Koray D. SIMSEK, PhD, CFA

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EDUCATION

Princeton University, Princeton, NJ
Ph.D., Operations Research and Financial Engineering, November 2004
M.A., Operations Research and Financial Engineering, November 2002

Bogazici University, Istanbul, TURKEY
B.Sc., Industrial Engineering, June 2000

ACADEMIC EXPERIENCE

Rollins College, Crummer Graduate School of Business, Winter Park, FL
Orchid/Singleton Chair of Finance, 2024 - present
Professor of Finance, 2021 - present
Associate Professor of Finance, 2016 - 2021
- Teaching the following MBA courses: Financial Decision Making, Security Analysis and Portfolio Management, Derivative Markets, Fixed Income Securities, Financial Risk Management, Financial Modeling, and Managing Global Portfolios.
- Chair for two EDBA dissertations. Second committee member for six dissertations. Outside reader for four dissertations. Taught EDBA course Theory & Contemporary Thought in Finance.
- Chair of the MBA Curriculum Committee, 2019 - present.
- Rollins College-Graduate Chapter Advisor for Beta Gamma Sigma, 2018 - present.

Sabanci University, School of Management, Istanbul, Turkey
Associate Professor, 2011 - 2016
Assistant Professor, 2006 - 2011
Academic Director of the Masters in Finance (MiF) Program, 2011 - 2014
- Taught MBA/MiF courses (Derivatives and Financial Risk Management, Financial Modeling, Financial Econometrics), a PhD course (Empirical Asset Pricing), and undergraduate courses (Derivative Securities/Financial Engineering, Introduction to Management).
- Offered executive education: Managerial Finance (Turquality: a mini Executive MBA program supported by the Turkish government); Derivatives Markets (Akbank); FX and IR Derivatives (Isbank); Derivatives Markets, Debt Securities, Portfolio Management (Borsa Istanbul, Federation of Eurasian Exchanges).
- Provided consulting to two financial software companies for their EUREKA projects on algorithmic trading and option pricing.
- Led the establishment and fundraising efforts and academically managed Center for Applied Finance Education (CAFE), Turkey's first finance laboratory (educational trading room).
- Oversaw the process of MiF program's participation in the CFA Institute University Recognition Program and served as the university liaison.
- Faculty adviser of the student teams that regularly competed in CFA Institute Research Challenge.

MIT Sloan School of Management, Cambridge, MA
Visiting Scholar / International Faculty Fellow, 2012 - 2013
Spent my sabbatical leave under the mentorship of Professor Leonid Kogan.

EDHEC Business School, Nice, France
Associate Professor of Finance, 2004 - 2006
- Taught the following courses: Principles of Finance (Undergraduate level), Options, Futures, and Other Derivatives (MSc level), Quantitative Methods in Finance / Financial Modeling (MSc level), Financial Assets and Present Value Calculations (Undergraduate level), Global Treasury Management (Undergraduate level), Financial Engineering (MSc level)
- Assisted several MSc students with their dissertations either as a supervisor or a reader.

EDHEC Risk and Asset Management Research Centre, Nice, France
Co-Head, Asset/Liability Management Research Program, 2005 - 2006
Research Associate, 2004 - 2006
- Took part in a project that involved scenario generation for asset returns and multi-period portfolio optimization for optimal allocation of structured products in an institutional investor's portfolio.
- Worked with a team that investigated the benefits of hedge fund investments from an asset-liability management perspective using a surplus optimization approach.

Princeton University, Princeton, NJ
Assistant-in-Instruction, 2000 - 2004
Held weekly precepts (Princeton-style discussion groups/problem solving sessions) and office hours; graded exams and assignments for the following courses: Financial Econometrics (Graduate level), Optimization under Uncertainty, Optimization, and Introduction to Statistical Thinking
Summer Research Assistant, 2001 - 2004
Developed a software package for multi-period portfolio optimization (for case studies assigned to undergraduates); worked closely with Mt. Lucas hedge fund in Princeton, and analyzed characteristics of their MLM index, including rebalancing gains achieved by long-term investors; finding optimal contribution strategies for corporate sponsored US pension plans in deficit. The last became a part of the project that was eventually presented to the US Department of Labor.
Senior Thesis Writers' Group Co-Leader, 2002 - 2003
One of two graduate students, who helped senior students in the Operations Research and Financial Engineering Department during their thesis writing process, with responsibilities that include organizing/leading discussion groups for thesis writing techniques, holding LaTeX tutorial sessions, having office hours for research-specific issues.

RESEARCH INTERESTS

Asset pricing and portfolio management: Theory and applications of stochastic programming in large-scale problems in finance (e.g. equity/bond portfolio management, multi-stage financial planning for pension funds and insurance companies); benefits of alternative investments (hedge funds, structured products, etc.) and investment strategies (portfolio insurance, etc.) in long-term portfolio management; longevity risk and retirement planning; real options in energy markets; algorithmic trading; emerging markets finance.

PUBLICATIONS

Refereed Journal Articles

"Monte Carlo Simulation in Financial Modeling," *The Journal of Portfolio Management* 49:9(2023), 178-188.

"The Influence of Baby Boomers' Perceptions of Well-Being on Their Plan to Age-In-Place Post-Retirement," with Eric J. Emerson and Robert C. Ford. *International Journal of Hospitality Management* 107(2022), 103295.

"The Market Impact of Private Information before Corporate Announcements: Evidence from Turkey," with Serif Aziz Simsir. *Journal of International Financial Markets, Institutions & Money* 80(2022), 101624.

