Rade Musulin - General Information

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Areas of Expertise

ACADEMIA | ACTUARIAL | AGRICULTURE | CATASTROPHE MODELING | CLIMATE RISK | ECONOMIC CAPITAL MODELING |
ENTERPRISE RISK MANAGEMENT | EXECUTIVE MANAGEMENT | EXTREME EVENTS | GOVERNMENT RELATIONS MEDIA |
NATURAL PERILS | PUBLIC POLICY | RATING AGENCY | REINSURANCE | TERRORISM | WEATHER RISK MANAGEMENT

Web Page and LinkedIn

My web page contains links to my complete CV, publications, and media clips (<u>www.ozgator.com</u>). My LinkedIn profile can be found <u>here</u>.

Career Progression

PRINCIPAL | FINITY CONSULTING PTY LTD | EMPLOYED 2019 - PRESENT | SYDNEY, NSW AUSTRALIA

Finity is Australia and New Zealand's largest independent actuarial and analytics consulting firm. I help lead the firm's Climate Risk and Perils practice areas, which for over a decade have been providing advice on environmental and climate related risks to the government and business sectors, helping them develop strategies and solutions based on Finity's deep understanding of the physical and financial risks associated with catastrophic events. I also work on a range of other projects drawing on my experience in reinsurance, insurance strategy, operations, and public affairs. I serve as one of Finity's media spokespersons on a range of subjects.

CHIEF EXECUTIVE OFFICER | FBALLIANCE INSURANCE | EMPLOYED 2015 - 2019 | SCHAUMBURG, ILLINOIS, USA

FBAlliance is a new part of the Farm Bureau organization which focuses on innovative ways of delivering insurance products to Farm Bureau members in the US. My role was to provide leadership and strategic direction to the company and drive its expansion into various states. I was charged with building the company's initial strategy, recruiting core personnel, and developing strong partners for outsourced functions such as IT and policy processing.

The company was a startup, requiring management to secure licensing, acquire processing systems, create an IT infrastructure, develop sales and claims capabilities, develop new products, and recruit staff. The company employs a business model whereby key functions, such as policy processing, are outsourced, requiring significant effort in managing vendors.

CHIEF OPERATING OFFICER AON BENFIELD ANALYTICS ASIA PACIFIC | AON BENFIELD | EMPLOYED 2006 - 2015 | SYDNEY, NSW, AUSTRALIA

At Aon Benfield my responsibilities included all aspects of analytics management in Asia Pacific, including staff recruitment, quality control, workflow, peer review, budgeting, infrastructure, and training. I was involved with clients across the region on reinsurance analytics, strategic advisory, and Enterprise Risk Management. I was a media spokesperson and a driver of thought leadership through publications and the Aon Benfield Hazards Conference.

During my tenure I built the firm's Regulatory and Rating Agency Advisory practice group in Asia Pacific. It is structured as a consulting unit supporting clients with insight on regulatory matters, advice on how to interact with rating agencies, and training on global best practice in disciplines such as Enterprise Risk Management.

I joined the firm as Senior Actuary in the Sydney office and was appointed Head of Analytics for Australia and New Zealand shortly thereafter. Following the merger between Aon Re and Benfield in 2009 I was promoted into the regional role of COO Aon Benfield Analytics Asia Pacific. I was also a member of the Asia Pacific Executive and the International Analytics Executive.

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VICE PRESIDENT OPERATIONS (COO), PUBLIC AFFAIRS, AND REINSURANCE | FLORIDA FARM BUREAU INSURANCE COMPANIES | EMPLOYED 1982 – 1984; 1987 – 2006 | GAINESVILLE, FLORIDA, USA

I was employed by the Florida Farm Bureau Insurance Companies (FFBIC) for over 20 years in various roles. FFBIC is a wholly owned subsidiary of <u>Southern Farm Bureau Casualty Insurance Company</u>. The Farm Bureau companies are leading insurers of agricultural interests in the United States. While my primary focus was on senior management duties at FFBIC, I spent significant time on projects at both the regional and national level.

