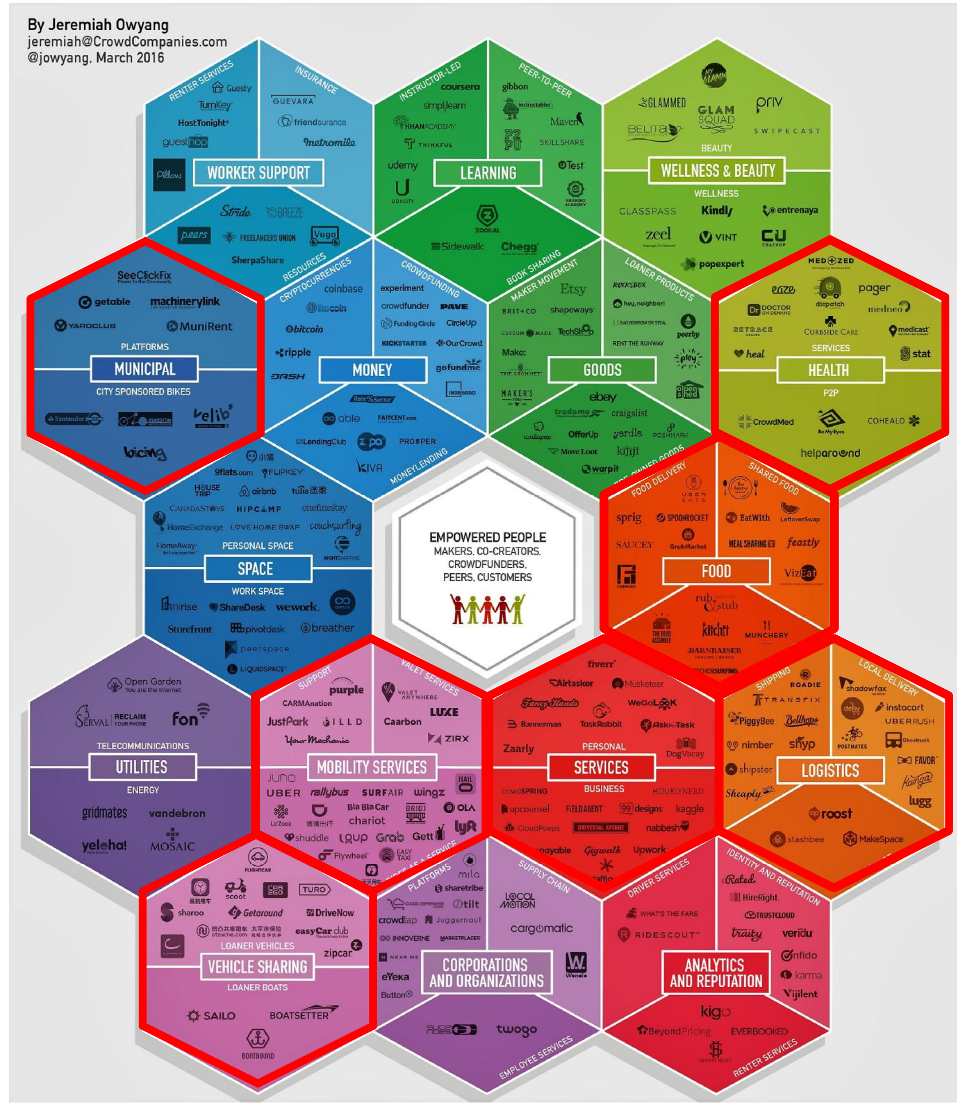
(1) http://www.investopedia.com/terms/s/sharing-economy.asp
(2) Lyft presentation, Aug 24, 2016

Sharing Economy - Trends

- **New companies are revolutionizing business**
  - On-demand products and services
  - Focus on peer-to-peer collaboration
  - Shift from ownership to access and sharing
- **Sharing Economy is rapidly evolving**
  - $15B in 2014 revenues → $335B by 2025
  - Over $21B in VC funding supports these companies
- **Benefits are real and consumers are catching on**
  - 78% of US adults agree that the Sharing Economy builds strong communities and makes life more affordable, convenient and efficient
- **Gen X and Y consumers are driving the growth of the Sharing Economy**

