Financial Keynote: Rating Agency Views of Regulatory Initiatives

Matthew Mosher
EVP & COO
AM Best
Learning Objectives

At the end of this presentation, you will be able to:

• State the difference between the roles of a rating agency and an insurance regulator
• Identify the technology areas with the greatest impact on the insurance industry
• Recall how AM Best defines and incorporates innovation into the ratings process
• State the potential impact of regulation on innovation
• Identify key emerging issues the insurance industry is facing
The Accelerating Impact of Technology
Q: Which Technology Will Have the Biggest Impact on Insurance in the Near Term?

- Blockchain
- Artificial Intelligence
- Cloud Computing
- Internet of Things
- Big Data
Percentage of Respondents That Believe That These Technologies Will Have a Significant Impact:

- **Big Data**: 41%
- **AI**: 30%
- **Cloud Computing**: 29%
- **IoT**: 26%
- **Blockchain**: 8%
Artificial Intelligence/Big Data

- **AI/machine learning:**
  - Simulation of intelligent behavior in computers
  - The capability of a machine to imitate intelligent human behavior

- **Big data:**
  - Volume of data
  - Advances in data storage & data mining technologies
AI/Big Data: Selected Applications in Insurance

• Advances in predictive modeling
• Robust data analytics
• Enhanced customer experience
  – Chatbots
  – Loss control and risk management services
  – Claims handling
• More customized products such as
  – Mileage-based insurance
  – Supplemental health coverage
  – Easier life insurance underwriting
AI/Big Data: Challenges

• Model validation:
  – Algorithms often lack transparency
  – Common statistical techniques cannot be used for testing
• Demand for talent exceeds supply
• Regulators’ need for transparency
• Issues regarding the collection of large amounts of data
  – Privacy
  – Preserving the integrity of data
Internet of Things (IoT)

- Network of devices connected to each other
- “Smart” objects that can communicate
- IoT can change the risk profile of insured products

Applications:
- Data on driving habits
- Drones and telematic devices collect insured’s data
- Wearable technologies for biometric information
- Sensors to detect temperature, gas leaks, fire, theft, and other risks
IoT: Challenges

• Security
  – Increased impact of a systemic cyber attack

• Privacy
  – Exponential increases in data gathering
  – Adds responsibilities to protect data

• Regulatory
  – Clarity on data used for underwriting
  – Standards for regulating IoT are still evolving
Blockchain

• Digital and decentralized version of a traditional ledger
  – Programmed to track assets and record transactions securely
  – Can be used for currency, digital rights, identity, property titles, and more

• Transactions are recorded sequentially with an audit trail
• Algorithms and cryptography guarantee the integrity of transactions
• Eliminates the need for third party intermediaries
Blockchain: Selected Applications in Insurance

- P/C and reinsurance:
  - Claims processing
  - Subrogation
  - Treaty underwriting
- Life/health insurance:
  - Sharing medical records securely
  - Biometric information and monitoring
- Examples:
  - Travel insurance: Automated claims payout for a delayed or cancelled flight
  - Title insurance initiative to adopt blockchain
  - B3I: Consortium to digitize a property cat excess of loss contract
  - Riskblock Alliance: Subrogation application for insurers
## Blockchain: Challenges

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Challenge Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scalability</td>
<td>Immense computational power needed to scale pilot programs for real-time solutions</td>
</tr>
<tr>
<td>Compatibility and Cooperation</td>
<td>Lack of standards for different blockchain implementations</td>
</tr>
<tr>
<td>Privacy</td>
<td>Legal and regulatory privacy requirements</td>
</tr>
<tr>
<td>Security</td>
<td>Untested for real-time cyber events</td>
</tr>
<tr>
<td>Regulation</td>
<td>Regulatory agencies (banks, consumer protection, insurance, communication) need to be consistent</td>
</tr>
</tbody>
</table>
Innovation
Structural Changes Taking Place

Demographic Shifts
- Defined benefits/pensions disappearing
- Healthcare becoming more expensive
- Gig economy becoming more prevalent
- Collaborative consumption trends

Climate-Related Trends
- Weather events increasing in severity
- Migration to coastal regions
- Urbanization leading to topological changes

Technology
- Cloud computing
- IoT
- Big Data
- Artificial intelligence/machine learning
- Blockchain

Financial Strength and Success
Innovation in the Ratings Process

- Our plan is to further understand and evaluate companies’ innovativeness, including:
  - How (re)insurers adapt to changes in the marketplace
  - How (re)insurers change to improve operating efficiencies
  - How these changes influence the financial strength and success of (re)insurers

- Historically, AM Best has captured innovation indirectly through Business Profile in the rating process.

- We launched the innovation initiative to develop a more explicit analysis of innovation in the rating process.
Innovation – AM Best Definition

- A multi-stage process …
- … that transforms ideas into new or significantly improved:
  - Products
  - Processes
  - Services
  - Business models
- … that have measurable impact over time and enable an organization to stay relevant and successful …
- … and can be organically grown or adopted from external sources.
How Critical Is Innovation to Success, by Segment?

