"A Model for the Market for Life Insurance and Annuities using
Adverse Selection, Risk Aversion and Health: A Dynamic Game of Imperfect Information"

Born, Patricia H., Montesinos-Yufa, Hugo M., Sirmans, E. Tice
March 2017

Asymmetric information is common in all types of insurance contracts. The insured has hidden information that precludes the insurers' ability to price policies based on risk levels. Adverse selection is the tendency for high risks to purchase greater amounts of insurance.[1] A common prediction of adverse selection models in insurance markets is that individuals reveal risk levels based on coverage choices. When presented with a menu of options, high risk individuals tend to choose greater coverage.[2] For instance, high risk individuals tend to choose lower deductibles. Through their deductible choice, the insured is unintendedly signaling information regarding his or her risk type. In life insurance markets, the true health condition of the insured is known by the individual but unobserved by the firm. In this paper, we use the selection to life insurance or annuity products as an unintended signal revealing truthful information regarding the insured's health type. We then analyze the incentives of the insured and insurer to model both the demand and supply sides of the market. We use a dynamic game of incomplete information where asymmetric information is a function of the insured's health status.

The paper contributes to the literature in several ways. First, where prior literature has mainly focused on the demand side, we attempt to incorporate the incentives of the insurer to sell

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[1] Cummins, J. D., Smith, B. D., Vance, R. N., & Vanderhel, J. L. (Eds.). (2013). *Risk classification in life insurance* (Vol. 1). Springer Science & Business Media

[2] Chiappori, P. A., & Salanie, B. (2000). Testing for asymmetric information in insurance markets. *Journal of political Economy*, *108*(1), 56-78.; Cohen, A. (2005). Asymmetric information and learning: Evidence from the automobile insurance market. *Review of Economics and statistics*, *87*(2), 197-207.; Browne, M. J. (1992). Evidence of adverse selection in the individual health insurance market. *Journal of Risk and Insurance*, 13-33; Browne, M. J., & Doerpinghaus, H. I. (1993). Information asymmetries and adverse selection in the market for individual medical expense insurance. *Journal of Risk and Insurance*, 300-312.

annuities to unhealthy individuals and life insurance to healthy ones. Second, we use the selection to either life insurance or annuity products as an unintended signal revealing true health information of the insured's population. Since the selection is an individual choice rather than a strategy to purchase a given product, the mechanism captures, on average, the insured's true type. Third, since the selection follows conflicting incentives, we develop a model to predict the types of new individuals based on observable characteristics and the types[3] of similar individuals. Finally, we use the predictive equation with individual data to test, on average, the pricing implications of the game theoretical model described above.

To briefly expand on the proposed model, we include a discussion of the incentives of the players under consideration. From the demand side, truly healthy insureds should want to annuitize because they expect to live longer. However, truly unhealthy insureds should want to purchase life insurance (and not annuitize) because they expect to die sooner.[4] Conversely, from the supply side, insurers want to sell more annuities to the unhealthy individuals to minimize long term payments to annuitants, and they want to sell more life policies to healthy insureds to maximize the collection of premiums. The following pricing implications are derived from this model. If the fraction of truly healthy individuals who purchase annuities, $\lambda_{Ann}$, is relatively high, say $\lambda_{Ann} = 0.9$, then we expect the price of annuities to be relatively large because the insurer needs to compensate for the relatively large "adverse" selection. If the fraction of truly healthy individuals who purchase life insurance policies, $\lambda_{Life}$, is relatively low, say $\lambda_{Life} = 0.1$ (implying large adverse selection in the life insurance market), then we would also expect the price of life insurance to be relatively high since the firm will compensate for losses due to adverse selection.

[3] Healthy, or those who only purchase annuities and unhealthy, or those who only purchase life insurance.
[4] Or at least truly unhealthy individuals might not expect to live as long as truly healthy ones.

Alfred P. Sloan Foundation
National Bureau of Economic Research
Budget Proposal
March 2017
Hugo M. Montesinos-Yufa
Eleanor T. Sirmans

Please see below for the proposed budget for the project titled "A Model for the Market for Life Insurance and Annuities using Adverse Selection, Risk Aversion and Health: A Dynamic Game of Imperfect Information" by Hugo M. Montesinos-Yufa, Eleanor Tice Sirmans and Dr. Patricia H. Born. We have outlined expenses as seen below. Hugo and Eleanor expect to travel to Atlanta to collect data from the Census Bureau Research Data Center. Additionally, we plan to utilize a research assistant in the data collection process.

| National Bureau of Economic Research<br>NBER Household Finance Working Group Small Grants Call for Proposals<br>2017 | | |
|---|---|---|
| **Purpose** | **Recipient** | **Proposed Amount** |
| Travel to 2018 Meeting | Hugo M. Montesinos-Yufa | $2,500 |
| Travel to 2018 Meeting | Eleanor T Sirmans | $2,500 |
| Travel to Atlanta RDC | Hugo M. Montesinos-Yufa | $1,000 |
| Travel to Atlanta RDC | Eleanor T Sirmans | $1,000 |
| Research Assistant | TBD | $3,000 |
| Total | | $10,000 |

# Hugo M. Montesinos-Yufa March 2017


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Stavros Center
Florida State University
250 South Woodward Avenue
Tallahassee, FL 32306

Home Address
253 Hayden Rd. Apt 253
Tallahassee, FL 32304
Phone: (850) 408-4465
E-mail: hugomoises@gmail.com


## Education

**Ph.D. in Economics** Currently Third-Year ABD
Florida State University
Department of Economics
Major Area: Economics
Support Areas: Finance and Econometrics
Dissertation Title:
*On Geography, Institutions and Human Capital and Economic Development*

**Ph.D. in Engineering** 2013
Universidad Simon Bolivar
Major Area: Engineering
Concentration: Statistics

**Master of Science** 2005
Universidad Simon Bolivar
Major Area: Statistics

**Bachelor of Science** 2004
Universidad Simon Bolivar
Major Area: Production Engineering

## Experience

2014–present Research Assistant/Teaching Assistant, Florida State University (FSU)
2010–present Professor, Instituto de Estudios Superiores de Administracion (IESA) – Center of Finance
2008–2013 Director, Center of Statistics and Applied Mathematics (CESMa)
2006–2014 Professor, Universidad Simon Bolivar (USB)
2004–2005 Research Assistant/Teaching Assistant, Universidad Simon Bolivar (USB)

## Research Interests

Annuities, Development Economics, Econometrics, Financial Economics, Insurance Economics

## Publications

### Published Research

"The Critical Role of Economic Freedom in Venezuela's Predicament" (with H. Faria). In James Gwartney, Robert Lawson, and Joshua Hall, *Economic Freedom of the World: 2016 Annual Report* (Fraser Institute). 2016, 213–235.

"Unbundling the roles of human capital and institutions in economic development" (with H. Faria, D. Morales, and C. Navarro). *European Journal of Political Economy.* 2016.

"Admission criteria for MBA programs: A review" (with S. Dakduk, J. Malav, L. Michelena, and C. Torres). *SAGE Open.* 2016, Vol 6 (4). Available online:
http://journals.sagepub.com/doi/abs/10.1177/2158244016669395

"Autologous tumor lysate/Bacillus CalmetteGurin immunotherapy as an adjuvant to conventional breast cancer therapy" (with J. Convit, H. Oviedo, G. Romero, B. Maccarone, E. Essenfeld, A.F. Convit, and L. E. Palacios). *Clinical and Translational Oncology.* 2015, Vol 17(11), 884-887.

"Should the modernization hypothesis survive Acemoglu, Johnson, Robinson and Yared? Some more evidence" (with H. Faria, and D. Morales. *Econ Journal Watch.* 2014. Vol 11(1), 17-36.

"Does Corruption Cause Encumbered Business Regulations? An IV Approach" (with C. Aviles, H. Faria, and D. Morales. *Applied Economics.* 2013, 45:1, 65-83.

"Can Capitalism Restrain Public Perceived Corruption? Some Evidence" (with H. Faria, D. Morales and N. Pineda). *Journal of Institutional Economics.* 2012, Vol 8(4), 511-535.

"Does Economic Freedom Cause Prosperity? An IV approach" (with H. Faria). *Public Choice.* 2009, 141: 103-127.

"Estimating Venezuelas Latent Inflation" (with J. Bencomo, H. Faria, and J.R. Rondon. *International Business and Economics Research Journal.*2008, Vol 7(4).

"Time Series Stochastic Properties of Growth Miracles and Growth Disasters" (with R. Avila, H. Faria, and D. Morales). *International Business and Economics Research Journal.* 2006, Vol 5(11).

