## ROBERT R. REITANO

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<u>rreitano@brandeis.edu</u> Website: <u>www.robertr</u>reitano.com

#### **EDUCATION and PROFESSIONAL DESIGNATIONS**

- 2008 C.E.R.A. (Chartered Enterprise Risk Analyst) honorary award by SOA as a "thought leader"
- 1980 F.S.A. (Fellow of the Society of Actuaries (SOA));
- 1980 M.A.A.A. (Member of the American Academy of Actuaries)
- 1976 Ph.D., Mathematics, Massachusetts Institute of Technology
- 1972 M.A., Mathematics, University of Massachusetts, Amherst
- 1971 B.A., Mathematics, University of Massachusetts, Boston

#### WORK EXPERIENCE

## **Brandeis University**

2005 – Present INTERNATIONAL BUSINESS SCHOOL

Professor of the Practice in Finance

Develop (\*) and teach graduate courses in quantitative finance: Advanced Financial Theory; Fixed Income Securities; Options and Derivatives; Options and Derivatives 2 (\*); Financial Risk Management (\*); Applied Risk Management (\*); Introduction to Quantitative Finance (\*).

2015 - 2016

Senior Director, Academics

Recipient of the 2006-2007 Excellence in Teaching Award for full-time faculty

# **Strategic Investment Risk Management**

2005 – Present Investment Strategy and Risk Management Consulting

Principal

Clients from life insurance, property and casualty insurance, medical malpractice insurance, and public pension plan sectors.

# Wuhan University of Technology, China

2016 SCHOOL OF ECONOMICS

**Adjunct Professor** 

Taught a graduate course in financial risk management in the Masters degree program of finance.

#### CRICO/RMF

2009 – 2011 INVESTMENT DEPARTMENT

Chief Investment Officer (CIO)

The Risk Management Foundation of the Controlled Risk Insurance Company (Grand Cayman) is the patient safety and medical malpractice company owned by and serving the Harvard medical community, which in 2008 sought to expand its investment capabilities and processes, build an investment team, and to hire its first full-time CIO. As their investment strategy consultant since 2005, I provided an organizational and corporate governance

recommendation report detailing the steps required to achieve these goals and was subsequently recruited to implement the recommendations and serving as CIO. The last phase of the implementation plan, the hiring of a permanent CIO, was completed in fall, 2011.

## Manulife/John Hancock Life Insurance Company

2004 – 2005 GLOBAL INVESTMENT STRATEGY GROUP (GIS) Executive Vice President & Chief Investment Strategist (CIS)

Managed a department of 50+ investment and financial professionals and support staff grouped into 7 specialized teams located in Boston and Toronto that was globally responsible for investment strategy, investment tactics, asset/liability and investment risk management (U.S. markets), derivatives strategy and trading, economic research, investment portfolio modeling and analytics, investment manager research/selection/oversight, and the management of asset allocation portfolios. Chaired the Company's committees responsible for the J.H. Defined Benefit Pension Plans (\$2.5B), Defined Contribution (401k) Plans (\$1B), and Variable Series Trust (\$10B), as well as the Committees of Finance for two JH insurance subsidiaries; Board Member of several JH subsidiaries. Served as John Hancock's Derivatives Supervisory Officer, a position required under N.Y. statute for developing, interpreting and overseeing the implementation of the Company's Board approved Derivatives Use Plan.

2000 - 2004	INVESTMENT STRATEGY GROUP	Senior Vice President & CIS
1986 - 2000	INVESTMENT POLICY & RESEARCH	Vice President
1985 - 1986	CORPORATE ANALYSIS	Associate Actuary
1980 - 1985	ACTUARIAL DEPARTMENT	Associate Actuary
1978 - 1980	ACTUARIAL RESEARCH UNIT	Actuarial Associate
1976 - 1978	UNDERWRITING RESEARCH UNIT	Actuarial Assistant

# Reykjavik University, Iceland

2005-2008 SCHOOL OF BUSINESS Visiting Professor

Taught a graduate course in Fixed Income Securities for the MSIM (Master of Science in Investment Management) Program over 3 long-weekend visits; 16 hours class time per visit.