- Insurers across all segments believe innovation is critical
Innovation Input Score
(1 to 4 for each component)

Leadership + Culture + Resources + Processes and Structure = Innovation Input Score
Leadership

Buy-in at the senior management level

Leadership clearly enumerates corporate goals, which are understood throughout the organization

Innovation strategy dovetails with corporate mission statement

Leadership embraces a mindset that supports cross-functional collaboration
Culture

- Allows for risk-taking and possibility of failure
- Ability to kill ineffective projects without fear of retribution
- Fosters ownership and transparency
- Open to external solutions
Processes and Structures

Without a proper structure in place, innovation will be hard to implement:

**Data Management**
- Data governance well defined
- Access and transparency

**Strategy**
- Assess capabilities
- Well defined and aligned with corporate objectives
- Flexible development plan

**Governance**
- Customer privacy/regulatory concerns
Innovation Output Score (1 to 4 for each component)

2 x (Results + Level of Transformation) = Innovation Output Score
Results

Output reviewed over a five-year period

Impact must be tangible and quantifiable

Should be replicable

Mix between operational and growth

Incremental and disruptive innovation
Level of Transformation

How innovative compared to the rest of the industry and versus other industries

Near-term vs. long-term impact

- Bring company up to speed with others or is it propelling ahead?
- Relate to value creation: customer engagement, better business model, enhanced growth

View of insurance industry relative to customer expectations from other experiences
AM Best’s Approach to Scoring Innovation

AM Best Scoring:

Innovation Input Score

+ Innovation Output Score

= Innovation Score
Scoring System

- Innovation Leader
- Innovator
- Adopter
- Reactor
- Non-Innovator
Regulations
Regulatory Challenges and Innovation

• Data sharing and protection
  – Appropriate regulations needed to protect large amounts of personal information being collected

• Legal systems
  – Do not yet recognize blockchain transactions
  – GDPR gives consumers the “right to be forgotten”

• Peer-to-peer insurance models

• Big Data and Machine Learning

• Regulators need to understand complex technologies and risks to regulate appropriately
  – Training, hiring, and retaining talent that is in great demand will be a challenge
Bridging Regulatory Regimes

• Group Capital
  – NAIC Group Capital Calculation (GCC)
    • Ready to begin field testing; roll out likely in 2020
  – International Association of Insurance Supervisors (IAIS) Group Capital Standard
    • Field testing and roll-out scheduled for 2019
  – Federal Reserve Board Group Capital tool for insurance holding companies that include depository institutions
    • Specific timetable unknown

• Reinsurance
  – Completion of Covered Agreements (US/EU and US/UK)
  – Revisions to NAIC Credit for Reinsurance Model Law & Regulation
    • Includes elimination of collateral requirements for non-US reinsurers
      – Feds gave state regulators five years to accomplish
    • Industry concerned about level playing field

• AM Best looks beyond regulatory and accounting regimes to gain an economic view of capital adequacy in its BCAR calculations
Emerging Issues
Q: Which of the Following Products Had the Lowest Sales Revenue in 2018?

- Beer
- Bottled Water
- Cannabis
- Cigarettes
- Coffee
Cannabis Insurance

- 33 states and DC legalized medical marijuana
- 10 states and DC have legalized recreational marijuana (must be 21 to consume)
- Still illegal at the federal level
  - The divergence between state and federal legality makes providing insurance a challenge

* Includes US & Canada

Source: Brewers Association, Alcohol & Tobacco Tax & Trade Bureau, Mordor Intelligence, Statista, US Distilled Spirits Council and Food Business News
Copyright 2018 Marijuana Business Daily, a division of Anne Holland Ventures Inc.
Challenges in Managing Wildfire Risk

- Hurricanes & earthquakes historically the largest perils
  - Wildfire historically viewed as secondary peril

- Probabilistic modeling in infancy stage

- Insurers own loss data insufficient to quantify today’s risk

- Climate Change

- Regulatory Restrictions
Cyber

2018 direct premiums written for cyber insurance around $2 billion

**Increased use of technology and Big Data leads to more cyber risks**

- Threats are evolving faster than technology can keep up

**Employees are the most common cause of security breaches**

- 53% of companies said their organization had experienced an insider attack in 2018

**60% of cyber security breaches occur in small to mid-sized companies**

- Too often, cyber becomes a priority only after an incident
Environmental, Social, and Governance (ESG)

• A set of metrics used by investors to assess a company’s risks that may not be captured by conventional financial metrics
  – **Environmental** criteria look at how a company performs as a steward of the natural environment
  – **Social** criteria examine how a company manages relationships with its employees, suppliers, customers, and the communities where it operates
  – **Governance** deals with the company’s leadership, executive pay, audits, internal controls, and shareholder rights
• No industrywide ESG standards in place
  – Some organizations may be overwhelmed trying to understand how to implement and disclose ESG practices
  – ESG is starting to gain more traction
Q&A

• What are the two areas we focus on when we rate innovation?

A  Input and Output Score
B  Input and Management
C  Output and Processes & Structure
D  Culture and Management
Q&A

• Which is not a key emerging issue for the Insurance Industry?

A  Wildfire
B  Innovation
C  Worker’s Compensation
D  Cyber Risk
Learning Objectives

• State the difference between the roles of a rating agency and an insurance regulator
  – Rating agencies are focused on financial strength only
  – Regulators must also consider market conduct & insurance availability

• Identify the growing impact of technology on insurance
  – Insurers must focus on innovation to properly serve their customers
  – New risks emerging, such as cyber

• Understand how AM Best defines and incorporates innovation into the ratings process: What are the two areas AM Best considers in evaluating innovation?
  – Inputs
  – Outputs
Learning Objectives

• State a potential impact of regulation on innovation
  – Restrict innovation due to inconsistent regulation or data protection regulations
  – Promote innovation within specific states through principle based regulation

• Identify key emerging issues the insurance industry is facing
  – Cannabis
  – Wildfire
  – Cyber
  – ESG
  – Innovation
Thank you