My roles included Chief Actuary, Appointed Actuary, Rating Agency Relations, Government Affairs, and Reinsurance Management. In my Operations role I managed the Underwriting, Policy Services, Training, Actuarial, Government Affairs, Enterprise Risk Management, and Reinsurance functions.

During my time with the FFBIC, I served as Chairman of the Florida Insurance Council, represented the company before government bodies at the state and federal level, and served as Vice-Chairman of the American Academy of Actuaries' Casualty Practice Council.

Other Roles

ACTUARY | MIDDLESEX MUTUAL ASSURANCE | EMPLOYED BY MIDDLESEX 1985 – 1987 | MIDDLETOWN, CONNECTICUT, USA

ACTUARIAL ASSISTANT | MARYLAND AUTOMOBILE INSURANCE FUND | EMPLOYED 1979 – 1982 | ANNAPOLIS, MARYLAND, USA

Education and Citizenship

BACHELOR OF ARTS, APPLIED MATHEMATICS | JOHNS HOPKINS UNIVERSITY, BALTIMORE, MARYLAND, USA | 1980 MEMBER OF THE CASUALTY ACTUARIAL SOCIETY AND AMERICAN ACADEMY OF ACTUARIES

CERTIFIED CATASTROPHE RISK MANAGEMENT PROFESSIONAL

DUAL CITIZEN OF AUSTRALIA AND THE UNITED STATES

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Rade Musulin – General Information

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Professional and Academic Experience

In addition to my employment history, I have devoted significant time to professional organizations, academic research, and public policy. I have undergone professional media training, serving as a media spokesperson for several organizations and appearing on national television in the USA.

- Served on many committees for five actuarial organizations over a thirty-year period (Casualty Actuarial Society, Society of Actuaries, American Academy of Actuaries, Actuaries Institute of Australia, and the International Actuarial Association), including:
 - o Current Positions:
 - International Actuarial Association, Resource and Environment Virtual Forum (formerly the Resource and Environment Working Group) (2015-present, Chairperson 2018-2019, Vice Chairperson 2020-2022, and Chairperson 2022-present).
 - International Actuarial Association, Climate Risk Task Force (2020-present).
 - American Academy of Actuaries, Research Task Force (2018-present).
 - Actuaries Institute (Australia), Climate Risk Working Group (2015-present, Chairperson 2020present).
 - Past Positions:
 - American Academy of Actuaries:
 - Vice President Casualty and Member of the Executive Committee (2016-2018).
 - Flood Insurance Work Group (2016-2017; Chairperson).
 - Extreme Events Committee (2011-2016).
 - Terrorism Committee, (2005-2015).
 - Casualty Practice Council (2004-2006; Vice Chairperson 2006).
 - Communications Review Committee (1998-2004; Chairperson 1999-2004).
 - Actuaries Institute (Australia):
 - Australian Actuarial Journal, Associate Editor (2007-2016).
 - Communications Committee (2006-2011; Chairperson 2009-2010).
 - Casualty Actuarial Society:
 - Ambassador to Asia Pacific (2014-2016).
 - Media Relations Committee (2001-2007; Chairperson 2003-2005).
 - International Member Services Committee (2011-2014; 2019-2021) and Asia Regional Committee (2011-2014; 2019-2021).
 - International Actuarial Association:
 - International Association of Consulting Actuaries, Committee (Board) (2012-2016).
 - Society of Actuaries:
 - Catastrophe & Climate Strategic Research Program (2019-2021).
- Served on boards and committees in several public policy organizations, including the Florida Insurance Council, Florida Hurricane Catastrophe Fund, and the Institute for Home and Business Safety.
- Published numerous academic papers, magazine articles, and studies on topics such as financing natural disasters, catastrophe modeling, climate change, actuarial professionalism, and risk management. A full list of publications, including links to all papers, may be found on my website www.ozgator.com.
- Served on an Academy of Actuaries Committee on Terrorism that provided input to the US government following 9/11 and was an expert peer reviewer for the US Congressional Budget Office for reports on the terrorism program to Congress.