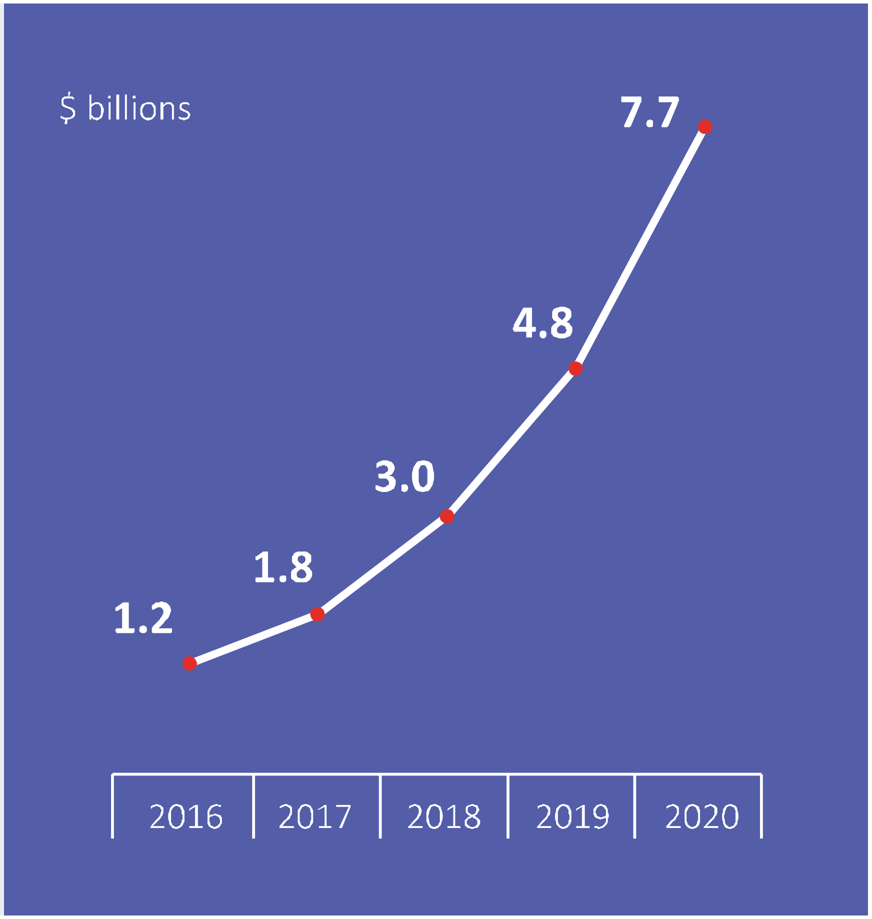
Sharing Economy - Constituents

- There are 16 subsectors of the Sharing Economy
- Examples:
  - Hospitality & Real Estate – Airbnb, HomeAway, CouchSurfing, WeWork
  - Food Sharing – Feastly, Josephine
  - Food & Grocery Delivery – Postmates, DoorDash, Instacart
  - Fashion – Rent the Runway
  - Retail & Consumer Goods – Yerdle, Neighborgoods
  - Services – UrbanSitter, Handy, TaskRabbit,
  - Mobility Services– Uber, Lyft, Getaround, Turo, Hitch, Luxe



Sharing Economy – Commercial GWP

Estimate the addressable insurance market is between $1B and $2B today, growing to over $7.5B by 2020(1)



(1) Based on the PWC forecast of Sharing Economy global revenues, applied 2 methods to calculate range for market size - total cost of risk of $54 per $1000 revenue (RIMS 2015) and our price discovery process where companies expect to spend 10-15% of revenue on insurance; reasonable estimate given that $7.7B is only ~2.5% of the commercial insurance market

Y-Risk Overview

- MGU and risk consultant exclusively focused on marketplaces and platforms
- Backed by globally respected and innovative insurance companies
- Tailored insurance products and usage based pricing
- Specialized claims handling for marketplaces and platforms
- Insurance and legal expertise
- Use reviews and rating to underwrite
- Wholesale distribution with access to select retail agencies