### Research in Progress

Papers Under Review

"The Inter-Related Effects of the Financial Sector and Annuitization: A State-Aggregate Approach" (with Patricia H. Born and E. Tice Sirmans).
Under review at *The Geneva Papers on Risk and Insurance.*

"Is the Effect of Income on Democracy Heterogeneous?" (with H. Faria).
Under review at *The European Journal of Political Economy.*

Working Papers

"Evidence on the Primacy of Economic versus Political Institutions for Economic Development" (with D. Bennet, H. Faria, J. Gwartney, D. Morales and C. Navarro).

"Default options and transaction costs on the voluntary provision of public goods" (with Hanna Hoover).

"The Managed Care Option: Does Utilization Management Affect Firm Performance?" (with Patricia H. Born and E. Tice Sirmans).

"The Financial Performance of Health Insurers Pre- and Post-Affordable Care Act" (with Joshua D. Frederick and E. Tice Sirmans).

Works in Progress

"A fully robust and generalized test for heterogeneity and autocorrelation using matrix norms."

"An assessment of indexes composed of several indicators in reducing measurement error. Bootstrapping evidence."

"The effects of the Affordable Care Act on insurers behavior" (with Cassandra Cole).

"Time varying effects of geography and institutions on economic development" (with James Gwartney).

"Unveiling the channel of genetic diversity" (with Hugo Faria).

"Economic institutions versus culture for economic development" (with Daniel Bennett, Hugo J. Fara, and Carlos E. Navarro).

"Political retaliation in Venezuela. Evidence from nightlight satellite images and election outcomes" (with Robert Mark Isaac, Shawn Kantor, and Karl Kitchens).

"Understanding the role of demographic changes in growth and the interest rates" (with James Gwartney).

"An empirical investigation of Insurance Fraud in Florida" (with Patricia H. Born, and E. Tice Sirmans).

"Modeling the Market for Life Insurance and Annuities using Adverse Selection, Risk Aversion and Health: A Dynamic Game of Imperfect Information" (with Patrica H. Born and E. Tice Sirmans).

## Presentations at Meetings of Academic Societies

Public Choice Society Meeting
Association of Private Enterprise Education
Southern Economics Association
World Interdisciplinary Network for Institutional Research
Western Risk and Insurance Association
American Risk and Insurance Association
The International Environmetrics Society
Clute Institute International Applied Business Research
Encuentro Binacional Colombia Venezuela de Estadistica
Seminarios del CESMa y Coloquios del Dpt. de Computo Cientifico y Estadistica
Jornadas de Aplicaciones Matematicas y Seminarios de Investigacion del IESA

## Awards and Honors

**Scholarship** Institute of Human Studies 2016–2017.

**Fellowship** Department of Economics Florida State University 2014–present.

**Award for Outstanding Academic Performance 2013–2014** IESA 2015.

**Best Paper Award** in the *International Business and Economics Research* 2007 Annual Congress. "Does Economic Freedom Cause Prosperity? An IV Approach"

**Best Paper Award** in the *International Business and Economics Research* 2005 Annual Congress. "Time Series Stochastic Properties of Growth Miracles and Growth Disasters"

**Honors Thesis** 2005 "Purcashing Power Parity, Cointegrated or Not?"

**Cum laude** Distinction in Production Engineering Degree, USB 2004. Undergraduate Dissertation "Venezuelan Manufacturing Sector, An Economic Approach"

**Special State Award** to outstanding overall performance: "Premio a la Excelencia del joven aragueno"

## Teaching Experience

**Florida State University**. Tallahassee, FL
**Universidad Simon Bolivar**. Caracas, Venezuela
**Instituto de Estudios Superiores de Administracion**. Caracas, Venezuela

| **Instructor** | Current |
|---|---|
| ECO 3431: Analysis of Economic Data | 1 section |
| Statistics for Managers (Master of Business Administration) | 6 sections |
| Quantitative Methods (Master of Finance) | 2 sections |
| Ethics, Probability and Statistics Module Chartered Financial Analyst Program | 1 section |

| | |
|---|---|
| Bayesian Statistical Modeling | 1 section |
| Stochastic Methods for Pattern Recognition and Classification | 1 section |
| Econometrics | 2 sections |
| Statistical Inference I | 2 sections |
| Statistical Inference II | 2 sections |
| Statistical Process Control | 1 section |
| Statistics, Quality and Productivity | 1 section |
| Statistics for Mathematicians | 2 sections |
| Statistics for Engineers | 10 sections |
| Probability for Engineers | 10 sections |

**Teaching Assistant** Current

| | |
|---|---|
| ECS 5015: Economic Development: Theory and Practice | 1 section |
| ECO 2023: Principles of Microeconomics | 1 section |
| ECO 2013: Principles of Macroeconomics | 1 section |
| Scientific Computing with MATLAB | 1 section |
| Statistics for Engineers | 1 section |
| Statistics for Mathematicians | 1 section |
| Statistics for Engineers | 1 section |
| Probability for Engineers | 1 section |

## Referee Service

*Journal of Entrepreneurship and Public Policy*

## Professional Activities

Assistant Editor in Training. *Risk Management and Insurance Review (RMIR)*. Current
Coordinator of Admissions Universidad Simon Bolivar. 2012.
Advisory Committee for Technical Cooperation and Social Development Universidad Simon Bolivar. 2011–2013
Advisory Committee for Production Engineering Program Universidad Simon Bolivar. 2009–2014.
Director of the Center for Statistics and Applied Mathematics (CESMa) Universidad Simon Bolivar. 2008–2013.
Advisory Committee for Graduate Programs Statistics Universidad Simon Bolivar. 2010–2014.
Officer Public Relations of Latin American Matters University of Chicago. 2005–2006.

## Student Advisory (as Major Professor)

Ana Beatriz Monteverde, Laura Davalillo, Veruska Rojas, Roberto Branger, Velentina Sojo, Karina Quijada, Mariana Alvarez, Andrea Viacaba, Alexander Silva, Carla Milles, Ricardo Matute, Karen Garrido, Christina Greeves, Andrea Carnevali, Victor Soto, Viviana Vallenilla, Gabriela Tuetti, Richard Martinez.

# E. Tice Sirmans March 2017

Office Address
College of Business
Florida State University
821 Academic Way
Tallahassee, FL 32306

Home Address
9389 Settler Ave.
Tallahassee, FL 32309
Phone: (801) 558-5129
E-mail: tsirmans@fsu.edu

## Education

**Ph.D. in Business Administration** Currently ABD
Florida State University, Tallahassee, FL
Department of Risk Management/Insurance, Real Estate and Legal Studies
Major Area: Risk Management and Insurance
Support Areas: Finance and Economics
Dissertation Title:
*Information Asymmetries and Policyholder Satisfaction in the U.S. Health Insurance Market*

**Bachelor of Science** May 2001
University of Utah, Salt Lake City, UT
Major Area: Economics
Support Area: Sociology

## Research Interests

Annuities, Health Insurance Markets, Insurance Economics, Insurance Regulation

## Publications

### Research in Progress

Papers Under Review

Born, Patricia H., Montesinos-Yufa, Hugo M., Sirmans, E. Tice, "The Inter-Related Effects of the Financial Sector and Annuitization: A State-Aggregate Approach"
Under review at *The Geneva Papers on Risk and Insurance*

McCullough, Kathleen M., Sirmans, E. Tice "A Comparison of the Risk Management and Own Risk and Solvency Assessment (ORSA) Model Act and Insurer Credit Ratings"
Revise and Resubmit at the *Journal of Insurance Regulation*

Working Papers

Baggett, Courtney B., Cole, Cassandra A., Sirmans, E. Tice "The Impact of the Patient Protection and Affordable Care Act (PPACA) on Insurer Performance in the Workers' Compensation Marketplace"

Bisco, Jill A., McCullough, Kathleen A., Sirmans, E. Tice "Loss Reserves and the Employment Status of the Appointed Actuary: Evidence from the United States"

Born, Patricia H., Montesinos-Yufa, Hugo M., Sirmans, E. Tice "The Managed Care Option: Does Utilization Management Affect Firm Performance?"

Born, Patricia H., Sirmans, E. Tice, Steinorth, Petra "Consumer Satisfaction and Financial Performance in the U.S. Health Insurance Market"

Frederick, Joshua D., Montesinos-Yufa, Hugo M., Sirmans, E. Tice "The Financial Performance of Health Insurers Pre- and Post-Affordable Care Act"

Sirmans, E. Tice., "The Effects of Subsidization on the U.S. Health Insurance Market: Are Employer-Sponsored Plans Driving the High Costs of Healthcare?"

