

## **RANGARAJAN K. SUNDARAM**

Yamaichi Faculty Fellow & Associate Professor of Finance  
and  
Coordinator, Ph.D. Program, Department of Finance  
Stern School of Business, New York University  
New York, NY 10012

### **Education:**

Ph.D., 1988, Department of Economics, Cornell University, Ithaca, NY 14853.

M.A., 1987, Department of Economics, Cornell University, Ithaca, NY 14853.

M.B.A., 1984, Indian Institute of Management, Ahmedabad 380 015, India.

B.A., 1982, Loyola College, University of Madras, Madras 600 034, India.

### **Recent Awards:**

Jensen Award from the *Journal of Financial Economics* for the Best Paper in Corporate Finance, 2001.

CIBC Award for the Best Working Paper in Finance at the Stern School of Business, 1999-2000.

Glucksman Institute Prize for the Best Paper by a member of the finance faculty, Stern School of Business, 1998-99.

Glucksman Institute Prize for the Second Best Paper by a member of the finance faculty, Stern School of Business, 1998-99.

Three-year grant (1994–1997) from the National Science Foundation for Project titled “Stochastic Games and their Applications” (joint with Prajit K. Dutta).

### **Full-Time Academic Appointments:**

July 2000 to date: Associate Professor (with tenure), Department of Finance, Stern School of Business, New York University, New York, NY 10012.

July 1996 to June 2000: Associate Professor (untenured), Department of Finance, Stern School of Business, New York University, New York, NY 10012.

July 1994 to July 1996: Associate Professor (with tenure), Department of Economics, University of Rochester, Rochester, NY 14627.

July 1988 to June 1994: Assistant Professor, Department of Economics, University of Rochester, Rochester NY 14627.

**Editorships:**

Co-Editor, *Journal of Derivatives*, 2002 to date.

Associate Editor, *Journal of Economic Theory*, 1993 to 2002.

Associate Editor, *Review of Derivatives Research*, 2000 to date.

Associate Editor, *Journal of Emerging Market Finance*, 2000 to date.

**Refereeing:**

Referee for: • *American Economic Review* • *Econometrica* • *Economic Theory* • *Finance Research Letters* • *Financial Analysts Journal* • *Games and Economic Behavior* • *International Journal of Game Theory* • *Journal of Banking and Finance* • *Journal of Business* • *Journal of Derivatives* • *Journal of Econometrics* • *Journal of Economic Dynamics and Control* • *Journal of Economic Theory* • *Journal of Economics and Environmental Management* • *Journal of Finance* • *Journal of Financial and Quantitative Analysis* • *Journal of Monetary Economics* • *Management Science* • *Mathematics of Operations Research* • *Review of Derivatives Research* • *Review of Economic Design* • *Review of Economic Studies* • *Review of Finance* • *Review of Financial Studies* • *Test*.

Referee for the National Science Foundation and the Social Sciences and Humanities Research Council of Canada.

**Visiting Academic Appointments:**

January 1995 to July 1996: Visiting Associate Professor, Department of Finance, Stern School of Business, New York University, New York, NY 10012.

November 1994 to December 1994: Visiting Scholar, Department of Economics, New York University, New York, NY 10003.

August 1991 to July 1992: Visiting Assistant Professor, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA 91125.

June 1989: Visiting Assistant Professor, Department of Economics, Cornell University, Ithaca, NY 14853.

**Contact Information:**

**Phone:** 212-998-0308 (Office)      212-998-0300 (Department of Finance)

**Fax:** 212-995-4233

**E-mail:** rsundara@stern.nyu.edu

**Webpage:** <http://pages.stern.nyu.edu/~rsundara>

**Publications:**

**A) Books:**

*A First Course in Optimization Theory*, 1996, Cambridge University Press, Cambridge and New York; second printing 1999.

*Derivatives Trading & Modeling*, Vol I (Equity Derivatives) and Vol II (Interest-Rate & Credit Derivatives), to be published by McGraw-Hill (with Sanjiv Das). Note: Titles may be modified before publication.

**B) Published Articles:**

On Rescissions in Executive Stock Options, Working Paper, Stern School of Business; forthcoming in *Journal of Business* (with Menachem Brenner and David Yermack).

Generalized Bandits Problems, Working Paper, Department of Finance, Stern School of Business, September 2003; forthcoming in *Social and Strategic Behavior: Essays in Honor of Jeffrey S. Banks* (David Austen-Smith and John Duggan, Editors), Springer-Verlag.