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Key Skills

During my career I have developed specialized skills in several areas. On the following pages I highlight several in detail. These are arranged in alphabetical order with no implication of importance.

- Academia
- Actuarial
- Executive Management
- Modeling and Reinsurance
 - Public Affairs
- Regulatory and Rating Agency
 - Risk Management

Rade Musulin - Academia

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Summary

Throughout my career I have maintained close ties with academic institutions, including being a lecturer for undergraduate classes in actuarial science, risk management, and political science. I am a published author in academic journals and industry magazines. In 2011-2013 I served as an advisor to and a voting member of the faculty committee for a PhD student at the University of Colorado doing a dissertation on the Florida property insurance market.

My main areas of interest include how changing population demographics affect catastrophe exposure, climate change adaptation, applications of catastrophe models for disaster planning in developing countries, building code development, and community resilience.

I have served as an editor and reviewer of papers for several professional journals, including the *Australian Actuarial Journal*, the *Journal of Insurance Regulation*, the *Journal of Actuarial Practice*, the *Journal of Risk and Insurance*, the *Environmental Hazards Journal* (Oxford University), and the *Bulletin of the American Meteorological Society*. I have also reviewed a book on flood management in the Netherlands for the Cambridge University Press.

Selected Academic Publications

International Actuarial Association and the Intergovernmental Panel on Climate Change, <u>Climate Science: A Summary for Actuaries - What the IPCC Climate Change Report 2021 Means for the Actuarial Profession</u>, *International Actuarial Association*, March, 2022. Note, Rade Musulin was a lead author on this paper.

Musulin, Rade (lead author); Dal Moro, Eric; Gutterman, Sam; Yong, Evelyn; and Zalk, Tracey, <u>Climate-Related Scenarios</u> <u>Applied to Insurers and Other Financial Institutions</u>, *International Actuarial Association*, August 2021.

Weinkle, J., Landsea, C., Collins, D., Musulin, R., Klotzbach, P. J., and Pielke, Jr., R., Normalized hurricane damage in the continental United States 1900–2017, *Nature Sustainability*, November 2018.

McAneney, J., Sandercock, B., Crompton, R., Musulin, R., Pielke, Jr, R., Gissing, A., <u>Normalised Insurance Losses and Weather-Related Australian Natural Disasters: 1966-2017</u>, *Risk Frontiers*, November 2018.

McAneney, John, McAneney, Delphine, Musulin, Rade, Walker, George, and Crompton, Ryan, <u>Government-sponsored natural disaster insurance pools: A view from down-under</u>, *International Journal of Disaster Risk Reduction*, December 2015.

Walker, George and Musulin, Rade T., <u>The Development of a Formal Framework for Discussing Earthquake Resilience of the Built Environment</u>, New Zealand Society for Earthquake Engineering, April 2015.

Walker, George and Musulin, Rade T., <u>Wind Resilience - What Do We Mean By It?</u>, *Australasian Wind Engineering Society*, February 2015.

Walker, George and Musulin, Rade T., <u>Disaster Risk Reduction and the Earthquake Code – A Disconnect</u>, *Australian Journal of Structural Engineering*, March 2014.

McAneney, J., Crompton, R., McAneney, D., Musulin, R., Walker, G., Pielke, R., <u>Market-based Mechanisms for Climate Change Adaptation</u>, *National Climate Change Adaption Research Facility (Australia)*, September 2013.

Winspear, N., Musulin, R., Sharma, M., <u>Earthquake catastrophe models in disaster response planning, risk mitigation, and financing in developing countries in Asia</u>, *Geological Society of London Special Publications*, 2012.

Pielke, R., Gratz, J., Landsea, C., Collins, D., Saunders, M., and Musulin, R., <u>Normalized Hurricane Damage in the United States:</u> 1900–2005, *Natural Hazards Review* (American Society of Civil Engineers), February 2008.

Musulin, Rade T., and Rollins, John W., <u>Optimizing a Multi-Season Catastrophe Program With Public and Private Components</u>, *Casualty Actuarial Society Forum*, Summer 2001. The paper was selected as one of two winners of the Reinsurance Call Paper Prize.

