

Rade Musulin – General Information

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Areas of expertise (additional detail provided on following pages)

ACADEMIA | ACTUARIAL | AGRICULTURE | CATASTROPHE MODELING | COMMUNICATIONS | CONSULTING | EXECUTIVE MANAGEMENT | INTERNATIONAL | GOVERNMENT RELATIONS | MEDIA | PUBLIC POLICY | RATING AGENCY | REINSURANCE | TENDER/RFP | TERRORISM | WEATHER RISK MANAGEMENT

Career Progression

CHIEF EXECUTIVE OFFICER | **FBALLIANCE INSURANCE** | EMPLOYED 2015 – PRESENT | SCHAUMBURG, ILLINOIS, USA

FBAlliance is a new part of the Farm Bureau organization which will focus on innovative ways of delivering insurance products to Farm Bureau members in the US. The company is domiciled in Illinois and I am based in Florida. My role is to provide leadership and strategic direction to the company and drive its expansion into various states.

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.

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 **Southern Farm Bureau Casualty Insurance Company**. 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, 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.

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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

DUAL CITIZEN OF AUSTRALIA AND THE UNITED STATES

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

Key Skills

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 - Public Affairs
- Regulatory and Rating Agency

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

McAneney, John, McAneney, Delphine, Musulin, Rade, Walker, George, and Crompton, Ryan, [Government-sponsored natural disaster insurance pools: A view from down-under](#), *International Journal of Disaster Risk Reduction*, December, 2015.

Walker, George and Musulin, Rade T., [The Development of a Formal Framework for Discussing Earthquake Resilience of the Built Environment](#), *New Zealand Society for Earthquake Engineering*, April 2015.

Walker, George and Musulin, Rade T., [Wind Resilience - What Do We Mean By It?](#), *Australasian Wind Engineering Society*, February 2015.

Walker, George and Musulin, Rade T., [Disaster Risk Reduction and the Earthquake Code - A Disconnect](#), *Australian Journal of Structural Engineering*, March 2014.

McAneney, J., Crompton, R., McAneney, D., Musulin, R., Walker, G., Pielke, R., [Market-based Mechanisms for Climate Change Adaptation](#), *National Climate Change Adaptation Research Facility (Australia)*, September 2013.

Winspear, N., Musulin, R., Sharma, M., [Earthquake catastrophe models in disaster response planning, risk mitigation, and financing in developing countries in Asia](#), *Geological Society of London Special Publications*, 2012.

Walker, G., and Musulin, R., [Incentives for Mitigation - Who pays, Who benefits?](#), *New Zealand Society of Earthquake Engineering*, March 2010.

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

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

Musulin, Rade T., [Issues in the Regulatory Acceptance of Computer Modeling for Property Insurance Ratemaking](#), *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.

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). Throughout my career I have devoted considerable time to professional organizations and held senior positions in the profession.

One of my papers ([Issues in the Regulatory Acceptance of Computer Modeling for Property Insurance Ratemaking](#)) 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 the Executive Committee of the American Academy of Actuaries as Vice President – Casualty, the Flood Insurance Working Group for the American Academy of Actuaries (Chair), and the International Actuarial Association's Resource and Environmental Working Group. From 2014 – 2016 I was the CAS Ambassador to Asia Pacific, coordinating CAS activities with actuarial associations in the region.

Skills

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

Selected Actuarial Committee Positions

- Current Positions:
 - American Academy of Actuaries, Vice President Casualty and Member of the Executive Committee (2016–present).
 - American Academy of Actuaries, Flood Insurance Work Group (2016–present; Chairperson).
 - International Actuarial Association, Resource and Environmental Working Group (2015 –present).
- Past Positions:
 - American Academy of Actuaries:
 - 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).
 - International Member Services Committee (2011–2014).
 - Media Relations Committee (2001–2007; Chairperson 2003–2005).
 - International Actuarial Association:
 - International Association of Consulting Actuaries, Committee (Board) (2012–2016).

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 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).

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.

Skills

- Through understanding of catastrophe and economic capital models, including:
 - Data requirements.
 - IT infrastructure required.
 - Selection of assumptions.
 - Model design and operation (note, I have not been running the software in recent years).
 - 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:
 - Pricing insurance products.
 - Reinsurance design.
 - Loss reserving.
 - Regulatory compliance.
 - Internal operations, such as cost or capital allocation.
 - Enterprise Risk Management.

Accomplishments

- Played a significant role in the creation of the [Florida Commission on Hurricane Loss Projection Methodology](#).
- 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.

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 [Florida Hurricane Catastrophe Fund](#), 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 [Florida Commission on Hurricane Loss Projection Methodology](#) and [Citizens Property Insurance Company](#).
- 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:
 - Florida Hurricane Catastrophe Fund Advisory Council, Insurance Industry Representative (1994–2002, Vice–Chairperson 2001–2002, Chairperson 2002).
 - [Florida Insurance Council](#), Board of Directors Executive Committee (1998–present; Chairperson 2001–2002).
 - Florida Insurance Education Foundation, Board of Directors (2005–2006).
 - Florida Residential Property Casualty Joint Underwriting Association Actuarial Committee (1995–2002; Chairperson, 1997–2002).
 - Florida Windstorm Underwriting Association Actuarial Committee (1994–2000).
 - Florida Working Group on Residual Property Insurance Markets (1996), created by the Florida Legislature to formulate recommendations on reforming Florida's residual markets.
 - Institute for Home and Business Safety, Research Advisory Committee (1998–2002).
 - National Association of Independent Insurers, Financial Modernization Working Group (2003).
 - U.S. Senate Working Group on Catastrophe Insurance (1996).

Selected Published Articles

- Musulin, Rade T., [Rising Tides](#), *Contingencies Magazine*, November 2015.
- Musulin, Rade T., [Demographics, Development, and Disasters](#), *Contingencies Magazine*, September 2014.
- Musulin, Rade T., [Understanding CAT risk in captives](#), *Asia Insurance Review*, July, 2011.
- Musulin, Rade T., [Actuarial \(R\)evolution](#), *Actuary Australia*, April, 2008.
- Musulin, Rade T., [Insurance Downunder](#), *Florida Trend Magazine*, November, 2006.
- Musulin, Rade T., and Rollins, John W., [Frequency Matters](#), *Best Review Magazine*, January, 2005.
- Musulin, Rade T., [Sound Bites and Fuzzy Math](#), *Contingencies Magazine*, November, 2001.
- Musulin, Rade T., [Taming the Big Cats](#), *Best's Review Magazine*, March, 1999.
- Musulin, Rade T., [Can Our Children Afford Affordable Property Insurance?](#), *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 [Florida Commission on Hurricane Loss Projection Methodology](#), 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:
 - [Issues in the Regulatory Acceptance of Computer Modeling for Property Insurance Ratemaking](#).
 - [Asia Pacific Solvency Regulation](#).
 - [2013 Evolving Criteria - Asia Pacific Edition](#).
 - [Rating Agency Advisory newsletter](#).