Works in Progress

Born, Patricia H., Montesinos-Yufa, Hugo M., Sirmans, E. Tice "Insurance Fraud in Florida: A Cost-Benefit Analysis"

Born, Patricia H., Sirmans, E. Tice "The Patient Protection and Affordable Care Act (PPACA) and Medicaid/Medicare: An analysis of the quality of patient care"

Born, Patricia H., Montesinos-Yufa, Hugo M., Sirmans, E. Tice "On the Market for Life Insurance and Annuities using Adverse Selection, Risk Aversion and Wealth Thresholds"

## Presentations

May 2015 "The Inter-Related Effects of the Financial Sector and Annuitization: A State-Aggregated Approach"
**Florida State University/University of Georgia Research Symposium**, Athens, GA

November 2015 "Loss Reserves and the Employment Status of the Appointed Actuary: Evidence from the United States"
**Southern Risk and Insurance Association**, New Orleans, LA

November 2015 "The Value of the Managed Care Option"
**Southern Risk and Insurance Association**, New Orleans, LA

November 2015 "The Inter-Related Effects of the Financial Sector and Annuitization: A State-Aggregate Approach"
**Southern Economics Association**, New Orleans, LA

May 2016 "The Impact of the Patient Protection and Affordable Care Act (PPACA) on the Workers' Compensation Marketplace"
**Florida State University/University of Georgia Research Symposium**, Athens, GA

November 2016 "The Impact of the Patient Protection and Affordable Care Act (PPACA) on Insurer Performance in the Workers' Compensation Marketplace"
**Southern Risk and Insurance Association, Savannah, GA**

January 2017 "The Impact of the Patient Protection and Affordable Care Act (PPACA) on Insurer Performance in the Workers' Compensation Marketplace"
**Western Risk and Insurance Association, Santa Barbara, CA**

## Discussant Talks

August 2016 "The Impact of the Affordable Care Act on the Financial Performance of Health Insurers"
Browne, Mark and Lei, Yu
**American Risk and Insurance** Annual Meeting; Cambridge, MA

## Teaching Experience

Florida State University, Tallahassee, FL

| | |
|---|---|
| **Instructor** | Current |
| RMI 3011: Introduction to Risk Management and Insurance | 3 sections |
| **Teaching Assistant** | Current |
| RMI 2302: Risk in Business and Society | 8 sections |
| RMI 3011: Introduction to Risk Management and Insurance | 3 sections |
| RMI 4115: Life/Health Products: A Financial Planning Perspective | 2 sections |
| RMI 4292: Property and Casualty Insurer Operations | 1 section |
| RMI 5017: Introduction to Risk Management and Insurance (Graduate level) | 2 sections |
| RMI 5810: Personal Financial Planning (Graduate level) | 2 sections |
| RMI 5935: Alternative Risk Finance (Graduate level) | 1 section |
| LAW 6080: Insurance Law | 1 section |

## Referee Service

*Journal of Insurance Regulation*
*Journal of Insurance Issues*
*Journal of Risk Education*

## Professional Activities

Assistant Editor *Risk Management and Insurance Review (RMIR)* Spring 2015 - current
FSU College of Business Graduate Admissions Appeals Committee Fall 2015 - current

## Honors and Awards

Member of Florida State University Chapter of Beta Gamma Sigma
Recipient of 2015 Eggers Scholarship
Recipient of 2014 Waters Scholarship
Recipient of 2013 Hold Scholarship

## Affiliations

American Risk and Insurance Association, Member since 2013
Risk and Insurance Management Society, Member since 2013
Southern Risk and Insurance Association, Member since 2013
Southern Economics Association, Member since 2015
Western Risk and Insurance Association, Member since 2016

# Curriculum Vitae

# Patricia H. Born

August 23, 2016

## General Information


University address: Risk Management & Insurance, Real Estate and Legal Studies
College of Business
821 Academic Way
Florida State University
Tallahassee, Florida 32306-1110
Phone: (850) 644-7884; Fax: (850) 644-4077

E-mail address: pborn@cob.fsu.edu

Web site: http://cob.fsu.edu


## Professional Preparation

1994 Ph.D., Duke University, Durham, NC. Major: Economics. Supervisor: W. Kip Viscusi.

Born, P. H. (1994). *Essays on Insurance Regulation and Performance*. Unpublished doctoral dissertation, Duke University, Durham, NC.

1991 M.A., Duke University, Durham, NC. Major: Economics.

1986 B.A., University of Michigan, Ann Arbor, MI. Major: Economics. Supervisor: Gary Solon. With High Honors.

Hagen, P. (1986). *Labor Demand Elasticities in U.S. Manufacturing*. Unpublished bachelor's thesis, University of Michigan, Ann Arbor, MI.

## Professional Credential(s)

2009–present Certified Long Term Care Ombudsman, Florida Department of Elder Affairs.

2008–present Licensed Life/Health/Annuities Producer, State of Florida.

2007–2008 Licensed Life/Health Producer, State of California September 2008.

**Professional Experience**

| | |
|---|---|
| 2014–present | Courtesy Professor, College of Law, Florida State University College of Law. |
| 2011–present | Professor, Eminent Scholar, and Doctoral Program Director, Risk Management/Insurance, Real Estate and Legal Studies Department, College of Business, Florida State University. Responsible for teaching courses in undergraduate and graduate risk management curriculum. |
| 2008–2011 | Associate Professor, Risk Management/Insurance, Real Estate and Legal Studies Department, College of Business, Florida State University. Responsible for teaching courses in undergraduate and graduate risk management curriculum. |
| 2005–2008 | Associate Professor, Finance Department, Real Estate and Insurance, California State University, Northridge. Responsible for teaching undergraduate courses in the financial services curriculum. |
| 2001–2005 | Assistant Professor, Finance Department, Real Estate and Insurance, California State University, Northridge. Responsible for teaching undergraduate courses in the financial services curriculum. |
| 1997–2001 | Assistant Professor, Finance Department, Insurance, Real Estate and Health Systems, University of Connecticut. Responsible for teaching undergraduate courses in the financial services curriculum; responsible for teaching undergraduate and graduate courses in the health systems management curriculum. |
| 1994–1997 | Research Economist, Center for Health Policy Research, American Medical Association. Responsible for analysis and reporting of health policy information within the organization; analysis of health care reform bills. |
| 1995–1996 | Adjunct Professor, Economics Department, DePaul University. Responsible for teaching courses in the evening part-time MBA curriculum. |
| 1987–1989 | Telecommunications Manager, State of Michigan, Legislative Service Bureau. Responsible for management of PBX telephone system for all state legislators and court of appeals. |
| 1985–1987 | Instructor/Consultant, Computer Trade Development Corporation (now National Tech Team). Responsible for teaching courses in computer programming and development of client database solutions, preparation of RFPs for computer training services. |

## Language Proficiency

German - intermediate in speaking; rudimentary in reading and writing.
Mandarin - intermediate in speaking; rudimentary in reading and writing.
Spanish - intermediate in speaking, reading, and writing.

## Visiting Professorship(s)

| | |
|---|---|
| 2015 | Visiting Lecturer, Ludwig-Maximilians Universitat, Munich. |
| 2014 | Visiting Lecturer, Ludwig-Maximilians Universitat, Munich. |
| 2013 | Visiting Lecturer, Fudan University, Shanghai, PRC. |
| 2013 | VIsiting Lecturer, Ludwig-Maximilians Universitat, Munich. |
| 2012 | Visiting Lecturer, Ludwig Maximilians Universitat, Munich. |
| 2011 | Visiting Lecturer, Fudan University, Shanghai, PRC. |
| 2011 | Visiting Lecturer, Ludwig Maximilians Universitat, Munich. |
| 2009 | Visiting Lecturer, Ludwig Maximilians Universitat, Munich. |
| 2009 | Visiting Lecturer, Shanghai Normal University, Shanghai, PRC. |
| 2007 | Visiting Lecturer, Shanghai Normal University, Shanghai, PRC. |
| 1997 | Visiting Lecturer, NOVA Southeastern University, Orlando, FL. |

## Honors, Awards, and Prizes

Donald Hardigree Best Paper Award - Journal of Insurance Issues, Western Risk and Insurance Association (2005).
Doctoral Dissertation Award in Insurance, State Farm Foundation (1993).