Musulin, Rade T., <u>Issues in the Regulatory Acceptance of Computer Modeling for Property Insurance Ratemaking</u>, *Journal of Insurance Regulation*, Spring 1997, pp. 342-359. This paper won the Spencer Kimball Award for the best paper of 1997 in the JIR. The NAIC President Pomeroy presented the award at the NAIC Summer Meeting in Boston, June 1998.

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Rade Musulin - Actuarial

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Summary

My actuarial training has been the foundation of my career. I earned a Bachelor of Arts in Applied Mathematics at Johns Hopkins University (Baltimore, Maryland, USA; 1980). I am an Associate of the Casualty Actuarial Society (CAS, 1987) and a Member of the American Academy of Actuaries (1988). In 2019 I was honored to be one of thirteen people comprising the "first class" of the CAS Institute's new Certified Catastrophe Risk Management Professional (CCRMP) credential.

One of my papers (<u>Issues in the Regulatory Acceptance of Computer Modeling for Property Insurance Ratemaking</u>) was on the CAS examination syllabus for many years, and I have been a frequent speaker at actuarial conferences. In both the US and Australia I have been a lecturer for actuarial students on topics such as professionalism, extreme events, reinsurance, and Enterprise Risk Management.

At FFBIC I was the company's Appointed Actuary, responsible for the Statement of Opinion, Actuarial Report on Loss and Loss Adjustment Expense reserves, Management Discussion and Analysis, and Rate Certifications. I also prepared various regulatory filings related to rates, underwriting rules, and policy forms.

I currently serve on committees in five actuarial organizations and have held various leadership positions over several decades, as outlined below. From 2016-2018 I served on the Executive Committee of the American Academy of Actuaries as Vice President – Casualty.

Skills

- Ratemaking and classification plans.
- Loss reserving and capital modeling.
- Use of catastrophe models in pricing, capital modeling, and loss reserving.
- Actuarial communication, including explanation of actuarial work to non-technical audiences.
- Climate Risk and environmental issues.

Selected Actuarial Committee Positions

- Current Positions:
 - o International Actuarial Association, Resource and Environment Virtual Forum (formerly the Resource and Environment Working Group) (2015-present, Chairperson 2018-2019, Vice Chairperson 2020-2022, and Chairperson 2022-present).
 - o International Actuarial Association, Climate Risk Task Force (2020-present).
 - o American Academy of Actuaries, Research Task Force (2018-present).
 - o Actuaries Institute (Australia), Climate Risk Working Group (2015-present, Chairperson 2020-present).
- Past Positions:
 - American Academy of Actuaries:
 - Vice President Casualty and Member of the Executive Committee (2016-2018).
 - Flood Insurance Work Group (2016-2017; Chairperson); Extreme Events Committee (2011-2016).
 - Terrorism Committee, (2005-2015).
 - Casualty Practice Council (2004–2006; Vice Chairperson 2006).
 - Communications Review Committee (1998-2004; Chairperson 1999-2004).
 - Actuaries Institute (Australia):
 - Australian Actuarial Journal, Associate Editor (2007-2016).
 - Communications Committee (2006-2011; Chairperson 2009-2010).
 - Casualty Actuarial Society:
 - Ambassador to Asia Pacific (2014-2016).
 - Media Relations Committee (2001-2007; Chairperson 2003-2005).
 - International Member Services Committee (2011-2014; 2019-2021) and Asia Regional Committee (2011-2014; 2019-2021).
 - o International Actuarial Association:
 - International Association of Consulting Actuaries, Committee (Board) (2012-2016).
 - Society of Actuaries:
 - Catastrophe & Climate Strategic Research Program (2019-2021).

Rade Musulin – Executive Management

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Summary

I have more than 30 years' experience holding senior executive positions in a general insurance company and a global reinsurance broker. I have also held senior leadership positions in industry trade organizations and professional associations.

