

Daniel Bauer

Curriculum Vitae

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ACADEMIC POSITIONS

02/2008 – present Assistant Professor (TT) of Risk Management and Insurance, J. Mack Robinson College of Business, Georgia State University
08/2007 – 01/2008 Visiting Lecturer of Risk Management and Insurance, J. Mack Robinson College of Business, Georgia State University
09/2002 – 05/2003 Teaching Assistant, Department of Mathematics and Statistics, San Diego State University
09/2000 – 02/2007 Grading Assistant, Faculty of Mathematics and Economics, Ulm University

HIGHER EDUCATION

06/2005 – 11/2007 Doctoral studies in Mathematics, DFG Research Training Group 1100, Faculty of Mathematics and Economics, Ulm University
Degree: Dr. rer. nat., Summa cum Laude
Thesis: “*Stochastic Mortality Modeling and Securitization of Mortality Risk*”
10/1999 – 06/2005 Studies in Economic Mathematics, Faculty of Mathematics and Economics, Ulm University
Degree: Dipl. Math. oec., Summa cum Laude, GPA: 1.0
Thesis: “*Modellierung und Risikoneutrale Bewertung eines Deutschen Lebensversicherungsvertrages*”
09/2002 – 09/2003 Graduate studies in Statistics, Department of Mathematics and Statistics, San Diego State University
Degree: MS Statistics, GPA: 3.86
Thesis: “*Asymptotic Behavior of the Quality of a Partial Hedge in a Complete Brownian Stock Market: The Case when the Partial Hedge is Close to the Perfect one*”

PROFESSIONAL EXPERIENCE (relevant, post high school)

09/2003 – 08/2007 Assistant Consultant with the Institute for Finance and Actuarial Science (ifa), Ulm, Germany (actuarial and financial consulting)
03/2002 – 04/2002 Intern with BodeGrabnerBeye AG & Co. KG (now BodeHewitt AG & Co. KG), Munich, Germany (actuarial consulting)
07/1999 – 09/1999 Intern with the DaimlerChrysler Sales Organization, Berlin, Germany

GRANTS, AWARDS & SCHOLARSHIPS

09/2009	International Association of Actuaries (IAA) Life Section Prize 2009 for “A Universal Pricing Framework for Guaranteed Minimum Benefits in Variable Annuities” (with A. Kling and J. Russ)
11/2008	SCOR Actuarial Prize Germany (1 st Prize) for the dissertation “Stochastic Mortality Modeling and Securitization of Mortality Risk”
07/2008	Dissertation Award from the Ulm University Society for the best Mathematics dissertation in 2007/2008
05/2006	Junior GAUSS-Award of the German Actuarial Society (DAV) and the German Society for Actuarial and Financial Mathematics (DGVM) for “Ein allgemeines Modell zur Analyse und Bewertung von Guaranteed Minimum Benefits in Fondspolizen” (with A. Kling and J. Russ)
04/2005 – 08/2007	German Research Society (DFG) Scholarship for doctoral studies
09/2002 – 09/2003	Fulbright Scholarship for studying abroad (travel grant)

PUBLICATIONS

Monographs

1. “Stochastic Mortality Modeling and Securitization of Mortality Risk”, (2008). ifa-Verlag, Ulm (Germany).

Journal articles

1. “On the Pricing of Longevity-Linked Securities”, (2009) with M. Boerger and J. Russ (a former version entitled “Pricing Longevity Bonds Using Implied Survival Probabilities”). To appear in *Insurance: Mathematics and Economics* (Special Issue Longevity Four).
2. “A Universal Pricing Framework for Guaranteed Minimum Benefits in Variable Annuities”, (2008) with A. Kling and J. Russ. *ASTIN Bulletin* 38: 621 – 651.
3. “Assessing Investment and Longevity Risks within Immediate Annuities”, (2008) with F. Weber. *Asia-Pacific Journal of Risk and Insurance* 3 (Special Issue Longevity Three): 90 – 112.
4. “The Volatility of Mortality”, (2008) with M. Boerger, J. Russ, and H.-J. Zwiesler. *Asia-Pacific Journal of Risk and Insurance* 3 (Special Issue Longevity Three): 184 – 211.
5. “Risk-Neutral Valuation of Participating Life Insurance Contracts in a Stochastic Interest Rate Environment”, (2008) with K. Zaglauer. *Insurance: Mathematics and Economics* 43: 29 – 40.
6. “Ein allgemeines Modell zur Analyse und Bewertung von Guaranteed Minimum Benefits in Fondspolizen“, (2007) with A. Kling and J. Russ. *DGVFM Blaetter* 28: 259 – 290.
7. “Risk-neutral valuation of participating life insurance contracts”, (2006) with R. Kiesel, A. Kling, and J. Russ. *Insurance: Mathematics and Economics* 39: 171 – 183.