## Current Membership in Professional Organizations

American Risk and Insurance Association
Asia-Pacific Risk and Insurance Association
Deutscher Verein für Versicherungswissenschaft (German Association for Insurance Science)
Financial Management Association
Risk and Insurance Management Society

Southern Economic Association
Southern Risk and Insurance Association
Western Risk and Insurance Association

## Teaching

### Courses Taught

Fundamentals of Risk Management - MBA cohort (RMI5017)
Life and Health Insurance Products (RMI4115)
Catastrophe Risk Management (RMI4905)
Personal Financial Planning (RMI5810)
Statistical Inference in Law (LAW7930)
Life and Health Insurance Products (RMI4115)
Doctoral Seminar in Life and Health Insurance (RMI6195)
Fundamentals of Risk Management - MSRMI cohort (RMI5017)
Fundamentals of Risk Management (RMI5011)
International Insurance Markets
Principles of Risk and Insurance (RMI3011)
RMI for the Travel/Tourism Industry
Commercial Risk Management
Financial Planning
Gateway Experience
Principles of Corporate Finance
Employee Benefits
Health Care Finance
Business Conditions
Money and Financial Systems

### New Course Development

Catastrophe Risk Management Seminar (2013)
Gateway Experience (2003)

### Doctoral Committee Cochair

Karl, J. B., graduate. (2013).
Boor, J. A., graduate. (2012).
Klimaszewski-Blettner, B., graduate. (2010). *Essays on Catastrophe Insurance.*

**Doctoral Committee Member**

Pooser, D., graduate. (2012).
Fier, S., graduate. (2011).
Zawacki, A., graduate. (2002).
Ritsatos, T., graduate. (1999).

**Doctoral Committee University Representative**

Dua, N., graduate. (2011).
Crisp, A. M., doctoral candidate.
Raphael, A., doctoral candidate.

**Supervision of Student Research Not Related to Thesis or Dissertation**

Dasgupta, C. (Aug 2015–present).

Meyr, S. (Jun 2013–present).

Aseervatham, V. (May 2013–Nov 2014).

## Research and Original Creative Work

### Publications

**Invited Journal Articles**

Born, P. H., & Richter, A. (2010). Reforming Insurance Regulation: Where do we Start? *Journal of Insurance Regulation, 29*, 29-46.

**Refereed Journal Articles**

Born, P., Karl, J. B., & Viscusi, W. K. (submitted). The Net Effects of Medical Malpractice Tort Reform: The Texas Experience. *Southern Economic Journal*. Manuscript submitted for publication, 35 pages.

Born, P., Lange, R., & Schiller, J. (submitted). Medicaid Managed Care and the Market for Private Health Insurance. *Health Economics, Policy, and Law*. Manuscript submitted for publication, 39 pages.

Karl, J. B., Born, P., & Bass, C. (submitted). The Effect of Malpractice Liability Risk on Workers' Compensation Insurance Losses. *Benefits Quarterly*. Manuscript submitted for publication, 30 pages.

Born, P., Lin, H., Wang, C., & Wen, M. (submitted). Cash Flow Risk Management in the Insurance Industry: A Dynamic Factor Modeling Approach. *Insurance: Mathematics and Economics*. Manuscript submitted for publication, 35 pages.

Born, P., Meyr, S., & Tennyson, S. (submitted). Credible or Biased? An Analysis of Insurance Product Ratings in Germany. *Journal of Risk and Insurance*. Manuscript submitted for publication, 30 pages.

Aseervatham, V., Born, P., & Richter, A. (submitted). Demand Reactions in the Aftermath of Catastrophes and the Need for Behavioral Approaches. *Journal of Risk and Insurance*. Manuscript submitted for publication, 27 pages.

Born, P. H., Epermanis, K., & McCullough, K. (submitted). Does a Persistent Defense Strategy Pay Off? An Analysis of Insurance Company Defense Expenditures. *The Journal of Empirical Legal Studies*. Manuscript submitted for publication, 30 pages.

Aseervatham, V., Born, P., Lohmaier, D., & Richter, A. (in press). Putting Everything under the Same Umbrella – Hazard-specific Supply Reactions in the Aftermath of Natural Disasters. *Geneva Papers on Risk and Insurance*, 32 pages.

Born, P. (in press). The Influence of Tort Reform on Auto Liability Losses and Premiums. *Journal of Insurance Issues*, 28 pages.

Born, P. H., Karl, J. B., & McCullough, K. (in press). Commercial Insurers' Participation in Public Health Insurance Programs. *Journal of Insurance Regulation*, 36 pages.

Born, P., & Karl, J. B. (in press). The Effect of Tort Reform on Medical Malpractice Insurance Market Trends. *Journal of Empirical Legal Studies*, 40 pages.

Born, P., Karl, J. B., & Viscusi, W. K. (in press). The Relationship between the Markets for Health Insurance and Medical Malpractice Insurance. *Applied Economics*, 40 pages.

Born, P., & Klein, R. (in press). Best Practices for Regulating Property Insurance Markets in the U.S. *Journal of Insurance Regulation*, 49 pages.

Born, P., & Puelz, B. (in press). Are Preferences for Structured Settlements Consistent with the Loss-Minimization Objective of Tort Law? *Journal of Insurance Issues*, 32 pages.

Lee, I., Jung, H., & Born, P. (in press). Insurance Market Development and Income Inequality. *International Review of Financial Consumers*, 21 pages.

Born, P., Dumm, R., & Eger, R. (2015). Developing a Framework for Financial Achievability of Department of Transportation Research and Development Projects. *Transportation Research Record, 2480,* 16.

Bohnert, A., Born, P., & Gatzert, N. (2014). Dynamic Hybrid Products in Life Insurance: Assessing the Policyholders' Viewpoint. *Insurance: Mathematics and Economics, 59,* 87-99.

Neale, F., & Born, P. H. (2014). The Differential Effects of Non-Economic Damage Cap Levels on Medical Malpractice Insurers. *Risk Management and Insurance Review, 17,* 10.

Born, P. H., & Klimaszewski-Blettner, B. (2013). Should I Stay or Should I Go? The Impact of Natural Disasters and Regulation on U.S. Property Insurers' Supply Decisions. *Journal of Risk and Insurance, 80,* 1-36.

Berry-Stölze, T., & Born, P. H. (2011). Regulation, Competition and Cycles: Lessons from the Deregulation of the German Insurance Market. *Journal of Insurance Regulation*, 40.

Born, P. H. (2011). Periodic Payments Reform: Who Benefits? *Journal of Insurance Regulation, 30,* 197.

Born, P. H., & Boyer, M. M. (2011). Claims-Made and Reported Policies and Insurer Profitability in Medical Malpractice. *The Journal of Risk and Insurance, 78(1),* 139-162.

Born, P. H., Dumm, R., Grace, M., Medders, L., & Nyce, C. (2011). Mitigation, Money, and Residual Markets: Findings from a Symposium on Catastrophic Risk Management. *Journal of Insurance Regulation, 31,* 3-26.

Berry-Stölzle, T., & Born, P. H. (2010). The Effect of Regulation on Insurance Pricing: the Case of Germany. *Journal of Risk and Insurance, 29,* 105-140.

Born, P. H., Kleffner, A., & Chan, D. (2010). The Relationship between Automobile Liability Costs and Government Social Spending. *Assurances et gestion des risques / Insurance and Risk Management, 78(3-4),* 24.

Born, P. H., & Richter, A. (2010). Reforming Insurance Regulation: Where do we Start? *Journal of Insurance Regulation, 29,* 29-46.

Born, P. H., Boyer, M. M., & Barth, M. (2009). Risk Retention Groups in Medical Malpractice Insurance: A Test of the National Chartering Option. *Journal of Insurance Regulation, 27 (4),* 3-33.

Born, P. H., Karl, J. B., & McCullough, K. (2009). The Impact of Health Care Delivery Changes on Professional Liability. *PLUS Journal, 22,* 4-6.

Born, P. H., Lin, H. J., Wen, M., & Yang, C. C. (2009). The Dynamic Interactions between Risk Management, Capital Management, and Financial Management in the U.S. Property/Liability Insurance Industry. *Asia-Pacific Journal of Risk and Insurance, 4 (1),* 1-21.

Born, P. H., Viscusi, W. K., & Baker, T. (2009). The Effects of Tort Reform on Medical Malpractice Insurers' Ultimate Losses. *Journal of Risk and Insurance*, *76*, 197-219.

Born, P. H., & Santerre, R. E. (2008). Unraveling the Health Insurance Underwriting Cycle. *Journal of Insurance Regulation*, *26*, 65-84.

O'Connell, J., & Born, P. H. (2008). The Cost and Other Advantages of Early Offers Reform for Product Liability Claims. *Columbia Business Law Review*, *2008*, 423-528.

Born, P. H., & Martin, W. (2006). Catastrophe Modeling in the Classroom. *Risk Management and Insurance Review*, *9*, 219-229.

Born, P. H., & Viscusi, W. K. (2006). The Catastrophic Effects of Natural Disasters on Insurance Markets. *Journal of Risk and Uncertainty*, *33*, 55-72.