I have a strong track record for delivering results, recruiting high caliber teams, showing initiative to build new capabilities, working in multicultural groups, and dealing with challenging structures in complex organizations. I have been successful in a wide range of situations. I have managed senior executives, young teams, operational groups (such as a policy processing department), an underwriting department, training functions, and highly trained professionals (such as actuaries and PhDs). I have also managed pan-Asian virtual teams.

Roles

- Vice President Actuary (FFBIC), including Appointed Actuary.
- Vice President Public Affairs and Reinsurance (FFBIC).
- Vice President Operations, Public Affairs, and Reinsurance (COO; FFBIC).
- Chairperson of the Board (Florida Insurance Council).
- Vice Chairperson, Casualty Practice Council (American Academy of Actuaries).
- Responsible Officer and Director (Aon Benfield Australia; Named Responsible Officer by ASIC for Capital Markets and Weather Risk Management).
- Head of Analytics Australia and New Zealand (Aon Re).
- Chief Operating Officer Analytics Asia Pacific (Aon Benfield).
- Member, Asia Pacific Management Executive (Aon Benfield).
- Member, International Analytics Executive (Aon Benfield).
- Chief Executive Officer (FBAlliance).

Accomplishments

- Identified a severe reserving problem and took action to bring this to the attention of the Board, averting an insolvency (FFBIC, 1982).
- Built an actuarial function where none had previously existed at a general insurer (FFBIC 1982-1984).
- Led implementation of cutting edge GIS, catastrophe modeling, IT, and imaging technology, working with teams across the company (FFBIC, 1990s).
- Implemented credit scoring in automobile pricing (FFBIC, 2000s).
- Implemented innovative peril based rating structure in Homeowners (FFBIC, 2000s).
- Delivered consistently profitable results and resilient operations after catastrophes (FFBIC, 1997-2006).
- Implemented numerous quality control, process, peer review, and efficiency initiatives in Analytics (Aon Re and Aon Benfield, 2006-2014).
- Built Regulatory and Rating Agency Advisory Practice Group in Asia Pacific (Aon Re and Aon Benfield, 2006-2014).
- Played a key role in developing the theme and program for the Aon Benfield Hazards Conferences (Aon Re and Aon Benfield, 2006-2014).
- Pushed the use of desktop publishing technology in Aon Benfield Analytics in Asia Pacific to improve the look and marketability of various reports, client analyses, tenders, and other communications (Aon Benfield, 2010-2014).
- Led a major project at Aon Benfield to implement a virtual IT environment for catastrophe and capital modeling in offices in Tokyo, Hong Kong, Singapore, and Sydney.
- Built a graduate recruitment program for analytics students in Sydney (Aon Benfield, 2011-2014).
- Recruited talent, trained staff, and led multidisciplinary teams (FFBIC and Aon Benfield, 1980s-2014).
- Managed budgets and met financial targets as a senior executive (FFBIC and Aon Benfield, 1980s-2014).
- Oversaw establishment of a startup insurance company, including development of a strategic plan, hiring core staff, executing vendor contracts, regulatory licensing, and reinsurance (FBAlliance, 2015-present).

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Rade Musulin – Modeling and Reinsurance

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Summary

Following Hurricane Andrew in 1992 my career became focused on financing of large disasters by both the private insurance system and government agencies. Central to this was mastery of catastrophe modeling tools and reinsurance.

I was an early proponent of replacing traditional experience based techniques for setting insurance prices and evaluating insurer capital needs with modern simulation models. As I practiced in the US at the time, significant effort was made to develop strategies for incorporating this technology into tightly regulated rates.

I was active in terrorism policy in the period following 9/11. I served on an Academy of Actuaries Committee on Terrorism that provided input to the US government and was an expert peer reviewer for the US Congressional Budget Office for reports on the terrorism program to Congress.

Later in my career my scope expanded to Economic Capital Models and how these could be used in Enterprise Risk Management, solvency regulation, and optimizing insurer capital structure.