Submitted articles

1. “On the risk-neutral valuation of life insurance contracts with numerical methods in view”, (2008) with D. Bergmann and R. Kiesel,
2. “Comment on the Paper ‘Assessing the Risk Potential of Premium Payment Options in Participating Life Insurance Contracts’ by N. Gatzert and H. Schmeiser”, (2008) with R. Phillips and A. Speight.

Working Papers

1. “Risk and Valuation of Mortality Contingent Catastrophe Bonds”, (2007) with F. Kramer.
2. “Solvency II and nested simulations – a least squares Monte Carlo approach”, (2008) with D. Bergmann and A. Reuss.
3. “Modeling the Forward Surface of Mortality”, (2008) with F.E. Benth and R. Kiesel (An earlier version of the paper was entitled “An Arbitrage-Free Family of Longevity Bonds”).

PRESENTATIONS (selection)

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| 05/2009 | CMA workshop on Insurance mathematics and longevity risk, Centre of Mathematics for Applications, University of Oslo (invited speaker): “Solvency II and nested simulations – a least squares Monte Carlo approach”. |
| 12/2008 | 11th Symposium on Finance, Banking, and Insurance, Technical University Karlsruhe, Germany. “A Universal Pricing Framework for Guaranteed Minimum Benefits in Variable Annuities”. |
| 12/2008 | Economic Risk Seminar, Humboldt Universität Berlin, Germany. “Some Ideas on Solvency II”. |
| 07/2008 | Seminar, Ulm University, Ulm, Germany. “Some Ideas on Solvency II”. |
| 07/2008 | ISBIS-2008 International Symposium on Business and Industrial Statistics, Prague, Czech Republic (session organizer). Modeling the Forward Surface of Mortality. |
| 02/2008 | Workshop on Prospective Mortality Tables, Longevity and Mortality Linked Securities, AXA, Paris, France (invited speaker): “Risk and Valuation of Mortality Contingent Catastrophe Bonds”. |
| 03/2007 | Second annual meeting of the Research Training Group 1100, Reisenburg Guenzburg, Germany: “Forward Mortality Models: Consistency Problems” |
| 02/2007 | Workshop Scientific Computing in Finance and Insurance, Research Association Scientific Computing Baden Wuerttemberg: “Computationally Intensive Problems from Life Insurance” (translated title) |
| 01/2007 | Seminar, Robinson College of Business, Georgia State University, Atlanta, GA: “Mortality Derivatives with a Focus on Longevity Risk” |
| 08/2006 | American Risk and Insurance Association (ARIA) 2006 Annual Meeting, Washington, DC: “Pricing Longevity Bonds using Implied Survival Probabilities” |
| 08/2006 | 10 th Conference of the Asia-Pacific Risk and Insurance Association (APRIA), Meiji University, Tokyo, Japan: “Risk-Neutral Valuation of Participating Life Insurance Contracts” and “Pricing Longevity Bonds using Implied Survival Probabilities” (two presentations) |
| 05/2006 | International Symposium on Insurance and Finance, Norwegian School of Economics and Finance (NHH), Bergen, Norway: “Risk-Neutral Valuation of Participating Life Insurance Contracts” |
| 04/2006 | Seminar, Katie School of Insurance and Financial Services, Illinois State University, Normal, IL: “Pricing Longevity Bonds using Implied Survival Probabilities” |
| 04/2006 | Mathematical Seminar, Department of Mathematics and Statistics, San Diego State University, San Diego, CA: “Risk-Neutral Valuation of Participating Life Insurance Contracts” |
| 02/2006 | First annual meeting of the Research Training Group 1100, Reisenburg Guenzburg, Germany: “Pricing Longevity Bonds using Implied Survival Probabilities” |

09/2005 15th International AFIR Colloquium, ETH Zurich, Zurich, Switzerland: “Risk-Neutral valuation of With-Profits Life Insurance Contracts”

MEMBERSHIPS & SERVICE ACTIVITIES

- Junior member of the German Society for Actuarial and Financial Mathematics (DGVMF)
- Passed all preliminary exams of the German Society of Actuaries (DAV) (for the final exam three years of practical experience are necessary)
- Referee for the *Asia-Pacific Journal of Risk and Insurance*, *ASTIN Bulletin*, *Belgian Actuarial Bulletin*, *Insurance: Mathematics and Economics*, *the Journal of Banking and Finance* and *the Journal of Risk and Insurance*
- Referee for the 2007 and the 2008 Annual Meeting of the Asia-Pacific Risk and Insurance Association (APRIA) and the 2009 Meeting of the European Finance Association (EFA)
- Referee for the 2009 GAUSS-Award of the German Actuarial Society (DAV) and the German Society for Actuarial and Financial Mathematics (DGVMF)