Harnessing technology to narrow insurance protection gaps

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17th Asia CEO Insurance Summit
Singapore, 21 February 2017
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The Geneva Association at a glance

The Geneva Association is a unique forum exclusively for ~80 CEOs of leading global (re)insurers – 14 members from Asia

Think Tank: Developing research papers with industry experts and academics

The leading advocate of insurance specific interests at the global level

Direct interaction with central banks and international organisations such as IAIS, FSB, World Bank, UN and OECD

Basis

Academic work

The Geneva Papers on Risk and Insurance – Issues and Practice
The Geneva Risk and Insurance Review

Source: The Geneva Association
The Geneva Association (co-)hosts leading insurance networks and offers awards and grants for research excellence

1. Annual General Assembly of CEO members

2. Key meetings for CFOs, CROs, CIOs and Chief Economists

3. Academic Networks, e.g.
   - WRiec – World Risk and Insurance Economics Congres
   - EGRIE – European Group of Risk and Insurance Economists seminar
   - EALE – Joint seminar of the European Association of Law and Economics (EALE) and The Geneva Association

4. Awards and Research Grants, e.g.
   - Ernst-Meyer Prize for the best PhD thesis in insurance economics in insurance
   - Shin Research Award, a joint GA/IIS award to promote applied research
   - Research grants, 2016 on Cyber

Source: The Geneva Association
Defining insurance protection gaps

- Uninsured losses as a share of total losses
- Uninsured people as a share of the total population
- Actual insurance penetration against benchmark
- Insurance actually purchased against economically beneficial coverage

Source: The Geneva Association
The protection gap in emerging Asia exceeds 90% for all major perils. Earthquake risk remains largely uninsured in mature markets, too.
2 Defining insurance protection gaps

The Health Insurance Protection Gap
Breakdown of national health expenditure (2014)

Source: World Health Organisation, Swiss Re
Six root causes for protection gaps

- Economic reasons
- Limits to insurability
- Lack of affordability
- Low risk awareness
- Product complexity/lack of client centricity
- Immature regulations
3 Root causes

Perceived lack of comprehensibility and responsiveness

Mismatch between what customers expect and what insurers provide

Source: Accenture Global Insurance Customer Survey
## How digital technology can make a difference and help address protection gaps

<table>
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<th>Mitigating moral hazard</th>
<th>Reducing information asymmetries</th>
<th>Cutting transaction costs</th>
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<tr>
<td>‘Big Data’ enabled pricing is likely to change policyholder behavior</td>
<td>Much improved information at lower cost</td>
<td>Much reduced cost of information gathering and processing across the entire insurance value chain</td>
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<tr>
<td>‘Big Data’ creates new markets for hitherto uninsurable risks</td>
<td>Digitally-sourced data allows to more clearly discern ‘good’ and ‘poor’ risks</td>
<td>Economics of self-retention change</td>
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### Digital technology and advanced analytics

*address long-standing insurance market inefficiencies and make risk transfer through insurance more cost-efficient and appealing*
In China up to 38% of premiums cover transaction costs
The picture for mature markets is similar
How technology can boost insurance markets’ efficiency

Illustration: Specific Areas Of Efficiency Gains
Combined ratio [%]

Major cost savings in administration, acquisition, underwriting and claims settlement

Source: Morgan Stanley / Boston Consulting Group
Through modern technologies, insurers can address a major weakness compared with other industries — the current relative paucity of client interaction.
## Towards a digitally enabled insurance value chain …

<table>
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<tr>
<th>Physical value chain</th>
<th>Product design/development</th>
<th>Pricing/underwriting</th>
<th>Marketing</th>
<th>Distribution</th>
<th>Policy/claims management</th>
</tr>
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<tr>
<td>Digitalisation</td>
<td>• On-demand/modular insurance</td>
<td>• Use of big data/analytics to identify new claims drivers</td>
<td>• Position insurance as more customer centric</td>
<td>• Customer preferences for multi-channel interaction</td>
<td>• Use of big data/analytics to reduce fraud and improve claim processes</td>
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<td></td>
<td>• Robotics/Telematics/Internet of Things/Wearables (IoT) open up usage-based insurance opportunities</td>
<td>• Predictive/prescriptive underwriting techniques</td>
<td>• Increase frequency of customer interaction</td>
<td>• Less face-to-face engagement</td>
<td>• Self-service applications to improve customer post-sales experience</td>
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<td></td>
<td>• New emerging risks such as cyber</td>
<td>• Artificial intelligence/cognitive computing to hone risk assessment</td>
<td>• Use a big data/analytics for micro market segmentation and product personalisation</td>
<td>• Emergence of digital eco-systems to threaten incumbent firms</td>
<td></td>
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<td></td>
<td>• Social network insurance groups</td>
<td></td>
<td></td>
<td>• Scope for efficiency gains in traditional channels</td>
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</table>

### Information capture and analysis

- Source: Swiss Re
How technology can boost insurance markets’ efficiency

... which promotes all key levers of insurance demand

**Appeal**
Improved customer experience and individualized products

**Awareness**
Lower cost of information gathering

**Affordability**
Lower production cost of insurance

The radical changes to the insurance value chain brought about by digitisation are set to boost insurance demand via all three major levers

Source: The Geneva Association
The regulatory dimension – a catalyst or a roadblock?