At the FFBIC I was responsible for assessing capital requirements and designing reinsurance programs in property catastrophe and liability. At Aon Benfield I was Chief Operating Officer Aon Benfield Analytics Asia Pacific, responsible for the region's use of models, quality control, peer review, and modeling infrastructure (IT). While at Aon I also worked with clients across the region to develop effective reinsurance structures and to explain reinsurance strategy to outside stakeholders, such as regulators and rating agencies.

In 2019 I earned the Certified Catastrophe Risk Management Professional (CCRMP) credential from the CAS Institute by the experienced industry professional pathway.

Skills

- Through understanding of catastrophe and economic capital models, including:
 - o Data requirements.
 - o IT infrastructure required.
 - Selection of assumptions.
 - o Model design and operation (note, I have not been running the software in recent years).
 - o Model output and its use in reinsurance program design, capital management, etc.
- Understanding of the science underlying models such as geology, meteorology, hydrology, and conflagration.
- Agricultural modeling.
- Analytical support for Weather Risk Management products ("Weather Derivatives").
- Model evaluation.
- Use of models in:
 - o Pricing insurance products.
 - o Reinsurance design.
 - o Loss reserving.
 - o Regulatory compliance.
 - o Internal operations, such as cost or capital allocation.
 - o Enterprise Risk Management.

Accomplishments

- Played a significant role in the creation of the <u>Florida Commission on Hurricane Loss Projection Methodology</u>.
- Arranged a Loss Portfolio Transfer of FFBIC Workers Compensation claims.
- Designed a reinsurance structure for event frequency which successfully protected FFBIC against multiple severe hurricanes in 2004 and 2005.
- Built and led strong modeling teams in Asia Pacific for Aon Benfield using all major models.
- Drove use of a Bangalore (India) center of excellence to support modeling operations in Asia Pacific.
- Helped build Aon Benfield's Impact Forecasting model development team in Asia Pacific.
- Earned Certified Catastrophe Risk Management Professional (CCRMP) credential.

Rade Musulin – Public Affairs

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Summary

After Hurricane Andrew devastated Florida in 1992 the property insurance market was in chaos. FFBIC required a more robust Public Affairs presence, and I assumed a role representing the company to government and industry in addition to my other responsibilities. My actuarial training gave me a unique perspective on Public Affairs that led to leadership roles in the Florida Insurance Council and on various government boards. I worked on most aspects of the public policy response to the severe stress in the private sector insurance market, including event financing, consumer protection, rate regulation, solvency regulation, residual markets, and building code development.

For the next 15 years I worked as a lobbyist, industry leader, advisor to government agencies, and media spokesperson. I have undergone intensive media training on several occasions and have run media training sessions.

Accomplishments

- Played a significant role in the creation of the <u>Florida Hurricane Catastrophe Fund</u>, served on its Advisory Council for eight years, and became its Chairman in 2002.
- Made major contributions to insurance legislation in Florida from 1992 to 2006, including the creation of the <u>Florida Commission on Hurricane Loss Projection Methodology</u> and <u>Citizens Property Insurance Company</u>.
- Testified before the U.S. House of Representatives on Homeowners Insurance issues.
- Worked on an insurance industry team that successfully persuaded legislators to adopt tough building codes over the vehement objections of development interests.
- Served as an expert peer reviewer for the Congressional Budget Office for reports on Natural Disasters and Terrorism post 9/11.
- Regularly gave media interviews and appeared on national television (an example from MSNBC can be found here).
- Did media work for Aon Benfield on reinsurance issues (an example from A.M. Best TV can be found here).
- Significant Roles:
 - o Florida Hurricane Catastrophe Fund Advisory Council, Insurance Industry Representative (1994-2002, Vice-Chairperson 2001-2002, Chairperson 2002).
 - o Florida Insurance Council, Board of Directors Executive Committee (1998-present; Chairperson 2001-2002).
 - o Florida Insurance Education Foundation, Board of Directors (2005-2006).
 - o Florida Residential Property Casualty Joint Underwriting Association Actuarial Committee (1995-2002; Chairperson, 1997-2002).
 - o Florida Windstorm Underwriting Association Actuarial Committee (1994-2000).
 - o Florida Working Group on Residual Property Insurance Markets (1996), created by the Florida Legislature to formulate recommendations on reforming Florida's residual markets.
 - o Institute for Home and Business Safety, Research Advisory Committee (1998-2002).
 - o National Association of Independent Insurers, Financial Modernization Working Group (2003).
 - o U.S. Senate Working Group on Catastrophe Insurance (1996).

