Curriculum Vitae

Name: Leigh Joseph Halliwell

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Education: B.S., Marietta College, Marietta, OH. Double major in Mathematics and Phys-

ics, Magna Cum Laude. Phi Beta Kappa

M.A. and M.Div., Westminster Theological Seminary, Philadelphia, PA

M.A. in Religion, Claremont Graduate School, Claremont, CA. Passed quali-

fying examinations for a Ph.D. in New Testament studies

Professional Fellow of the Casualty Actuarial Society (FCAS)

Designations: Member of the American Academy of Actuaries (MAAA)

Professional Activities and CAS examination committee, 1998–1999 Committee of the Theory of Risk, 1998–2005

Awards: Joint Program Committee for the CLRS, 2005–2007

Committee on Reinsurance Research, 2008 to present Frequent presenter at CAS continuing-education seminars

Michelbacher Prize, 1995

Woodward-Fondiller Prize, 1997

Actuarial
Employment and
Experience:

National Council on Compensation Insurance, Boca Raton, FL, 1988–1993. Aggregate ratemaking, experience and retrospective rating, historic and prospective profitability, internal rate-of-return and cost-of-capital modelling.

Chief Actuary, Louisiana Workers' Compensation Corporation, Baton Rouge, LA, 1993–1995. Ratemaking, reserving, deductible and retro plans, reinsurance pricing, and asset/liability matching

Regional Actuary of Latin America, Zurich Insurance Group, Mexico City, 1995–1997. Ratemaking, reserving, and financial reporting to Zurich home office. Auto and earthquake ratemaking for Mexico. Due diligence review for a Venezuelan acquisition

Consultant, Milliman & Robertson, Inc., West Paterson, NJ, 1997–1998. Concentrated on dynamic financial analysis

Munich-American Re-Insurance Company, 1998–2003. Vice President, Actuarial Research and Development, in Princeton, NJ, for first two years. Last three years spent in Munich, pricing and underwriting financial reinsurance

Consultant, EPIC Consulting, LLC, Chattanooga, TN, 2003–2004

Consultant, L. J. Halliwell, LLC, Chattanooga, TN, October 2004 to present

Publications:

"The NCCI Internal Rate of Return and Cost of Capital Models," co-authored with William Kahley, *NCCI Digest*, December 1992

"Mean-Variance Analysis and the Diversification of Risk," *Incorporating Risk Factors in Dynamic Financial Analysis* (CAS 1995 Discussion Paper Program)

"Statistical and Financial Aspects of Self-Insurance Funding," *Alternative Markets/Self Insurance* (CAS 1996 Discussion Paper Program)

"Loss Prediction by Generalized Least Squares," *Proceedings of the Casualty Actuarial Society* (1996)

"Conjoint Prediction of Paid and Incurred Losses," CAS Forum (Summer 1997)

"Statistical Models and Credibility," CAS Forum (Winter 1998)

"Insights into Present Value and Duration," *CAS Forum* (Spring 1999)

"ROE, Utility, and the Pricing of Risk," *CAS Forum* (Reinsurance Call Papers, Spring 1999)

"Author's Response to Discussions of 'Loss Prediction by Generalized Least Squares' *PCAS LXXXIII*," *Proceedings of the Casualty Actuarial Society* (1999)

"A Critique of Risk-Adjusted Discounting," 2001 ASTIN Colloquium, http://www.casact.org/coneduc/reinsure/astin/2000/ halliwell1.doc

"The Valuation of Stochastic Cash Flows," *CAS Forum* (Reinsurance Call Papers, Spring 2003)

"Valuing Stochastic Cash Flows: A Thought Experiment," *CAS Forum* (Winter 2004)

"Testing the Significance of Class Refinement," *Applying and Evaluating Generalized Linear Models* (CAS 2004 Discussion Paper Program)

"Financial Reinsurance," *Encyclopedia of Actuarial Science*, Volume 2, 714-716, John Wiley & Sons, Ltd, Chichester, 2004

"Chain-Ladder Bias: Its Reason and Meaning," Variance, 1:2, 2007, 214-247

"Modeling Paid and Incurred Losses Together, *CAS E-Forum*, Spring 2009, www.casact.org/pubs/forum/09spforum/05Halliwell.pdf

"Mixing Collective Risk Models," CAS E-Forum, Fall 2009, 1-12

"Whose Guess is Best?" Contingencies, May/Jun 2010, 56-57

- "Conditional Probability and the Collective Risk Model," CAS *E-Forum*, Spring 2011, www.casact.org/pubs/forum/11spforum/Halliwell.pdf
- "The Conditional Validity of Risk-Adjusted Discounting," CAS *E-Forum*, Spring 2011, casact.org/pubs/forum/11spforum/Halliwell_Addl_Paper.pdf
- "Probability and the 80-20 Rule," *Contingencies*, Nov/Dec 2012, 64-66, www.contingenciesonline.com/contingenciesonline/20121112#pg67
- "The Mathematics of Excess Losses," *Variance*, 6:1, 2012, 32-47, <u>www.variancejournal.org/issues/06-01/32.pdf</u>
- "Classifying the Tails of Loss Distributions," CAS *E-Forum*, Spring 2013, Volume 2, www.casact.org/pubs/forum/13spforumv2/Haliwell.pdf
- "The Discrete Fourier Transform and Cyclical Overflow," *Variance*, 8:1, 2014, 73-79, www.variancejournal.org/issues/08-01/73.pdf
- "The Lognormal Random Multivariate," CAS *E-Forum*, Spring 2015, www.casact.org/pubs/forum/15spforum/Halliwell.pdf
- "Complex Random Variables," CAS *E-Form*, Fall 2015, www.casact.org/pubs/forum/15fforum/Halliwell_Complex.pdf
- "The Gauss-Markov Theorem: Beyond the BLUE," CAS *E-Form*, Fall 2015, www.casact.org/pubs/forum/15fforum/Halliwell_GM.pdf