The Foundations of Freezeout Laws in Takeovers, *Journal of Finance* 59(3), pp. 1325-1344, June 2004 (with Yakov Amihud and Marcel Kahan).

On the Regulation of Fee Structures in Mutual Funds, in *Mathematical Modeling in Finance* Vol III, Courant Institute of Mathematical Sciences (with Sanjiv R. Das).

Fee Speech: Signaling, Risk-Sharing, and the Impact of Fee Structures on Investor Welfare, *Review of Financial Studies* 15(5), pp. 1465-97, Winter 2002 (with Sanjiv R. Das).

Discrete-Time Arbitrage-Free Pricing of Credit Derivatives with Ratings Transitions, *Financial Analysts Journal* May-June 2002, pp. 28-44 (with Viral V. Acharya and Sanjiv R. Das).

Survival and the Art of Profit Maximization, *Review of Economic Design* 6, December 2001, pp. 429-446 (with Prajit Dutta).

The Merton/KMV approach to Pricing Credit Risk, *Extra Credit* January/February 2001, pp. 59-68.

- To be reprinted in *The Handbook of Collateralized Debt Obligations*.

On the Optimality of Resetting Executive Stock Options, *Journal of Financial Economics* 57, July 2000, pp. 65-101 (with Viral Acharya and Kose John).

Altering the Terms of Executive Stock Options, *Journal of Financial Economics* 57, July 2000, pp. 103-128 (with Menachem Brenner and David Yermack).

Stochastic Mean Models of the Term-Structure of Interest Rates, in *Advanced Tools for the Fixed-Income Professional* (B. Tuckman and N. Jegadeesh, Eds.), John Wiley and Sons, New York, 2000 (with P. Balduzzi, S.R. Das, and S. Foresi).

A Discrete-Time Approach to Arbitrage-Free Pricing of Credit Derivatives, *Management Science* 46(1), January 2000, pp. 46–62 (with Sanjiv R. Das).

- Reprinted in: *Mathematical Modeling in Finance* Vol III, Courant Institute of Mathematical Sciences.

Of Smiles and Smirks: A Term-Structure Perspective, *Journal of Financial and Quantitative Analysis* 34(2), June 1999, pp. 211–239 (with Sanjiv R. Das).

Optimal Agent Retention in Principal/Agent Models, *Journal of Economic Theory* 82(3), October 1998, pp. 293–323 (with Jeffrey S. Banks).

The Equilibrium Existence Problem in General Markovian Games, in *Organizations with Incomplete Information: Essays in Economic Analysis—A Tribute to Roy Radner*, (M. Majumdar, Editor), Cambridge University Press, Cambridge and New York, 1998 (with Prajit K. Dutta).

Equivalent Martingale Measures and Risk-Neutral Pricing: An Expository Note, *Journal of Derivatives*, Fall 1997, pp. 85–98.

A Simple Approach to Three-Factor Models of Interest Rates, *Journal of Fixed Income* 6(3), 1996 (with Pierluigi Balduzzi, Sanjiv R. Das, and Silverio Foresi).

Auction Theory: A Summary with Applications to Treasury Bill Auctions, *Financial Markets, Institutions, and Investments* 5(5), 1996, pp.1–36 (with Sanjiv R. Das).

Switching Costs and the Gittins Index, *Econometrica* 62(3), May 1994, pp. 687–694 (with Jeffrey S. Banks).

Parametric Continuity in Dynamic Programming Problems, *Journal of Economic Dynamics and Control* 18, 1994, pp. 1069–1092 (with Prajit K. Dutta and Mukul Majumdar).

The Tragedy of the Commons? *Economic Theory* 3(3), July 1993, pp. 413–426 (with Prajit K. Dutta).

How Different Can Strategic Models Be? *Journal of Economic Theory* 60(1), June 1993, pp. 42–62 (with Prajit K. Dutta).

Adverse Selection and Moral Hazard in a Repeated Elections Model, in *Political Economy; Institutions, Information, Competition and Representation*, (W. Barnett, M. Hinich, N. Schofield and H. Rosenthal, Eds.), Cambridge University Press, New York, 1993 (with Jeffrey S. Banks).

Bayesian Economists, . . . , Bayesian Agents: An Alternative Approach to Optimal Learning, *Journal of Economic Dynamics and Control* 17(2), April 1993, pp. 355–383 (with Mahmoud A. El-Gamal).

Denumerable-Armed Bandits, *Econometrica* 60(5), September 1992, pp. 1071–1096 (with Jeffrey S. Banks).

A Class of Bandit Problems Yielding Myopic Optimal Strategies, *Journal of Applied Probability*, September 1992, pp. 625–632 (with Jeffrey S. Banks).

