

# General Insurance Track Reading Materials

## Introduction to General Insurance Exam

- The Institutes CPCU publications covering the following topics:
- Overview of Insurance Operations
- Insurance Regulations
- Insurance Marketing and Distribution
- The Underwriting Function
- Underwriting Property and Liability Insurance
- Risk Control and Premium Auditing
- The Claim Function
- Adjusting Property and Liability Claims
- Reinsurance
- Personal Auto Policy
- Homeowners Coverage
- Commercial Property Insurance
- Commercial General Liability Insurance
- Commercial Auto Insurance
- Workers Compensation and Employers Liability Insurance
- Specialty Coverages

## Ratemaking and Reserving Exam

SOA textbook (including the 2019 Supplement), by J. Friedland, *Fundamentals of General Insurance Actuarial Analysis*, covering the following ratemaking and reserving topics:

- Projecting Ultimate Claims
- Financial Reporting
- Trending
- Ratemaking
- Monitoring Results

## ASB ASOP 25, Credibility Procedures

Understanding the nature and application of catastrophe models using the American Academy of Actuaries paper, "Uses of Catastrophe Model Output."

## Financial and Regulatory Exam – U.S.

There are five major topics covered in this exam: financial reporting, financial health measurement, responsibilities of the actuary, regulatory environment for insurance and tort law/insurance law with respect to its impact on the general insurance industry.

Financial reporting topics are covered in a number of resources including:

- SOA textbook, *General Insurance Financial Reporting Topics* (including chapters on introductory accounting, accounting under different standards, NAIC Annual Statement pages and schedules, federal income taxes)
- NAIC Annual Statement Blank, Property Casualty
- Excerpts from NAIC, *Accounting Practices and Procedures Manual* (including Preamble and SSAPs 5R, 9, 53, 55, 62R, 63, 65 and 66)
- Brehm and Ruhm's Variance paper, "Risk Transfer Testing of Reinsurance Contracts,"
- Teng and Perkins' CAS Proceedings paper, "Estimating the Premium Asset on Retrospectively Rated Policies"

Financial health measurement topics are covered in a number of resources including:

- SOA textbook, *General Insurance Financial Reporting Topics* (including chapters on measuring financial strength with financial ratios, solvency monitoring and financial ratings)
- NAIC White Paper on, "The U.S. National State-Based System of Insurance Regulation and the Solvency Modernization Initiative"
- NAIC ORSA Guidance Manual
- Vaughan's Networks Financial Institute at Indiana State University Policy Brief, "The Implications of Solvency II for U.S. Insurance Regulation"

Topics regarding responsibilities of the actuary are covered in a number of resources including:

- SOA textbook, *General Insurance Financial Reporting Topics* (chapters Overview of the General Insurance Statement of Actuarial Opinion)
- Relevant ASB ASOPs (1, 20, 21, 23, 36, 38, 41, 43)
- IAA ISAP 1
- AAA COPLFR Public Policy Practice Note, "Statements of Actuarial Opinion on Property and Casualty Loss Reserves"
- AAA Task Force on Materiality Discussion Paper, "Materiality, Concepts on Professionalism"
- IAA paper, "The Function of the Actuary in Prudential Supervision"
- Topics on the regulatory environment for insurance are covered in a number of resources including:
- The Institutes textbook, *Insurance Regulation*
- SOA Study Note, "Captive Insurance"
- SOA Study Note, "Government Provision of General Insurance" covering multiple lines of business for a number of countries
- SOA Study Note, "Usage Based Insurance and Telematics"
- Vaughan's Journal of Insurance Regulation paper, "The Economic Crisis and Lessons from (and for) U.S. Insurance Regulation"
- Insurance Bureau of Canada document, "Code of Conduct for Insurers' use of Credit Information (CODE)"
- Canadian Council of Insurance Regulators paper, "Use of Credit Scores by Insurers"
- Edmunds' UK Parliament briefing paper, "Insurance and the discrimination laws: motor and travel insurance"
- AAA Public Policy Monograph, "The National Flood Insurance Program: Challenges and Solutions"
- Facility Association of Canada Position Paper, "Considerations for Residual Market Regulation"
- Excerpts from the Mayer Brown publication, "Understanding the New Financial Reform Legislation: The Dodd-Frank Wall Street Reform and Consumer Protection Act"

Topics on tort law and insurance law with respect to its impact on the general insurance industry are covered in a number of resources including:

- The Institutes Custom Publishing textbook, prepared for the SOA, "Excerpts from Business Law for Insurance Professionals" (including chapters on Contract Law: Insurance Applications, Tort Law and The International Legal Environment)
- SOA Study Note, "Tort Law – Topics for General Insurance Actuaries"

Advanced Topics in General Insurance Exam

Stochastic reserving is covered in the following resources:

- Mack's CAS Forum paper, "Measuring the Variability of Chain Ladder Reserve Estimates"

- Venter's CAS Proceedings paper, "Testing the Assumptions of Age-to-Age Factors"
- Clark's CAS Forum paper "LDF Curve Fitting and Stochastic Reserving: A Maximum Likelihood Approach"
- Risk margins for unpaid claims is covered in the Institute of Actuaries of Australia paper, "A Framework for Assessing Risk Margins," by Marshall, Collings, Hodson, and O'Dowd "
- Understanding the ratemaking with excess and retrospective policies using Lee's CAS Proceedings paper "The Mathematics of Excess of Loss Coverages and Retrospective Rating—A Graphical Approach"
- Reinsurance pricing is covered in Clark's actuarial study note, "Basics of Reinsurance Pricing"
- Methodologies for determining an underwriting profit margin is covered in the following CAS Proceedings papers:
  - D'Arcy and Dyer's, "Ratemaking: A Financial Economics Approach"
  - Mango's, "An Application of Game Theory: Property Catastrophe Risk Load"

Topics for the General Insurance extension of the ERM exam are covered in a number of resources including:

- S&P "Enterprise Risk Management Criteria" (Paragraphs 74-81)
- Study Note, "Strategic Risk Management in Insurance: Navigating the Rough Waters Ahead"
- Study Note, "P&C RAROC: A Catalyst for the Improved Capital Management in the Property and Casualty Insurance Industry"
- Study note, "Natural Catastrophe Loss Modeling"
- Study note, "Allocation of Capital in the Insurance Industry"
- Study Note, "Risk Appetite for a General Insurance Undertaking"
- Study Note, "Catastrophe Modeling: Guidance for Non-Catastrophe Modelers"
- Study Note, "Stochastic Modeling of Catastrophe Risks in DFA Models"
- Study Note, "U.S. Property-Casualty: Underwriting Cycle Modeling and Risk Benchmarks (92-103)"
- Study Note, "The U.S. Casualty Market in 2018: Our Top 10 List"
- Study Note, "Property/Casualty Insurance Company Insolvencies"
- Study Note, "2018 Insurance Industry Outlook"
- Study Note, "Why Insurers Fail"
- Study Note, "Top 10 Trends in Property and Casualty Insurance, 2018"
- Study Note, "Insurance, Climate and Sustainable Development"
- Monograph, "ERM for Property-Casualty Insurance Companies," Section 2
- SOA Monograph, "Human Dynamics of Insurance Cycles and Implications for Insurers"
- CIA Research paper, "Quantification of Variability in P&C Liabilities"

#### Financial Economics Module

Bodie, Kane, and Marcus textbook, *Investments* (including *Student Solutions Manual to Accompany Investments by Bodie, Kane and Marcus*)

Several papers on asset-liability management are required

- Feldblum, S. "Asset Liability Matching for Property/Casualty Insurers"
- International Association of Insurance Supervisors. "Standard on Asset-Liability Management"
- International Association of Insurance Supervisors. "Issues Paper on Asset-Liability Management"
- Norris, P. "Asset/Liability Management Strategies for Property & Casualty Companies"
- Panning, W. "Managing Interest Rate Risk: ALM, Franchise Value, and Strategy"

Numerous optional readings including the following textbooks:

- Berk and Demarzo, *Corporate Finance*
- Brealey, Myers and Franklin, *Principles of Corporate Finance*
- Copeland, Weston and Kuldeep, *Financial Theory and Corporate Policy*

- Hull, *Options, Futures and Other Derivatives*
- McDonald, *Derivatives Markets*

#### Applications of Statistical Techniques Module

- De Jong and Heller textbook *Generalized Linear Models for Insurance Data*  
Additional readings (some optional, some required) include:
- Smyth, G., and B. Jorgensen. "Fitting Tweedie's Compound Poisson Model to Insurance Claims Data: Dispersion Modelling"
- Yan, J., J. Guszcz, M. Flynn, and C.-S. P. Wu. "Applications of the Offset in Property- Casualty Predictive Modeling"
- Klinker, F. "Generalized Linear Mixed Models for Ratemaking: A Means of Introducing Credibility into a Generalized Linear Model Setting"
- CAS Working Party on Quantifying Variability in Reserve Estimates. "The Analysis and Estimation of Loss & ALAE Variability: A Summary Report"
- England, P., and R. Verrall. "Stochastic Claims Reserving in General Insurance"
- General Insurance Reserving Oversight (GIRO) Working Party. "Best Estimates and Reserving Uncertainty"
- Meyers, G., and P. Shi. "The Retrospective Testing of Stochastic Loss Reserve Models"
- Verrall, R. "Obtaining Predictive Distributions for Reserves Which Incorporate Expert Opinion"

#### Enterprise Risk Management Module

There is no textbook for this module. There are numerous links to articles.