# **Boston University**

2000 – 2005 MATHEMATICS DEPARTMENT Adjunct Associate Professor

Taught Fundamentals of Finance and Computational Methods in Mathematical Finance two graduate courses in the Masters Degree program in Mathematical Finance:

#### **Actuaries' Club of Boston**

1978-1985 Taught various technical actuarial courses for actuarial examinations Instructor

## University of Massachusetts, Boston

1972 – 1976 MATHEMATICS DEPARTMENT Assistant Professor

References: Available on request

Robert R. Reitano 2/10 2016

#### ROBERT R. REITANO

#### **Professional Activities**

## 1. Investment Publications

<u>Introduction to Quantitative Finance: A Math Tool Kit</u>, Chinese Edition, Truth & Wisdom Press, 2015.

Introduction to Quantitative Finance: A Math Tool Kit, MIT Press, 2010.

"Yield Curve Risk Management", Handbook of Finance, ed. Frank J. Fabozzi, Wiley, 2008.

"Enterprise Risk Management (ERM): A Status Check on Global Best Practices", A Survey by the Professional Risk Managers' International Association (PRMIA); co-author and technical advisor, May 2008.

"Results of the Survey on Variable Annuity Hedging Programs for Life Insurance Companies", co-authors: Charles L. Gilbert, K. Ravindran, Society of Actuaries, <a href="http://www.soa.org/research/finance/research-results-of-the-survey-on-variable-annuity-hedging-programs-for-life-insurance-companies.aspx">http://www.soa.org/research/finance/research-results-of-the-survey-on-variable-annuity-hedging-programs-for-life-insurance-companies.aspx</a>, January, 2007

"Yield Curve Risk Management", <u>Investment Management for Insurers</u>, ed. David F. Babbel and Frank J. Fabozzi, Frank J. Fabozzi Associates, 1999.

"Two Paradigms for the Market Value of Liabilities," North American Actuarial Journal, October, 1997.

"Yield Curve Risk Management", <u>Advances in Fixed Income Valuation Modeling and Risk Management</u>, ed. Frank J. Fabozzi, Frank J. Fabozzi Associates, 1996.

"Non-Parallel Yield Curve Shifts and Stochastic Immunization", <u>Journal of Portfolio Management</u>, Winter, 1996.

"Multivariate Stochastic Immunization Theory", <u>Transactions of the Society of Actuaries</u>, XLV, 1994. Awarded the 1994-95 F.M. Redington Prize by the Investment Section of the Society of Actuaries.

"Non-Parallel Yield Curve Shifts and Convexity", TSA, XLIV, 1993.

"Non-Parallel Yield Curve Shifts and Immunization", <u>JPM</u>, Spring, 1992.

"Multivariate Immunization Theory", TSA, XLIII, 1991.

"Multivariate Duration Analysis", TSA, XLIII, 1991.

Awarded the 1991 Annual Prize by the Society of Actuaries

Awarded the 1991-93 F.M. Redington Prize by the Investment Section of the Society of Actuaries.

"Non-Parallel Yield Curve Shifts and Spread Leverage", JPM, Spring, 1991.

"A Multivariate Approach to Immunization Theory", <u>Actuarial Research Clearing House</u>, Vol.2, 1990 (Working Paper).

"Non-Parallel Yield Curve Shifts and Durational Leverage", JPM, Summer, 1990.

Robert R. Reitano 3/10 2016

"A Statistical Analysis of Banded Data with Applications" TSA, XLII, 1990.

"A Multivariate Approach to Duration Analysis", ARCH, Vol. 2, 1989 (Working Paper).