Markovian Equilibrium in a Class of Stochastic Games: Existence Theorems for Discounted and Undiscounted Models, *Economic Theory* 2(2), April 1992, pp. 197–214 (with Prajit K. Dutta).

Rangarajan K. Sundaram: October 5, 2004.....5

Repeated Games, Finite Automata, and Complexity, *Games and Economic Behavior* 2(2), June 1990, pp. 97-117 (with Jeffrey S. Banks).

Symmetric Stochastic Games of Resource Extraction: The Existence of Non-Randomized Stationary Equilibrium, in *Stochastic Games and Related Topics* (T.S. Ferguson, T.E.S. Raghavan, T. Parthasarathy, and O. Vrieze, Eds.), Kluwer Academic Publishing, The Netherlands, 1991 (with Mukul Majumdar).

Perfect Equilibrium in a Class of Symmetric Dynamic Games, *Journal of Economic Theory* 47(1), February 1989, pp. 153-177.

An Alternative Approach to Axiomatizations of the Von Neumann-Morgenstern Characteristic Function, *Mathematical Social Sciences*, April 1988, pp. 145-157 (with Alain A. Lewis).

### **C) Current Research Projects:**

Debt in Executive Compensation, work-in-progress (with David Yermack).

Capital Structures & Bankruptcy Codes: An International Cross-Country Analysis (with Viral Acharya).

Delinking Default and Recovery: A Derivatives-Based Approach, work in progress (with Sanjiv Das).

First Purchase Rights: An Economic Analysis, incomplete first draft available (with Marcel Kahan).

### **D) Other Working Papers:**

On the Capital Structure Implications of Bankruptcy Codes, Working Paper (with Viral Acharya & Kose John).

A Simple Model for Pricing Securities with Equity, Interest Rate, and Default Risk, Working Paper, June 2004 (with Sanjiv Das).

When does Strategic Debt-Service Matter? Working Paper, Stern School of Business, April 2002; revised May 2004, (with V. Acharya, J. Huang and M.G. Subrahmanyam).

Note: This paper replaces an earlier effort titled "Costly Financing, Optimal Payout Policies, and the Valuation of Corporate Debt."

A Numerical Algorithm for Optimal Consumption-Investment Problems, mimeo, July 2000 (with Sanjiv R. Das).

Proportionate Liability vs. Joint-and-Several Liability: Does the Choice of Regime Matter?, mimeo, Department of Economics, University of Rochester, September 1995 (with Dhananjay K. Gode).

The Non-Existence of Perfect Equilibrium in Infinite State Stochastic Games, mimeo, Department of Economics, University of Rochester, March 1994 (with Prajit Dutta).

**Teaching:**

**(A) Courses Taught**

**PhD Level** (At NYU, Rochester, and Cornell.)

- Contingent-Claim Pricing & Derivatives.
- Financial Theory I (co-taught).
- Seminar in Financial Institutions (co-taught).
- Game Theory.
- Mathematical Economics & Optimization.

**MBA Level** (At NYU & the Indian School of Business)

- Futures & Options.
- Advanced Derivatives.
- Corporate Finance.

**Executive MBA** (At NYU)

- Introduction to Derivatives.
- Advanced Derivatives.

**Undergraduate** (At NYU, Rochester, Caltech, and Cornell.)

- Futures & Options.
- Principles of Economics.
- Intermediate Microeconomics.
- Game Theory.
- Industrial Organization.
- Mathematical Economics.

**Others** (At various institutions in the US, Europe, and Asia)

- Open-enrollment and bank/corporate training programs on • Equity Derivatives and Convertibles • Swaps and Interest-Rate Derivatives • Interest-Rate Modeling • Credit-Risk Modeling and Measurement • Credit-Derivative Products, and • Introduction to Futures & Options.

**(B) Teaching Evaluations at NYU: 2000-2004** (7-point scale)

Year	Course	Level	Course Rating	Instructor Rating
2003-04	Futures & Options	MBA	6.6	6.5
	Futures & Options	MBA	6.5	6.6
2002-03 (On sabbatical Spring 2003)	Futures & Options	MBA	6.5	6.6
2001-02	Futures & Options	MBA	6.4	6.6
	Futures & Options	MBA	6.4	6.4
	Sem in Derivatives	PhD	6.2	6.7
2000-01	Futures & Options	MBA	6.4	6.6
	Futures & Options	UG	6.4	6.7
	Futures & Options	UG	6.8	7.0
	Sem in Finl Institutions	PhD	6.8	7.0