Long-Term Care (LTC) Credibility Monograph Work Group

Update to NAIC LTC Actuarial Working Group

August 25, 2016

Warren Jones, MAAA, FSA, FCA
Agenda

- Review Purpose of monograph
- Summary of monograph
Purpose of Monograph

- To increase the awareness of the application of credibility procedures to LTCI-related work and the importance of applying them to that work;

- To provide information on current practice, relevant publications, and underlying theory that an actuary could reference to inform the application of credibility procedures to LTCI-related work;
Purpose of Monograph (cont.)

- To outline considerations for deciding on and applying credibility procedures to LTCI actuarial work, as well as presenting results; and

- To suggest next steps for advancing actuarial practice in this regard.
Summary of Monograph

Outline

- **Section I** provides background on the issue of credibility in LTCI
- **Section II** discusses misestimation and volatility risks
- **Section III** summarizes the history of credibility theory
- **Section IV** summarizes key considerations
- **Section V** discusses the potential impacts of using credibility procedures
- **Section VI** outlines next steps
Summary of Monograph (cont.)

Section I - Background

- Relevant ASOPs for LTCI credibility
- Relevant stakeholder perspectives
Section II - Misestimation and Volatility Risks

- Credibility and misestimation/volatility
- LTCI projection assumptions
  - Morbidity – incidence, continuance, utilization
  - Mortality – active, disabled
  - Lapse
  - Investment yield
Section II - Misestimation and Volatility Risks

- Application and impacts
  - Determination of original pricing
  - Determination of rate increases
  - Valuation projections
  - Appraisal of a business
  - Surplus capital
Section III – Credibility Theory

- History of credibility theory
- Credibility methods
  - Full credibility
  - Partial credibility
    - Limited fluctuation credibility
    - Greatest accuracy credibility
    - Application to LTCI
Section III – Credibility Theory

- Challenges and limitations
- Why credibility procedures are useful
Summary of Monograph (cont.)

Section IV – Key Considerations in the Selection of Credibility Procedures for LTCI

- Professional and regulatory sources
- Purpose and application
- Subject experience
- Related experience
- Full and partial credibility
- The Application of credibility theory to LTCI
Section V – Potential Impacts of Using Credibility Procedures

- Sensitivity testing
- Multi-scenario deterministic testing
- Stochastic testing
Summary of Monograph (cont.)

Section VI – Next Steps

- Developing a comprehensive summary of credibility theory with direct applicability to LTCI-related actuarial work

- Performing research in which differing credibility procedures, methods, and assumptions are tested on actual blocks of historical data
Summary of Monograph (cont.)

Appendix

- Relevant documentation
- Relevant ASOPs
David N. Linn
Health Policy Analyst
American Academy of Actuaries
1850 M St., NW (Suite 300)
Washington, DC 20036
202-223-8196
linn@actuary.org