Selected Published Articles

- Musulin, Rade, and Nicholson, Jack, <u>Extreme Measures: How the design of the Florida "Cat Fund" fairly and efficiently provides funding for catastrophic hurricane losses</u>, The Actuary, June/July 2017.
- Musulin, Rade, <u>Rising Tides</u>, Contingencies Magazine, November 2015.
- Musulin, Rade, <u>Demographics</u>, <u>Development</u>, <u>and Disasters</u>, <u>Contingencies Magazine</u>, September 2014.
- Musulin, Rade, <u>Understanding CAT risk in captives</u>, *Asia Insurance Review*, July 2011.
- Musulin, Rade, <u>Actuarial (R)evolution</u>, Actuary Australia, April 2008.
- Musulin, Rade, <u>Insurance Downunder</u>, *Florida Trend Magazine*, November 2006.
- Musulin, Rade, and Rollins, John, <u>Frequency Matters</u>, Best Review Magazine, January 2005.
- Musulin, Rade, <u>Sound Bites and Fuzzy Math</u>, Contingencies Magazine, November 2001.
- Musulin, Rade, <u>Taming the Big Cats</u>, Best's Review Magazine, March 1999.
- Musulin, Rade, <u>Can Our Children Afford Affordable Property Insurance?</u>, *Emphasis Magazine*, 1997.

Rade Musulin – Regulatory and Rating Agency

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Summary

I have devoted a significant part of my career to regulatory and rating agency issues. In the US rate regulation was a major issue, particularly when new technologies are introduced (such as catastrophe modeling or credit scoring). Extreme events such as hurricanes or terrorist attacks place strains on solvency, drawing the attention of both regulators and rating agencies.

During my time with FFBIC I was the company's primary point of contact with regulators and rating agencies. Specific duties included preparing rate filings, performing loss reserve certification as the company's appointed actuary, preparing the Management Discussion and Analysis (similar to the Australian Financial Condition Report), preparing the company's submission to rating agencies, and representing the company before rating agencies.

While at Aon Benfield I built and headed the firm's Regulatory and Rating Agency Advisory Practice in Asia Pacific. This practice group serves regulators and insurers across Asia Pacific. With regard to insurers, the practice group provides advisory services on initial rating agency applications, full use of rating agency capital models, protecting existing ratings, Enterprise Risk Management, and testing the effect of various strategies (such as mergers or acquisitions) on rating agency capital requirements. With regard to regulators, the practice group provides information to clients on regulatory developments and input to regulators on topics such as global activity in solvency regulation.

Skills

- Knowledge of global regulatory regimes, including NAIC (US), Solvency II (Europe), C-ROSS (China), and APRA (Australia).
- Understanding of major rating agency criteria and capital models.
- Experience in the development of regulatory criteria, such as standards for using catastrophe modeling in ratemaking (US) or regulation following major events (OIC Thailand).
- Experience working with the World Bank and Asia Development Bank.
- Coaching insurer management in presentation techniques for rating agency meetings.
- Providing expert testimony before regulatory bodies and in judicial proceedings.
- Strong writing skills (see below).

Accomplishments

- Played a significant role in designing the <u>Florida Commission on Hurricane Loss Projection Methodology</u>, which evaluates catastrophe models for use in regulatory filings.
- Represented FFBIC before rating agencies following severe catastrophic events.
- Drove a successful legal challenge on toxic mold coverage with the Florida Department of Insurance, setting an industry precedent for coverage.
- Had an excellent track record of gaining approval for rate filings with regulators (US).
- Built Aon Benfield's successful Regulatory and Rating Agency Advisory Practice Group in APAC.
- Was the primary consultant for a successful project to obtain the first investment grade rating for a Vietnamese company.
- Produced or made significant contributions to numerous Thought Leadership works, such as:
 - o <u>Issues in the Regulatory Acceptance of Computer Modeling for Property Insurance Ratemaking.</u>
 - o Asia Pacific Solvency Regulation.
 - o <u>2013 Evolving Criteria Asia Pacific Edition</u>.
 - Rating Agency Advisory newsletter.