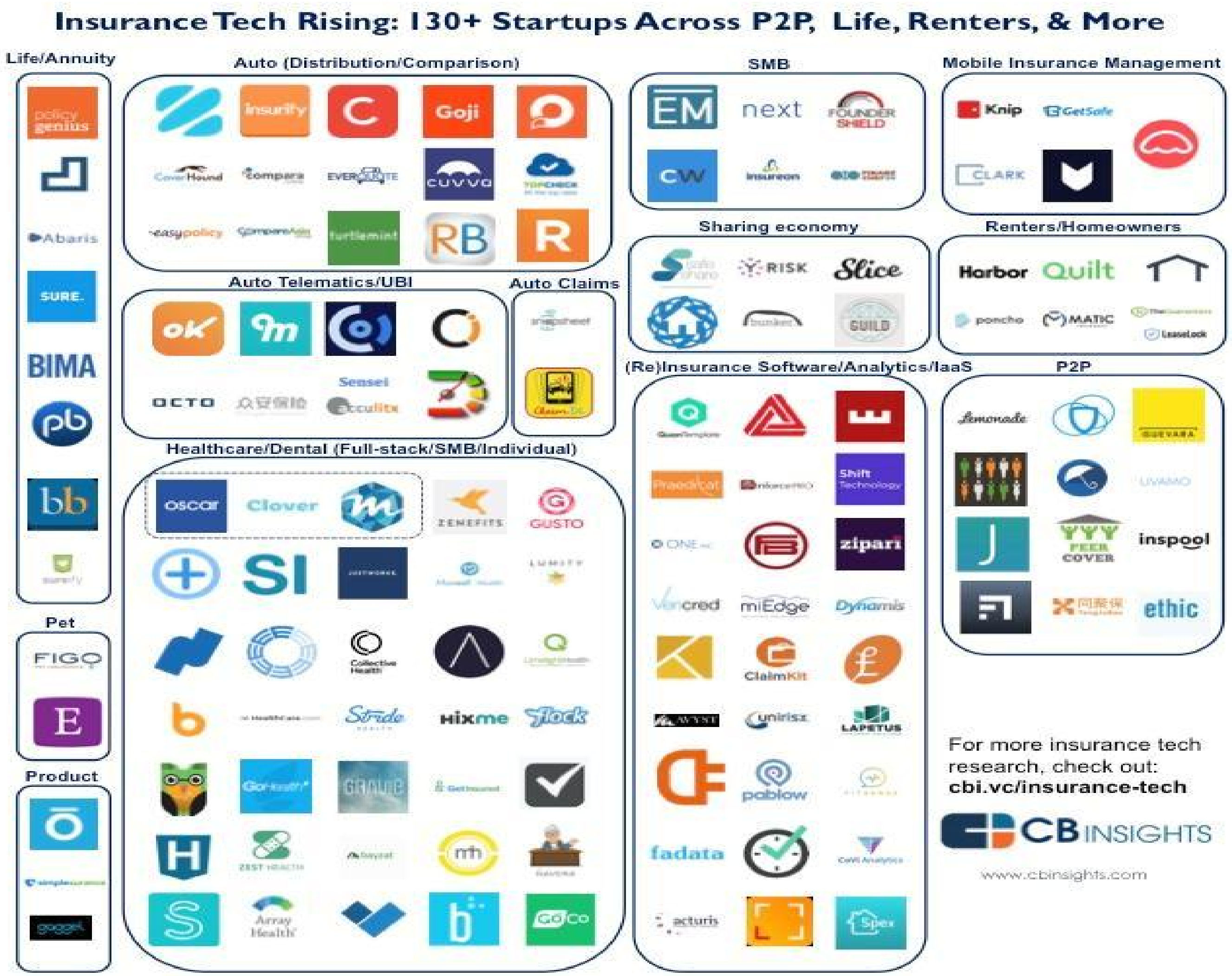
Traditional Approach

- Off-the-shelf products
- Structured, rigid policies
- Flat-rated
- Focus on established industries
- Insure the year

Current Approach

- Tailored solutions
- Nimble, flexible policy options
- Variable-rated
- Focus on Sharing Economy Companies
- Insure the moment

InsurTech Landscape "Today":



Challenges

(1/3)

Insurance Industry Issues

- Traditional insurance underwriting is rigid and formulaic
- Underwriting manuals & rating schedules don't work for Sharing Economy risks
- Lack of exposure data, loss data, revenue projections, support for growth estimates
- No incumbent pricing, insurer information or renewal date
- Brokers and insurance companies strive for "efficiency" can stifle creativity
- Pull back from commercial auto insurance

Challenges (2/3)

Insurance Companies

- Education at the insurance partner level as to why the Sharing Economy risks are good
- Communicating the basic principles of insurability
  - Quantify the risk
  - Measure and analyze the risk
  - Remove any moral hazard

Challenges (3/3)

Insurance Buyers

- Educate the end buyer as to why customized products are better / necessary
- Push through the adoption process
  - New products
  - Consumer education
  - Drive change

Draw for an Actuary

- New, Exciting, Growing Segment
- Short Term
  - No Data – surrogate/analogous pricing
  - Creative Solutions
  - Usage Based Pricing
  - Truly New Business, not Someone's Lost Renewal
- Longer Term
  - Enormous Amount of Data – particularly on exposure side
  - Data and Analytics Possibilities

Exposures

- Platform
- User
- Service Provider

Y-Risk

- Questions?