Born, P. H., & Zawacki, A. (2006). Manufacturing Firms' Decisions Regarding Retiree Health Insurance. *Benefits Quarterly*, *First Quarter 2006*, 34-44.

Floyd, S., Kramer, J., & Born, P. H. (2005). Institutional Forces in the Transfer of Managed Care Practices to Physicians. *Health Care Management Review*, *30*, 237-250.

Viscusi, W. K., & Born, P. H. (2005). Damages Caps, Insurability, and the Performance of Medical Malpractice Insurance. *Journal of Risk and Insurance*, *72*, 23-43.

Wen, M., & Born, P. H. (2005). Firm-Level Analysis of the Effects of Net Investment Income on Underwriting Cycles: An Application of Simultaneous Equations. *Journal of Insurance Issues*, *28*, 14-32.

Born, P. H., Giaccotto, C., & Ritsatos, T. (2004). The Wealth and Information Effects of Open-Market Stock Repurchase Announcements: Evidence from the Insurance Industry. *Risk Management and Insurance Review*, *7*, 25-40.

Born, P. H., & Query, J. T. (2004). Health Maintenance Organization (HMO) Performance and Consumer Complaints: An Empirical Study of Frustrating HMO Activities. *Hospital Topics*, *82*, 1-9.

Born, P. H. (2001). Insurer Profitability in Different Regulatory and Legal Environments. *Journal of Regulatory Economics*, *19*, 211-237.

Born, P. H., & Simon, C. J. (2001). Patients and Profits: The Relationship between Financial Performance and Quality of Care. *Health Affairs, 20*, 167-174.

Born, P. H., & Viscusi, W. K. (1999). The Performance of the 1980s California Insurance and Liability Reforms. *Risk Management and Insurance Review, 2*, 14-33.

Born, P. H., & Thran, S. L. (1998). The Influence of CLIA '88 on Physician Office Laboratories. *Journal of Family Practice, 46*, 319-327.

Born, P. H., & Viscusi, W. K. (1998). The Distribution of the Insurance Market Effects of Tort Liability Reforms. *Brookings Papers on Economic Activity: Microeconomics,* 55-105.

Born, P. H., & Geckler, C. (1996). HMO Quality and Financial Performance: Is there a Connection? *Journal of Health Care Finance, 24*, 65-77.

Born, P. H., & Simon, C. J. (1996). Changing Patterns in Physician Earnings: The Expanding Influence of Managed Care. *Journal of Clinical Outcomes Management, 3*, 41-47.

Born, P. H., & Simon, C. J. (1996). Physician Earnings in a Changing Managed Care Environment. *Health Affairs, 15*, 124-133.

Born, P. H., & Simon, C. J. (1996). Physician Earnings in a Changing Managed Care Environment. *Health Affairs, 15*, 124-133.

Viscusi, W. K., & Born, P. H. (1995). Medical Malpractice Insurance in the Wake of Liability Reform. *Journal of Legal Studies, 24*, 463-490.

Viscusi, W. K., & Born, P. H. (1995). The General Liability Reform Experiments and the Distribution of Insurance Market Outcomes. *Journal of Business and Economic Statistics, 13*, 183-188.

Born, P. H., & Viscusi, W. K. (1994). Insurance Market Responses to the 1980s Liability Reforms: An Analysis of Firm-Level Data. *Journal of Risk and Insurance, 61*, 192-218.

Viscusi, W. K., & Born, P. H. (1994). The National Implications of Liability Reforms for General Liability and Medical Malpractice Insurance. *Seton Hall Law Review, 24*, 1743-1766.

Viscusi, W. K., & Born, P. H. (1994). The Performance of the Liability Reform Experiments: New York and Colorado. *Journal of Products and Toxic Liability, 16*, 1-18.

Viscusi, W. K., Zeckhauser, R., Born, P. H., & Blackmon, G. (1993). The Effect of 1980s Tort Reform Legislation on General Liability and Medical Malpractice Insurance. *Journal of Risk and Uncertainty, 6*, 165-186.

**Invited Monographs**

Born, P., & Klein, R. (2015). *Best Practices for Regulating Property Insurance Premiums and Managing Natural Catastrophe Risk in the United State*. National Association of Mutual Insurance Companies.

Born, P., Dumm, R., & Clark, S. (2013). *GASB 45 and the Florida Public School System: Impact, Implications, and Possible Solutions to the Unfunded Liability Problem*. TIAA-CREF Research Institute: New York, NY. Retrieved from https://www.tiaa-crefinstitute.org/public/institute/research/dialogue/rd_106.html

**Refereed Book Chapters**

Born, P. H., & Klimaszweski-Blettner, B. (in press). Catastrophes and Performance in Property Insurance: A Comparison of Personal and Commercial Lines. In L. Powell (Ed.), *Insurance Choices: Competition and the Future of Property and Casualty Insurance Markets*. The Independent Institute.

Simon, C. J., White, W. D., Born, P., & Dranove, D. (1998). Managed Care and the Physician Marketplace. In M. A. Morrisey (Ed.), *Managed Care and Changing Health Care Markets*. AEI Press, Washington, D.C.

Born, P. H., Gentry, G., Viscusi, W. K., & Zeckhauser, R. (1995). Organizational Form and Insurance Market Performance. In D. Bradford (Ed.), *The Economics of Property-Casualty Insurance*. University of Chicago Press, Chicago, IL.

**Nonrefereed Journal Articles**

Born, P. H., & Berry-Stölzle, T. (2010). Comment on: Martin Eling and Michael Luhnen, "Versicherungszyklen in der deutschen KFZ-Versicherung". *Zeitschrift für die gesamte Versicherungswissenschaft, 95*, 507-516.

Born, P. H., & Thran, S. L. (1996). In-Office Laboratory Testing and the Clinical Laboratory Improvement Amendments of 1988. *Socioeconomic Characteristics of Medical Practice 1996, Chicago: American Medical Association*, 1.

**Nonrefereed Proceedings**

Born, P., Dumm, R., & Eger, R. (in press). Developing a Framework for Financial Achievability of Department of Transportation Research and Development Projects. In *Transportation Research Board-Research Advisory Committee Meeting*. TRB-RAC.

Born, P. H., & Boyer, M. M. (2008). Risk Retention Groups in Medical Malpractice: A Test of the Federal Chartering Option. In *Searle Center Symposium on Insurance Regulation*. Northwestern University Law School, Chicago, IL.

Born, P. H., & Query, J. T. (2003). Measures of HMO Performance: Complements or Substitutes?". In *Business & Health Administration Association annual meeting*. Chicago, IL.

**Nonrefereed Reviews**

Born, P. H. (2005). Review of The Rise and Fall of HMOs: An American Health Care Revolution, by J. G. Coombs. *The New England Journal of Medicine, 353,* 1868-1869.

Born, P. H. (2003). Review of Risk and Medical Decision Making, by L. Eeckhoudt. *Journal of Risk and Insurance, 71,* 174-177.

Born, P. H. (2003). Review of The Government of Risk: Understanding Risk Regulation Regimes, by C. Hood, H. Rothstein and R. Baldwin. *Journal of Risk and Insurance, 70,* 364-367.

Born, P. H. (2001). Review of Fundamentals of Financial Management: Concise, by E. Brigham and J. Houston. *Reviewed for Editor*.

Born, P. H. (1999). of Health Economics, by Peter Zweifel and Friedrich Breyer. *Journal of Risk and Insurance, 66,* 514-515.

Born, P. H. (1998). Review of Theory and Methods of Economic Evaluation of Health Care, by Magnus Johannesson. *Journal of Risk and Insurance, 65,* 181-182.

**Nonrefereed Reports**

Born, P. H. (2010). *The Importance of Being Capitalized*. American Consumer Institute - Consumer Gram.

Born, P. H. (2004). *Is SB899 Working? An Analysis of Workers Compensation Reform in California*. A. J. Gallagher.

Calvo, C., & Born, P. H. (2001). *Auto Insurance: A Study of Ratemaking in Connecticut.* National Conference of State Legislatures, Denver, CO.

### Nonrefereed Newsletter Articles

Born, P. H. (2008). Lessons Learned in Shanghai. *ARIA News, 13*, 2.