"Mortality Cost Valuation of Underwriting Requirements" TSA, XXXIV, 1982

# 2. Editorial Committees

ASTIN Bulletin: The Journal of the International Actuarial Association

Editorial Board (1998 - Present)

Journal of Actuarial Practice

Associate Editor (1992 - 1995)

Journal of Portfolio Management

Advisory Board (1990 - 2001)

North American Actuarial Journal

Associate Editor (1995-99)

Transactions of the Society of Actuaries

Committee on Papers (1991-96)

Miscellaneous Finance and Actuarial Journals; Textbook Publishers

Invited Referee

# 3. <u>Industry Presentations</u>

# **Society of Actuaries' Educational Seminars**

"ALM Techniques & Practices"

October 3-5, 2011 Chicago June 9-13, 2008 **Toronto** June 12-15, 2006 New York November 7-10, 2005 Hong Kong May 16-19, 2005 Brussels April 4-7, 2005 New York September 26-30, 2004 Quebec City July 27-31, 2004 Tokyo June 20-24, 2004 London December 7-10, 2003 Phoenix

"Incorporating Quantitative Analysis and ALM in Setting and Evaluating Investment Policy"

Setting and Evaluating Investment Policy"

November 1, 2007

Robert R. Reitano 4/10 2016

Webcast

"Actuaries Investment Actuary Symposium"		
General Session: Ask the Experts Panel		
November 6-8, 2002	Chicago	
November 9-10, 2000	Philadelphia	
"Update on Fair-Value Reporting"		
October 18-21, 1998	New York	
"Multivariate Duration Analysis"		
April 24-25, 1995	Cambridge	
October 4-5, 1993	Cambridge	
September 21-22, 1992	Cambridge	
March 6-7, 1991	New York	
January 9-10, 1991	New York	
November 7-8, 1990	Chicago	
"Investment Spring Training for Life and Annuity Actuaries"		
June 13-14, 1995	New York	
June 2-8, 1994	Chicago	
May 26-27, 1993	New York	
"Multivariate Immunization Theory"		
July 25-26, 1996	Cambridge	
October 6-7, 1993	Cambridge	
September 23-24, 1992	Cambridge	
November 13-14, 1991	Cambridge	
"Fair Value of Insurance Liabilities"		
December 7-8, 1995	New York	
"Risk Theory"		
March 18 - 19, 1982	Boston	
Society of Actuaries' Meetings		
Society of Actuaties Meetings		
"Using Quantitative Analysis to Help Set and		
Monitor Investment Policy"		
"Designing the Ideal Investment Policy"		
May 9-11, 2007	Phoenix	
"Market Value Accounting"		
"Careers in Investment"		
"Rocket Science"		
October 16-19, 1994	Chicago	
"Course 230 'Light': Overview of Exam on		
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Orlando

Principles of Asset/Liability Management" April 20-22, 1994 "Interest Rate Convexity" May 16-17, 1991

New York

"Funding for Investment Risks"

October 14-17, 1990

Orlando

## Other Seminars/Forums/Courses

<u>UMass Amherst: Math Department Colloquium</u>

"Careers in Mathematical Finance"

February 4, 2016

**Amherst** 

PRMIA Boston Chapter

Panel Discussant: "Advanced Curve Building Frameworks: Best Practices"

January 28, 2016

Boston

PRMIA Boston Chapter: Asset Management Risk Oversight

Moderator: "FBI Perspective – Current Trends and Risks"

October 27, 2015

**Boston** 

Fall Fest, Brandeis University

"A Primer on Financial Risk"

October 26, 2013

Waltham

Field's Institute: Industrial-Academic Forum on Financial

**Engineering and Insurance Mathematics** 

"Risk Management of Long Liabilities in Insurance and Pensions"

June, 21, 2010

Toronto

PRMIA Global Event Series

Moderator: Credit Risk Management in Times of Economic Stress"

May 14, 2009

**Boston** 

The Future of Life-Cycle Saving & Investing

Moderator: "The Economic Theory of Consumption and Wealth

Management in Retirement"

October 22-24, 2008

Boston

PRMIA Global Event Series

"Enterprise Risk Management"

April 20, 2008

**Boston** 

ACI: Operational Risk Management Executive Forum

Program Chairman

May 22-24, 2006

**Boston** 

World Bank 3<sup>rd</sup> Contractual Savings Conference: Regulatory

And Supervisory Issues In Private Pensions and Life Insurance

"Partial Durations: Theory and Application to ALM"

April 11-15, 2005

Washington, D.C.

