2020 VIRTUAL ANNUAL MEETING & EXHIBIT

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Session 7D: Underwriting Hot Topics: Trial by Jury

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Active participation in the Society of Actuaries is an important aspect of membership. While the positive contributions of professional societies and associations are well-recognized and encouraged, association activities are vulnerable to close antitrust scrutiny. By their very nature, associations bring together industry competitors and other market participants.

The United States antitrust laws aim to protect consumers by preserving the free economy and prohibiting anti-competitive business practices; they promote competition. There are both state and federal antitrust laws, although state antitrust laws closely follow federal law. The Sherman Act, is the primary U.S. antitrust law pertaining to association activities. The Sherman Act prohibits every contract, combination or conspiracy that places an unreasonable restraint on trade. There are, however, some activities that are illegal under all circumstances, such as price fixing, market allocation and collusive bidding.

There is no safe harbor under the antitrust law for professional association activities. Therefore, association meeting participants should refrain from discussing any activity that could potentially be construed as having an anti-competitive effect. Discussions relating to product or service pricing, market allocations, membership restrictions, product standardization or other conditions on trade could arguably be perceived as a restraint on trade and may expose the SOA and its members to antitrust enforcement procedures.

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- **Do not** discuss prices for services or products or anything else that might affect prices
- **Do not** discuss what you or other entities plan to do in a particular geographic or product markets or with particular customers.
- **Do not** speak on behalf of the SOA or any of its committees unless specifically authorized to do so.
- **Do leave** a meeting where any anticompetitive pricing or market allocation discussion occurs.
- **Do alert** SOA staff and/or legal counsel to any concerning discussions
- **Do consult** with legal counsel before raising any matter or making a statement that may involve competitively sensitive information.

Adherence to these guidelines involves not only avoidance of antitrust violations, but avoidance of behavior which might be so construed. These guidelines only provide an overview of prohibited activities. SOA legal counsel reviews meeting agenda and materials as deemed appropriate and any discussion that departs from the formal agenda should be scrutinized carefully. Antitrust compliance is everyone’s responsibility; however, please seek legal counsel if you have any questions or concerns.
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Introduction

• Trial By Jury
  • 3 statements
  • 1 Judge, 1 Prosecutor, 1 Defender
  • 14 mins per trial
  • Audience act as the jury

• Polling
• Questions
Statement 1

“By 2030 over 80% of life insurance underwriting decisions will be fully automated, without human involvement”
Prosecution: Sandeep

- Customers are demanding a better experience...akin to Amazon Insurance
  - Even testing for BMI, vitals and heart can be done instantly via video today
  - Competition for key segments will drive up the customer experience

- Industry cannot afford the cycle time and underwriting review times
  - EHR information is growing more complete everyday
  - Unstructured information is more easily analyzable today
  - New variables, readily available, are predictive of mortality

10 million policies, about 50% STP, insurers already expect 60% STP today based on an RGA survey.

Can we STP 60% (3/5 million) manually underwritten policies in 10 years?

80% is conservative

Last Decade: No iPhone, No Apps, No Uber, Netflix was DVDs, No Big Data!

We need to stop extrapolating from the past: autonomous cars vs drones
Defense: Jason

• Current state of automation:
  • Significant steps have been taken in automating more routine underwriting e.g. simplified issue products
  • Fully underwritten business is still mostly manually underwritten – around 80% of cases.

• Technology is impressive but still in its infancy
  • Rules-based solutions have limited capabilities for complex, multi-variate decision making. AI is needed to handle the complexity but requires massive amounts of data:
    • As an example, look at self-driving cars. The collect 40 terabytes every 8 hours, yet the timeline for mainstream use is now 10+ years

• Underwriting will change but human involvement will continue
  • Rules and AI solutions will be used increasingly to guide the human underwriter
Verdict (Audience Poll)

• Do you agree with the following statement?

“By 2030 over 80% of life insurance underwriting decisions will be fully automated, without human involvement”

• YES
• NO
Statement 2

“Increasing regulation and privacy concerns will reduce the use of predictive models for life insurance”
Prosecution: Nichole

- Work on **predictive models for life insurance** is not new topic. This has been a topic of discussion for least a decade.

- However, public discomfort is at **an all time high**
- The “**CREEP”** factor makes support for our customer base difficult to obtain
- Even the use of simple forms of data and historical applicant information are under attack

- The regulators are making their opinions known, widespread use of **predictive models is not long for the life insurance world**.

  Carriers and reinsurers are cautious, even if the “use” of predictive models is allowed, if they guidelines are too stringent and the consequences too risky, **they simply won’t implement them**.
Defense: Sandeep

- GDPR, CPRA, 187 Privacy Proposals before congress, Antitrust cases against Google, Facebook is all real.
- New predictive variables being added today bring no privacy concerns
  - Property ownership, location, licensure, lab history, criminal history, etc.
  - Future is “zero party” data (courtesy: Forrester)
- Wearables will start offering permissioned access to data
  - Apple Health App, Distributed Ledgers are maturing to get consented data from consumer
  - Modeling capability with Cloud, GPUs, and Libraries keeps increasing rapidly
    - Larger sets of variables and more sophisticated algorithms
    - Easier to test for bias/discrimination and correct for it in model validation
  - Companies that cannot assess risk well, will experience higher mortality

Predictive models will continue to be used more than ever before as a matter of survival, with “zero party” data or with proxies for such data.
Verdict (Audience Poll)

• Do you agree with the following statement?

  “Increasing regulation and privacy concerns will reduce the use of predictive models for life insurance”

• YES
• NO
Statement 3

“Electronic Health records will generate too much unstructured data and increase complexity of the underwriting process”
Prosecution: Jason

• Electronic Health Records will be transformative to the underwriting process in terms of reducing cycle time for collecting evidence

• However, they present challenges for underwriting:
  • Whilst reports are electronic, most data is unstructured. It’s like getting a 300-page APS on every case!
  • Information, collected in a format intended for clinical use rather than underwriter use
  • Large amount of duplication, across multiple sources e.g. EHR, Prescription histories, MIB, Tele-interview, Application

• Over time this situation will improve, yes?
  • Technologies will help but the issue of unstructured data will be around for some time. As an example look at UK
    • Even under the National Health Service there are multiple standards for healthcare data.
    • Electronic health records have been around for decades and have actually reduced underwriter productivity
Defense: Nichole

- Electronic Health Records will be transformative to the underwriting process. Full Stop!!!
- Underwriters have faced this issue before:
  - Prescription histories are now prolific in the underwriting process, but we didn’t start out knowing how to use them
  - Clinical formats are something we can work with, because there is a lot of structure in what we receive
  - Health care is solving the problem for us, in many instances
  - Solutions exist to solve for duplicative and redundant information

- EHR is still in its infancy
  - We are still learning how to work with the data
  - We have the tools
  - We are getting better every day

The Pro’s far outweigh the Con’s
EHR has a bright future!
Verdict (Audience Poll)

Do you agree with the following statement?

“Electronic Health records will generate too much unstructured data and increase complexity of the underwriting process”

• YES
• NO
Conclusion