Balancing innovation and safety

Reconciling data protection and usage

Supervising non-insurers engaged in risk underwriting and distribution

Determining the scope for price differentiation

Source: The Geneva Association
## Success stories

<table>
<thead>
<tr>
<th>ID</th>
<th>Geographical reach</th>
<th>Key issue(s) addressed</th>
<th>Technology</th>
<th>Line(s) of business</th>
<th>Distribution</th>
<th>Prospects</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Airtel Ghana</td>
<td>Ghana</td>
<td>Lack of insurance awareness</td>
<td>Mobile phone</td>
<td>Disability and hospitalisation</td>
<td>Mobile only</td>
<td>Expansion to additional African countries and lines of business; higher penetration</td>
</tr>
<tr>
<td>B. BIMA</td>
<td>Developing countries</td>
<td>Lack of insurance awareness</td>
<td>Mobile phone</td>
<td>Life, personal accident, health</td>
<td>Mobile, call centre-based agents</td>
<td>Further geographical expansion in developing markets and higher penetration</td>
</tr>
<tr>
<td>C. Discovery</td>
<td>Global</td>
<td>Demand for behavioural insurance; mitigation of moral hazard and adverse selection</td>
<td>Health monitoring and tracking devices</td>
<td>Life and health</td>
<td>Online direct or via partner insurers</td>
<td>Further geographical expansion and higher penetration</td>
</tr>
<tr>
<td>D. Friendsurance</td>
<td>Germany</td>
<td>Demand for peer-to-peer insurance, mitigation for moral hazard and insurance fraud</td>
<td>Social technology</td>
<td>Multiline</td>
<td>Online only</td>
<td>Further geographical expansion (e.g. Australia) and higher penetration</td>
</tr>
<tr>
<td>E. Kilimo Salama and Acre</td>
<td>Eastern Africa</td>
<td>Lack of insurance awareness; demand for 'pay-as-you plant' insurance</td>
<td>Mobile and meteorological technology</td>
<td>Agriculture</td>
<td>Traditional and mobile</td>
<td>Higher penetration</td>
</tr>
<tr>
<td>F. Pacifica</td>
<td>France</td>
<td>Lack of pasture insurance cover</td>
<td>Satellite technology</td>
<td>Agriculture</td>
<td>Traditional</td>
<td>Higher penetration</td>
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Source: The Geneva Association
Case study: Mobile microinsurance through BIMA

Premiums are paid through deductions of prepaid airtime credit

Marketing, distribution and claims and policy management are conducted through the mobile channel only

Source: The Geneva Association
Organisations interviewed by the Geneva Association

Source: The Geneva Association
### Key findings from expert and executive interviews

<table>
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<th>Ranking (no. of mentions)</th>
<th>Key weakness of traditional insurance business models</th>
<th>Areas of biggest potential for digital insurance</th>
<th>Key drivers of digital insurance</th>
<th>The insurance business model of the future</th>
<th>Elements of insurance value chain particularly prone to digitisation</th>
<th>Recommendations for insurance regulators</th>
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<tr>
<td>1</td>
<td>Lack of client centricity and knowledge</td>
<td>Personal lines</td>
<td>Advanced analytics</td>
<td>Digitally enabled value chains</td>
<td>Distribution</td>
<td>Focus on data protection and security to foster trust in digital solutions</td>
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<td>2</td>
<td>High cost of distribution</td>
<td>‘Pay-As-You-Go’ insurance in the sharing economy</td>
<td>New sources of data</td>
<td>Disruption and disintermediation of incumbents</td>
<td>Underwriting</td>
<td>Invest in developing digital expertise</td>
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<td>3</td>
<td>Lack of product simplicity and transparency</td>
<td>Improved targeting of underserved client groups</td>
<td>Advanced software and cloud technology</td>
<td>New partnerships and collaborations</td>
<td>Product design</td>
<td>Ensure customer protection</td>
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Source: The Geneva Association
Key takeaways

1. Technology boosts insurance markets’ efficiency

2. More appealing and cost-efficient products will help narrow long-time insurance protection gaps

3. A unique opportunity for insurers to enhance their societal relevance

4. There are already encouraging success stories, for example
   - Mobile micro-insurance
   - Behavioural insurance
   - P2P insurance
   - Parametric insurance based on improved models and analytics

Source: The Geneva Association