Carnegie Mellon Speaker Series - Carnegie Mellon University

"Managing Yield Curve Risk"

November 29-30, 2001 Pittsburgh

Math Finance Day - Boston University

"Non-Parallel Yield Curves & Stochastic Immunization"

September 23-24, 2000 Boston

Federal Reserve Bank Seminar

"Investment Risk Management"

February 29, 2000 Boston

IBC: Asset/Liability Management

"ALM and Asset Allocation"

June 21-23, 1999 New York

ACLI: Senior Investment Managers Seminar

"ALM and Asset Allocation"

October 4-7, 1998 Phoenix

5<sup>th</sup> Annual Meeting: The Chinese Financial Association

"Non-parallel Yield Curve Shifts and Stochastic Immunization"

August 15-16, 1998 Cambridge, MA

IBC: Asset/Liability Management

"Capitalizing on Nonparallel Yield Curve Shifts and

Stochastic Immunization"

July 13-15, 1998 New York

BSN: ALM for the Insurance Industry"

Keynote Address: "Yield Curve Risk Management"

December 2-3, 1997 New York

BSN: 3<sup>rd</sup> Annual Congress on ALM for the

for the Insurance Industry

Keynote Address: "The Theory and Application

of Stochastic Immunization"

December 4-5, 1996 New York

ACLI: Senior Investment Managers Seminar

"ALM Immunization Strategies: Real World Approaches"

October 2-5, 1996 Napa

ACLI: Chief Investment Officers Conference

"Duration Management"

March 31-April 3, 1996 Palm Beach

ACLI: Senior Investment Managers Seminar

"Duration Management: Practical Lessons Learned in ALM"

October 8-11, 1995 Orlando

#### IBC: Asset/Liability Modeling

Meeting Chairperson and Speaker

"Nonparallel Yield Curve Shifts and Stochastic Immunization" July 13-14, 1995

New York

### 4th Annual GAT Fixed-Income Conference

"Multivariate Stochastic Immunization: An Overview" Palm Springs

March 26-29, 1995

# BSN: Asset/Liability Management and Performance Measurement

Keynote Address: "Fair Value of Liabilities: Two Paradigms"

February 1-2, 1995 New York

## Actuaries' Clubs of Boston and Hartford – Joint Meeting

"Non-Parallel Yield Curve Shifts and Immunization"

June 23, 1994 Sturbridge

#### 4th AFIR International Colloquium

"Non-Parallel Yield Curve Shifts and Immunization"

April 20-22, 1994

Orlando

"Stochastic Dynamics of Markets" (Chairperson)

April 20-22, 1994

Orlando

#### Actuaries' Club of Boston

"Non-Parallel Yield Curve Shifts and Convexity"

November 30, 1993

**Boston** 

New York

# The Wharton Financial Institutions Center: Key Issues in

Financial and Risk Management in the Insurance Industry

"Key Issues in Balance Sheet Management: The CFO's Perspective" July 15, 1993 Philadelphia

#### Infoline: Asset & Liability Management for Insurance Companies

"Generalizing the Definition of Duration - What's New?"