## Presentations

### Invited Papers at Conferences

Born, P. H., & Klimaszewski-Blettner, B. (presented 2009). *Property Insurance Market's Response to Catastrophic Events - A Comparison of Homeowners and Commercial Property Lines*. Paper presented at Invitational conference on Adaptation to Climate Change: the Role of Insurance, University of Innsbruck, Innsbruck, Austria. (International)

Born, P. H., & Klimaszewski-Blettner, B. (presented 2009). *Property Insurers' Responses to Catastrophic Events: A Comparison of Personal and Commercial Lines*. Paper presented at Annual meeting of the Risk Theory Society, Risk Theory Society, Austin, TX. (National)

Born, P. H., & Boyer, M. M. (presented 2008). *Risk Retention Groups in Medical Malpractice Insurance: A Test of the Federal Chartering Option*. Paper presented at Research Symposium on Insurance Markets and Regulation, Searle Center on Law, Regulation and Economic Growth, Northwestern University, Chicago, IL. (National)

Born, P. H., Viscusi, W. K., Gentry, W., & Zeckhauser, R. (presented 1994). *Determinants of the Organizational Form of Insurance Companies: Stocks vs. Mutuals*. Paper presented at invitational Franco-American Seminar on Uncertainty, Risk and Insurance, National Bureau of Economic Research, Inc., Ministry of Foreign Affairs, Boston, MA. (International)

### Refereed Papers at Symposia

Aseervatham, V., Born, P., & Richter, A. (presented 2012). Impact of Catastrophes on Insurance Markets - Disentangling Supply and Demand Effects. In *MRIC/CEAR Behavioral Insurance Workshop*. Symposium conducted at the meeting of MRIC/CEAR, Munich, Germany. (International)

**Invited Keynote and Plenary Presentations at Conferences**

Born, P. (presented 2016, July). *Interdisciplinary and International Cooperation in the Management of Catastrophic Risks*. Keynote presentation at 2016 China International Conference on Risk Management and Insurance, China Center for Insurance and Risk Management, Xi'an, China. (International)

Born, P. H., & Berry-Stoelzle, T. (presented 2007). *The Effect of Regulation on Underwriting Cycles: The Case of Germany*. Plenary presentation at Annual Meeting of the Deutscher Verein für Versicherungswissenschaft, Deutscher Verein für Versicherungswissenschaft, Stuttgart, Germany. (International)

Born, P. H. (presented 2005). *Solvency and Insurance Guarantee Funds*. Plenary presentation at Annual Meeting of the National Conference of Insurance Legislators, National Conference of Insurance Legislators, San Diego, CA. (National)

Born, P. H. (presented 2003). *Medical Malpractice Crisis – Considerations*. Plenary presentation at Annual Meeting of the National Conference of Insurance Legislators, National Conference of Insurance Legislators, Santa Fe, NM. (National)

**Invited Presentations at Conferences**

Born, P. (presented 2015, March). *Economic Outlook for the Long Term Care Insurance Industry*. Presentation at Annual Meeting, Intercompany Long Term Care Insurance Conference, Colorado Springs, CO. (National)

Born, P. H. (presented 2009). *Insurance Market Response to the Output of Catastrophic Models*. Presentation at Annual Meeting of the Society of Insurance Research, Society of Insurance Research, Orlando, FL. (National)

Born, P. H. (presented 2009). *Private Insurers' Successful Strategies for Managing Catastrophic Risks*. Presentation at After the Storm 2009, Competitive Enterprise Institute, New Orleans, LA. (National)

Born, P. H. (presented 2009). *Reform of Financial Services Regulation in the Wake of the American Financial Crisis*. Presentation at Seminar on American Financial Crisis and Sino-US Trade and Business Relationships, Sino-US Economic Association and Shanghai Normal University, Shanghai, PRC. (International)

Born, P. H. (presented 2007). *Catastrophes and Insurance Market Dynamics*. Presentation at Seminar on Future Development in Global Insurance Markets, Shanghai Normal University, Shanghai, PRC. (International)

Born, P. H. (presented 2007). *The Effects of the German Claim Reserving System on Insurer Financial Performance*. Presentation at Solvency Studies Series Seminar, University of Calgary, Haskayne School of Business, Calgary, Alberta, Canada. (International)

**Refereed Presentations at Conferences**

Born, P. (presented 2016, June). *The Value of the Managed Care Option*. Presentation at Insurance Risk Research Conference, Insurance Risk and Finance Research Centre, Singapore. (International)

Born, P., & Karl, J. B. (presented 2015, October). *Do Medical Malpractice Insurance and Health Care Market Conditions Justify Tort Liability Reforms?* Presentation at Conference on Empirical Legal Studies, Society for Empirical Legal Studies, St. Louis, MO. (National)

Born, P., & Karl, J. B. (presented 2015, August). *Do Medical Malpractice Insurance and Health Care Market Conditions Justify Tort Liability Reforms?* Presentation at Annual Meeting, World Risk and Insurance Economics Conference, Munich, Germany. (International)

Aseervatham, V., Born, P., Lohmaier, D., & Richter, A. (presented 2014). *Putting Everything under the Same Umbrella – How Do Insurance Markets React to Different Hazard Types?* Presentation at Deutscher Verein für Versicherung-wissenschaft, Jahrestagung, Deutscher Verein für Versicherung-wissenschaft, Stuttgart, Germany. (International)

Bohnert, A., Born, P., & Gatzert, N. (presented 2014). *Dynamic Hybrid Products in Life Insurance: Assessing the Policyholders' Viewpoint.* Presentation at Deutscher Verein für Versicherungwissenschaft, Jahrestagung, Deutscher Verein für Versicherungwissenschaft, Stuttgart, Germany. (International)

Born, P., Karl, J. B., & Viscusi, W. K. (presented 2014). *The Net Effects of Health and Medical Malpractice Reform*. Presentation at Western Risk and Insurance Association - Annual Meeting, Western Risk and Insurance Association, Napa, CA. (Regional)

Bohnert, A., Born, P., & Gatzert, N. (presented 2013, September). *Dynamic Hybrid Products in Life Insurance: Assessing the Policyholders' Viewpoint*. Presentation at European Group of Insurance Economists Annual Meeting, European Group of Insurance Economists, Paris, France. (International)

Born, P., & Karl, J. B. (presented 2013, August). *Risk Management in Health Insurance Plans: An Analysis of the Use of Capitation*. Presentation at American Risk and Insurance Association - Annual Meeting, American Risk and Insurance Association, Washington, D.C. (International)

Born, P., Lange, R., & Schiller, J. (presented 2013, August). *The Impact of Public Health Care on the U.S. Market for Private Health Insurance*. Presentation at American Risk and

Insurance Association Annual Meeting, American Risk and Insurance Association, Washington, D.C. (International)

Aseervatham, V., Born, P., & Richter, A. (presented 2013). *Demand Reactions in the Aftermath of Catastrophes and the Need for Behavioral Approaches*. Presentation at Deutscher Verein für Versicherungwissenschaft, Jahrestagung, Deutscher Verein für Versicherungwissenschaft, Berlin, Germany. (International)

Aseervatham, V., Born, P., & Richter, A. (presented 2013). *Demand Reactions in the Aftermath of Catastrophes and the Need for Behavioral Approaches*. Presentation at European Group of Insurance Economists Annual Meeting, European Group of Insurance Economists, Paris, France. (International)

Born, P. H., Karl, J. B., & Viscusi, W. K. (presented 2013). *On the Relationship Between the Markets for Health Insurance and Medical Malpractice Insurance*. Presentation at Risk Theory Society Annual Meeting, Risk Theory Society, Philadelphia, PA. (International)

Born, P. H., Aseervatham, V., & Richter, A. (presented 2012, September). *Insurers' Long-Run Profitability Growth After Catastrophes: Disentangling Supply and Demand Effects*. Presentation at CEAR/MRIC Behavioral Insurance Workshop, Munich Risk and Insurance Center, Munich, Germany. (International)

Born, P. H., Karl, J. B., & Viscusi, W. K. (presented 2012, August). *On the Relationship between the Markets for Health Insurance and Medical Malpractice Insurance*. Presentation at American Risk and Insurance Association - Annual Meeting, American Risk and Insurance Association, Minneapolis, MN. (International)

Born, P. H., & Dumm, R. (presented 2012, July). *Sources of Uncertainty in Catastrophe Models: a Case Study of Earthquake Impact on the California State University-Northridge Campus*. Presentation at Asia-Pacific Risk and Insurance Association - Annual Meeting, Asia-Pacific Risk and Insurance Association, Seoul, S. Korea. (International)

Born, P. H., Karl, J. B., & Viscusi, W. K. (presented 2012). *On the Relationship Between the Markets for Health Insurance and Medical Malpractice Insurance*. Presentation at Southern Economic Association - Annual Meeting, Southern Economic Association, New Orleans, LA. (Regional)

Born, P. H., Karl, J. B., & Viscusi, W. K. (presented 2012). *On the Relationship Between the Markets for Health Insurance and Medical Malpractice Insurance*. Presentation at Southern Economic Association - Annual Meeting, Southern Economic Association, New Orleans, LA. (Regional)