Rade Musulin – Risk Management

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Summary

I have acquired skills and experiences that are well suited to an executive position in risk management. I have a strong technical background in risk modeling through my actuarial training. I have been directly responsible for Enterprise Risk Management (ERM) in my roles as Vice President – Operations with FFBIC and currently as CEO of FBAlliance. While at Aon Benfield I built and headed the firm's Regulatory and Rating Agency Advisory Practice in Asia Pacific, which provided advisory services on initial rating agency applications, full use of rating agency capital models, protecting existing ratings, ERM, and testing the effect of various strategies (such as mergers or acquisitions) on rating agency capital requirements. Most importantly, I have a diverse background with experience across insurance, reinsurance, regulation, public policy, and academia, allowing me to understand risk management challenges throughout an organization.

Skills

- Experience in all aspects of insurer and reinsurer operations.
- Experience managing complex projects in a global organization.
- Experience developing and implementing ERM frameworks both as an executive at insurance companies and as a consultant advising insurers.
- Expertise in catastrophe modeling, economic capital modeling, ratemaking, reserving, and other actuarial activities.
- Knowledge of global regulatory regimes, including NAIC (US), Solvency II (Europe), C-ROSS (China), and APRA (Australia).
- Understanding of major rating agency criteria and capital models.
- Experience coaching insurer management in presentation techniques for rating agency meetings.
- Strong communications skills, including writing, presentation, and television.
- Over twenty years' political and governmental experience, including the US Congress, US state legislatures, and government agencies in the US, Australia, China, Thailand, and New Zealand.
- Proven leadership capabilities, including leading executive teams, recruiting talent, and managing a diverse workforce housed in several countries in Asia Pacific from Australia.
- Expertise in emerging risk areas, particularly in climate change adaptation, food security, and supply chains.
- Negotiating skill, with experience in legal contracts, vendor management, complex reinsurance programs, and drafting of legislation and regulations.

Accomplishments

- Built Aon Benfield's successful Regulatory and Rating Agency Advisory Practice Group in APAC.
- Was the primary consultant for a successful project to obtain the first investment grade rating for a Vietnamese company, an effort that required implementation of a strong ERM program.
- Provided training and consulting services on risk management for insurers in many Asian countries.
- Implemented workflow management, quality assurance, peer review, client delivery, time tracking, project management systems, and IT infrastructure for a large regional team of analysts based in seven countries.
- Oversaw the successful delivery of Aon Benfield analytics work in catastrophe modeling, economic capital modeling, and reinsurance optimization for a wide range of clients.
- Implemented risk management frameworks in insurance companies, including a catastrophe risk management system in Florida which successfully protected against numerous severe hurricanes, including an unprecedented four storms hitting the state in a six-week period in 2004. The system included managing risk from policy coverage, product pricing, underwriting, reinsurance, catastrophe response, claims, and regulation.
- Played a significant role in the creation of the <u>Florida Hurricane Catastrophe Fund</u>, served on its Advisory Council for eight years, and became its Chairman in 2002.
- Made major contributions to insurance legislation in Florida from 1992 to 2006, including the creation of the <u>Florida Commission on Hurricane Loss Projection Methodology</u> and <u>Citizens Property Insurance Company</u>.
- Named to senior positions in the Casualty Actuarial Society, American Academy of Actuaries, and International Actuarial Association, including the Executive Committee of the American Academy of Actuaries as Vice President Casualty (2016-2018) and on the Board of the International Association of Consulting Actuaries (2012-2016).
- Lecturer for actuarial students on professionalism, extreme events, reinsurance, and Enterprise Risk Management.