June 18-19, 1992 New York

# Infoline: The Third Annual Congress on Measuring and Improving

the Insurance Company's Investment Portfolio Performance

"Strategies for Superior Asset/Liability Management: New A/L Management

Techniques and the Selection of Reliable Benchmarks"

May 27-28, 1992 New York

#### Investment Management Institute: Managing and Investing Insurance Assets

"Asset/Liability Matching: The Cutting Edge of Insurance Asset Management"

February 19-20, 1992

#### Infoline: Innovations in Developing GIC/BIC Alternatives

"New Approaches to Asset/Liability Management for GIC/BIC Issuers" December 16, 1991 New York

8/10 2016 Robert R. Reitano

<u>The Boston Security Analysts Society: Fixed Income Discussion Group</u>
"The Duration and Convexity Implications of Non-Parallel Yield Curve Shifts"
October 24, 1991

Boston

<u>Institute for International Research: Effective Pricing and Product</u> Design for the Insurance Industry

"Linking Your Pricing Methodology to Your Investment Strategy"

July 15-16, 1991

New York

## 2nd AFIR International Colloquium

"Non-Parallel Yield Curve Shifts and Durational Leverage"

"Asset/Liability Management"

April 17-20, 1991

Brighton, UK

Infoline: Managing GIC/BIC Portfolios

"New Approaches to Asset/Liability Management for Your GIC/BIC Portfolios" February 27, 1991 New York

## 4. Industry Committees

Professional Risk Managers' International Association (PRMIA)

Vice Chair of Board, 2014-Present

Board of Directors, 2013-Present

Steering Committee, PRMIA Boston Chapter, 2006-Present

Global Council of Regional Directors, 2011-2013

Advisory Committee, Global Event Series, 2007-2008

#### Society of Actuaries

Chair, Project Oversight Group, "Economic Capital," 2015-Present

Project Oversight Group, "Economic Scenario Generators," 2015-Present

Project Oversight Group, "Population Aging, Implications for Asset Values & Impact for Pension

Plans: An International Study," 2015-Present

Project Oversight Group, "Correlations and Tail Risk," 2015-Present

Project Oversight Group, "Applied Robust Performance Analysis for Actuarial Applications," 2014-Present

Project Oversight Group, "Tail Risk Analysis in Extreme Environments," 2014-2015

Project Oversight Group, "Managing in a Low Interest Rate Environment," 2013-2014

Project Oversight Group, "Equity Patterns & Baby Boomer Retirements," 2013-2014

Project Oversight Group, "Pension Risk Transfer," 2013-2014

Chair, Project Oversight Group, "Interest Rate Swaps – Exposed," 2012-14

Project Oversight Group, "Value Investing and ERM," 2011-13

Committee on Financial Research, 2008-Present

Project Oversight Group, "Interest Rate Hedging Survey," 2006-7

Investment Section, F.M. Redington Prize Committee, 2001, 2003 awards

Investment Section Council, 1992-95

#### American Academy of Actuaries

Task Force on the Fair Valuation of Liabilities, 1994-95

<u>American Council of Life Insurance</u>
Committee on Investment Research, 1994-97
Senior Investment Managers Seminar Board of Advisors, 1995-98

# 5. Board and Executive Committee Positions

MIT

Mathematics Visiting Committee, 2015-Present

Controlled Risk Insurance Company (CRICO)

Investment Committee, 2011-Present

**Brandeis University** 

Retirement Plan (403(b)) Investment Committee, 2010-Present

University of Massachusetts Foundation

Public Director; Executive Committee; Investment Committee, 2000-Present

Samson Capital Advisors LLC, New York

Advisory Committee, 2005-2014

# 6. Community Activities

Weston United Methodist Church

Staff-Parish Relations Committee, Member 2011- 12

Chair, Finance Committee, 2006-2009

Church Council, 2001-2, 2006-2009

Chair, Staff-Parish Relations Committee, 2001-2

Atrium School, Watertown, MA

Member, Board of Trustees; Treasurer;

Chair, Finance Committee, 1998-2002

Boston Area Youth Soccer (BAYS) League

Soccer Coach, 2000-2002