Born, P., Lange, R., & Schiller, J. (presented 2012). *Medicaid and the Market for Private Health Insurance*. Presentation at Deutscher Verein für Versicherungwissenschaft, Jahrestagung, Deutscher Verein für Versicherungwissenschaft, Hanover, Germany. (International)

Born, P. H., & Schriefer, P. (presented 2011, November). *Aggressive Advertising by Auto Insurers: An Analysis of the Risk and Returns*. Presentation at Southern Risk and Insurance Association - Annual Meeting, Southern Risk and Insurance Association, New Orleans, LA. (Regional)

Born, P. H. (presented 2011, August). *Periodic Payments Reform: Who Benefits?* Presentation at American Risk and Insurance Association - Annual Meeting, American Risk and Insurance Association, San Diego, CA. (International)

Born, P. H., Karl, J. B., & McCullough, K. (presented 2010). *The Influence of Managed Care Firms' Strategic Choices on Financial Performance*. Presentation at World Risk and Insurance Economics Congress, American Risk and Insurance Association, Singapore. (International)

Born, P. H., Karl, J. B., & McCullough, K. (presented 2010). *The Influence of Managed Care Firms' Strategic Choices on Financial Performance*. Presentation at China International Conference on Insurance and Risk Management, China Center for Insurance and Risk Management and Tsinghua University, Xining, PRC. (International)

Neale, F., & Born, P. H. (presented 2010). *The Differential Effects of Non-economic Damages Caps*. Presentation at World Risk and Insurance Economics Congress, American Risk and Insurance Association, Singapore. (International)

Born, P. H. (presented 2009). *Catastrophes and Performance in Property Insurance Markets: A Comparison of Personal and Commercial Lines*. Presentation at Annual Meeting of the Deutscher Verein für Versicherungswissenschaft, Deutscher Verein für Versicherungswissenschaft, Berlin, Germany. (International)

Born, P. H., & Kleffner, A. (presented 2008). *The Relationship between Liability Costs and Government Health and Welfare Spending*. Presentation at Annual Meeting of the Deutscher Verein für Versicherungswissenschaft, Deutscher Verein für Versicherungswissenschaft, Dresden, Germany. (International)

Born, P. H., & Kleffner, A. (presented 2008). *The Relationship between Liability Costs and Government Spending on Social Programs*. Presentation at Annual Meeting of the Asia Pacific Risk and Insurance Association, Asia Pacific Risk and Insurance Association, Sydney, Australia. (International)

Born, P. H., & Boyer, M. M. (presented 2007). *Claims-made and Reported Policies and Insurer Profitability in Medical Malpractice*. Presentation at Annual Meeting of the American Risk and Insurance Association, American Risk and Insurance Association, Quebec City, PQ, Canada. (National)

Born, P. H., & Berry-Stoelzle, T. (presented 2006). *Deregulation and Reserving in the German Property-Liability Insurance Industry*. Presentation at Annual Meeting of the American

Risk and Insurance Association, American Risk and Insurance Association, Washington, D.C. (National)

Born, P. H., Viscusi, W. K., & Baker, T. (presented 2005). *The Effects of Tort Reform on Medical Malpractice Insurers' Ultimate Losses*. Presentation at World Risk and Insurance Economic Congress, American Risk and Insurance Association, Salt Lake City, UT. (International)

**Nonrefereed Presentations at Conferences**

Born, P. H., Karl, J. B., & Viscusi, W. K. (presented 2012). *On the Relationship Between the Markets for Health Insurance and Medical Malpractice Insurance*. Presentation at Southern Risk and Insurance Association - Annual Meeting, Southern Risk and Insurance Association, Savannah, GA. (Regional)

Born, P. H. (presented 2009). *Effects of Natural Disasters on Insurance Availability: An Analysis of the Dynamics of the Florida Homeowners Insurance Market*. Presentation at Annual Meeting of the Southern Risk and Insurance Association, Southern Risk and Insurance Association, Orlando, FL. (Regional)

Born, P. H. (presented 2009). *Insurance Market Response to the Output of Catastrophe Models*. Presentation at Catastrophic Storm Risk Management Center Symposium, Florida State University, Tallahassee, FL. (Local)

Born, P. H., & Klimaszewski-Blettner, B. (presented 2009). *Catastrophes and Performance in Property Insurance Markets: A Comparison of Personal and Commercial Lines*. Presentation at Annual Meeting of the Western Risk and Insurance Association, Western Risk and Insurance Association, Las Vegas, NV. (Regional)

Born, P. H. (presented 2008). *Health Insurance Reform - Plenary Session*. Presentation at Annual Meeting of the American Risk and Insurance Association, American Risk and Insurance Association, Portland, OR. (National)

Born, P. H., & Kleffner, A. (presented 2008). *The Relationship between Liability Costs and Government Expenditure on Social Safety Net Programs*. Presentation at Annual Meeting of the Western Risk and Insurance Association, Western Risk and Insurance Association, Poipu Beach, Hawaii. (Regional)

Born, P. H., & Klimaszewski-Blettner, B. (presented 2008). *Catastrophes and Performance in Property Insurance Markets: A Comparison of Personal and Commercial Lines*. Presentation at Annual Meeting of the Southern Risk and Insurance Association, Southern Risk and Insurance Association, Bay St. Louis, MS. (Regional)

Berry-Stoelzle, T., & Born, P. H. (presented 2007). *The Effects of Regulation on Underwriting Cycles: The Case of Germany*. Presentation at Annual Meeting of the Western Risk and

Insurance Association, Western Risk and Insurance Association, San Diego, CA. (Regional)

Born, P. H. (presented 2006). *Do Risk Transfers Reduce Performance Volatility? Evidence from the Managed Care Industry*. Presentation at Annual Meeting of the Southern Risk and Insurance Association, Southern Risk and Insurance Association, Hilton Head, SC. (Regional)

### Nonrefereed Presentations at Symposia

Born, P., & Medders, L. (presented 2015, April). Managing Florida's Hurricane Risk: __Insurer and Consumer Responses to _Hurricanes. In *Symposium on Catastrophic Risks*. Presentation at the meeting of FSU/CSU-Fullerton. (National)

### Invited Workshops

Born, P. (accepted). *Searle Book Preview Roundtable on "To Sue is Human" by Black, Hyman, Paik, Silver and Page*. Workshop to be delivered at Searl Center on Law, Regulation, and Economic Growth, Northwestern University School of Law, Chicago, IL. (National)

## Contracts and Grants

### Contracts and Grants Funded

Born, P., Dumm, R., & Eger, R. (Jan 2013–May 2014). *Financial Achievability of Florida Department of Transportation Research Projects*. Funded by Florida Department of Transportation. (BDK83-977-24). Total award $150,000.

Born, P. H. (May 2009–Aug 2009). *Insurer Responses to Catastrophes: A Comparison of Homeowners and Commercial Property Markets*. Funded by Florida State University, Council on Research and Creativity (COFRS). Total award $14,000.

Born, P. H. (2007–2007). *The Marketing and Distribution of Life Insurance and Financial Services in China*. Funded by China Institute, California State University. Total award $2,000.

O'Connell, J., & Born, P. H. (2006–2007). *Analysis of Early Offers Reform of General Liability Claims*. Funded by Kauffman Foundation. Total award $54,000.

Wen, M., Lin, H. J., & Born, P. H. (2006–2007). *Application of Structural Equation Modeling on the Linkage of Risk Management, Capital Management, and Financial Management for the Insurance Industry*. Funded by Society of Actuaries, Research Projects in Risk Management. Total award $6,000.

Born, P. H. (1999–1999). *Who Decides What's Necessary? Medical Necessity and the Ethics of Managed Care*. Funded by Institute for Insurance Ethics, Illinois State University, Curricula and Cases in Insurance Ethics. Total award $1,000.

## Postdoctoral Supervision

Wang, H. (2014–present).

## Service

## Florida State University

### FSU University Service

Faculty Adviser, FSU Roller Hockey Team (2011–present).

Member, Graduate Policy Committee (2010–2015).

Member, Student Technology Fee Advisory Committee (2010–2013).

Member, Faculty Senate (2009–2013).

Committee member, GPC Subcommittee to evaluate Civil Engineering graduate programs (2012).

Committee member, GPC Subcommittee to evaluate Special Education graduate programs (2011).

Committee Member, GPC Subcommittee to evaluate the Law School (2009–2010).

Member, Faculty Advisory Board, Students for Healthcare Reform (2008–2010).

Ad-hoc Member, Academic Honor Policy Hearing (2008).

### FSU College Service

Member, International Exchanges Committee (2015–present).

Member, Promotion and Tenure Review Committee (2015–present).

Member, PhD Policy Committee (2010–present).

Member, Strategic Planning (2009–present).

**FSU Department Service**

Member, Curriculum Committee (2008–present).

**FSU Institute or Center Service**

Research Affiliate, Institute for Successful Longevity (2013–present).

Faculty Associate, FSU Center for Innovative Collaboration in Medicine & Law (2010–present).

Director, Center for Insurance Research (2009–present).

Faculty Associate, Florida Catastrophic Storm Risk Management (2009–present).

**FSU Program Service**

Risk Management/Insurance Department Assessment Coordinator, AACSB/SACS Reporting (2009–2010).

## The Profession

**Editor for Refereed Journals**

Co-Editor, *Risk Management and Insurance Review* (2015–present).

*Journal of Insurance Issues* (2005–2011).

**Editorial Board Membership(s)**

*Journal Assurances et Gestion des Risques* (2011–present).

*Journal of Insurance Issues* (2011–present).

*Risk Management and Insurance Review* (2003–2014).

**Guest Reviewer for Refereed Journals**

*The Economic Record* (2009–present).

*Journal of Economic Education* (2008–present).

*Journal of Banking and Finance* (2007–present).

*Journal of Insurance Regulation* (2003–present).

*Risk Management and Insurance Review* (2003–present).

*Eastern Economic Journal* (2000–present).

*Journal of Health Care Finance* (1998–present).

*Economic Inquiry* (1997–present).

*Health Services Research* (1997–present).

*Journal of Clinical Outcomes Management* (1997–present).

*Journal of the American Medical Association* (1997–present).

*New England Journal of Medicine* (1997–present).

*Financial Services Research* (1994–present).

*Journal of Law and Economics* (1994–present).

*Journal of Risk and Insurance* (1994–present).

*Journal of Risk and Uncertainty* (1994–present).

**Reviewer for Textbooks**

*Principles of Risk Management and Insurance* (2006–present).

*Personal Financial Planning* (2010–2011).

**Reviewer or Panelist for Grant Applications**

City University of New York – Baruch College (2008).

**Service to Professional Associations**

Board Member, Risk Theory Society (2016–present).

Member, Exploratory Committee on Accreditation of Insurance Programs (2015–present).

Associate, Munich Risk and Insurance Center (2010–present).

Board Member, American Risk and Insurance Association (2009–present).

Board Member, Asia-Pacific Risk and Insurance Association (2009–2013).

Member, Membership Committee, Asia-Pacific Risk and Insurance Association (2009–2013).

Board Member, Southern Risk and Insurance Association (2008–2013).

Chair, Early Career Achievement Award Committee, American Risk and Insurance Association (2009–2010).

Member, Editor Review Committee, American Risk and Insurance Association (2009).

Member, Hagen Family Foundation Travel Award Committee, American Risk and Insurance Association (2008–2009).

Member, Program Committee, American Risk and Insurance Association (2004–2009).

Chair, Excellence in Teaching Award Committee, American Risk and Insurance Association (2007–2008).

President, Western Risk and Insurance Association (2007–2008).

Board Member, Western Risk and Insurance Association (2003–2008).

Chair, Kulp-Wright Book Award Committee, American Risk and Insurance Association (2006–2007).

Board Member, RIMSTech Bulletin Advisory Board (2003–2007).

Board Member, Technology Advisory Council, Risk & Insurance Mgmt Society (2003–2007).

Member, Editor Search Committee, American Risk and Insurance Association (2005–2006).

Member, Nominations Committee, American Risk and Insurance Association (2005–2006).

Member, Risk Management and Insurance Review Awards Committee, American Risk and Insurance Association (2004–2005).

Member, Strategic Planning Committee, American Risk and Insurance Association (2003–2004).

Member, External Relations Committee, American Risk and Insurance Association (2002–2003).

**Interviews**

Jessica Downey. (2015, August). Novel insurance policies. *Learnvest* [Website].

Mark Hofmann. (2014, October). Insurance Education. *Business Insurance* [Trade magazine]. Retrieved from http://www.businessinsurance.com/article/20141027/NEWS04/141029814&template=printart

## Service to Other Universities

Faculty Senate, *California State University, Northridge* (2004–2007).

Curriculum Committee, *California State University, Department of Finance, Real Estate and Insurance* (2003–2007).

Director, Center for Insurance Education and Research, *California State University, Northridge* (2003–2007).

Webmaster, The Gateway Experience, *College of Business, California State University, Northridge* (2002–2007).

Member, Scholarship Committee, *California State University, Department of Finance, Real Estate and Insurance* (2001–2007).

Member, Honorary Degree Selection Committee, *California State University, Northridge* (2005).

Chair, Presidential Scholars Selection Committee, *California State University, Northridge* (2005).

Committee on Extended Learning, *California State University, Northridge* (2003–2005).

Member, Curriculum Review and Policy Committee, *College of Business, California State University, Northridge* (2003–2005).

Member, Technology Fund Advisory Committee, *College of Business, California State University, Northridge* (2003–2005).

Member, Research and Grants Committee, *California State University, Northridge* (2001–2003).

## The Community

Commission Member - Insurance Finance Expert, Florida Catastrophic Loss Projection Methodology Commission (2015–present).

Long Term Care Ombudsman, Florida Department of Elder Affairs (2009–present).

Member, Advisory Council, Griffith Insurance Education Foundation (2009–2012).

## Consultation

Florida Department of Transportation. (2013–present).

The Able Trust. Report on Key Factors that Positively Impact the Employer's Decision to Recruit, Interview, Hire and Retain People with Disabilities (2010–present).

Insurance Bureau of Canada. Report on the effects of tort reform on auto liability insurance (2014–2015).

Center for Reproductive Rights. Testimony on Medical Malpractice Insurance Company Practices (2008–2009).

Hull McGuire, PC. Testimony on Group Health Insurance Broker Practices (2007).

A.J. Gallagher, Inc. Analysis and Report on SB899, California Workers Compensation Reform (2006–2007).

The State of Connecticut General Assembly, Joint Auto Insurance Task Force. Analysis, Report and Testimony on Automobile Insurance Rating Practices (2000–2001).

The Oncology Network of Connecticut. Cost-benefit analysis of outpatient treatment for Deep Vein Thrombosis (1998–2000).

Monsanto Health Solutions/The WellBridge Corp. Cost-benefit analysis of Wellness Programs (1997–1998).

THE FLORIDA STATE UNIVERSITY
COLLEGE OF BUSINESS
*Department of Risk Management / Insurance, Real Estate & Legal Studies*
*Dr. William T. Hold / The National Alliance Program in Risk Management and Insurance*

March 20, 2017

Dear Mr. Healy:

I am pleased to refer Hugo Montesinos-Yufa and Eleanor (Tice) Sirmans as promising candidates for an NBER Household Finance Working Group small grant. Hugo and Tice are both in their third year of doctoral study at Florida State University; Hugo is a PhD candidate in Economics and Tice is a PhD candidate in Risk Management & Insurance. It has been my pleasure to work on several projects with these two students and they have shown remarkable initiative in their research.

Over the past year, the three of us have been working on a study of annuitization using a state-level data set beginning in the 1950s. In this research, we take a "helicopter" view of the annuity puzzle and seek to explain the variation in the use of annuities across states and over time. We propose that the decision to annuitize is driven by financial awareness, which is derived from exposure to the financial services industry more generally, and not simply a function of financial literacy. Hugo and Tice both took major roles in developing the theory and empirical tests, and have since presented this research at regional conferences and we have submitted this paper for this summer's working group meeting. Their ability to come up with related ideas has been impressive, and I believe the most recent – the idea they have submitted for the grant – is not only a good fit for the working group's focus, but also innovative in its approach. This initial proposal is largely theoretical, but we have discussed several sources of data for further evaluation, including (1) insurer-level financial data available from the National Association of Insurance Commissioners, (2) state-level aggregate data compiled from trade publications, and (3) individual-level datasets available through the Census Bureau Research Data Centers. We currently have access to the first two data sources and will submit a proposal to the Atlanta RDC for individual-level data as needed.

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I have advised hundreds of students through my career, and I have worked with many graduate students through various research programs. I have a good reference group in which to evaluate these two: in comparison to their peers, they are exceptionally self-motivated and conscientious workers. They would be especially grateful for any funding from NBER/the Alfred P. Sloan Foundation and we all look forward to being active participants in the Household Finance Working Group! Please feel free to call me if you have any questions.

Sincerely,



Patty Born, Midyette Eminent Scholar in Risk Management and Insurance
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