"The Speed of Stock Price Adjustment to Corporate Announcements: Insights from Turkey," with Oguz Ersan, Serif A. Simsir, and Afan Hasan. *Emerging Markets Review* 47(2021), 100778.

"Determinants of Capital Structure for Firms in an Islamic Equity Index: Comparing Developed and Developing Countries," with Evrim Hilal Erdamar, Huseyin Ersen, Cumhur Ekinci, and Oktay Tas. *Journal of Capital Markets Studies* 4:2(2020), 167-191.

"Managing Supply Chain Risk through Take-Or-Pay Gas Contracts in the Presence of Buyers' Storage Facilities," with Cagri Haksoz and Metin Cakanyildirim. *Journal of Energy Markets* 12:3(2019), 49-73.

"Optimal Longevity Risk Management in the Retirement Stage of the Life Cycle," with Min Jeong Kim, Woo Chang Kim and John M. Mulvey. *The Journal of Retirement* 5:3(2018), 73-92.

"The Performance of US-Based Emerging Market Mutual Funds," with Halil Kiymaz. *Journal of Capital Markets Studies* 1:1(2017), 58-73.

"Derivative Markets in Emerging Economies: A Survey," with Yigit Atilgan and K. Ozgur Demirtas. *International Review of Economics and Finance* 42(2016), 88-102.

"Studies of Equity Returns in Emerging Markets: A Literature Review," with Yigit Atilgan and K. Ozgur Demirtas. *Emerging Markets Finance and Trade* 51:4(2015), 757-773.

"Modeling Breach of Contract Risk through Bundled Options," with Cagri Haksoz. *The Journal of Operational Risk* 5:3 (2010), 3-20.

"Assisting Defined-Benefit Pension Plans," with John M. Mulvey, Frank J. Fabozzi, Zhuojuan Zhang, and Bill Pauling. *Operations Research* 56:5 (2008), 1066-78.

"Optimal Static Allocation Decisions in the Presence of Portfolio Insurance," with Felix Goltz and Lionel Martellini. *Journal of Investment Management* 6:2 (2008), 37-56.

"Improving Investment Performance for Pension Plans," with John M. Mulvey and Zhuojuan Zhang. *Journal of Asset Management* 7:2 (2006), 93-108.

"Modernizing the Defined-Benefit Pension System," with John M. Mulvey, Frank J. Fabozzi, William R. Pauling, and Zhuojuan Zhang. *The Journal of Portfolio Management* 31:2 (2005), 73-82.

"Evaluating a Trend-Following Commodity Index for Multi-Period Asset Allocation," with John M. Mulvey and Shiv Siddhant N. Kaul. *Journal of Alternative Investments* 7:1 (2004), 54-69.

"Trend-following Hedge Funds and Multi-period Asset Allocation," with Dries Darius, Aytac Ilhan, John Mulvey, and Ronnie Sircar. *Quantitative Finance* 2:5 (2002), 354-61.

Chapters in Books

"Derivatives Markets," with Halil Kiymaz. In H. Kent Baker, Greg Filbeck, and Andrew C. Spieler (eds.), *Debt Markets and Investments*, Oxford University Press, NY, 2019, 151–166.

"Bond Mutual Funds, Closed-end Bond Funds, and Exchange-Traded Funds," with Halil Kiymaz. In H. Kent Baker, Greg Filbeck, and Andrew C. Spieler (eds.), *Debt Markets and Investments*, Oxford University Press, NY, 2019, 305–324.

"Valuing and Analyzing Fixed Income Derivatives," with Halil Kiymaz. In H. Kent Baker, Greg Filbeck, and Andrew C. Spieler (eds.), *Debt Markets and Investments*, Oxford University Press, NY, 2019, 501–521.

"Commodity Trading Advisors and Managed Futures," with Halil Kiymaz. In H. Kent Baker, Greg Filbeck, and Jeffrey H. Harris (eds.), *Commodities: Markets, Performance, and Strategies*, Oxford University Press, NY, 2018, 217–232.

"Longevity Risk Management for Individual Investors," with Woo Chang Kim, John M. Mulvey, and Min Jeong Kim. In Horand I. Gassmann and William T. Ziemba (eds.), *Stochastic Programming: Applications in Finance, Energy, Planning and Logistics*, World Scientific, Singapore, 2013, 9-41.

"Performance Enhancements for Defined Benefit Pension Plans," with John M. Mulvey, Thomas Bauerfeind, and Mehmet T. Vural. In Marida Bertocchi, Giorgio Consigli, and Michael A.H. Dempster (eds.), *Stochastic Optimization Methods in Finance and Energy*, Springer, NY, 2011, 43-71.

"Introduction to Stochastic Programming and Its Applications to Finance." In Frank J. Fabozzi (ed.), *Handbook of Finance, Volume III*, Wiley, Hoboken, NJ, 2008, 775-83. Reprinted in Frank J. Fabozzi (ed.), *Encyclopedia of Financial Models, Volume III*, Wiley, Hoboken, NJ, 2012, 123-35.

"A Stochastic Network Approach for Integrated Pension and Corporate Financial Planning," with John M. Mulvey and Bill Pauling. In Anna Nagurney (ed.), *Innovations in Financial and Economic Networks*, Edward Elgar Publishing, UK, 2003, 67-83.

"Rebalancing Strategies for Long-term Investors," with John M. Mulvey. In E. J. Kontoghiorghes, B. Rustem, and S. Siokos (eds.), *Computational Methods in Decision-Making, Economics and Finance: Optimization Models*, Kluwer Academic Publishers, The Netherlands, 2002, 15-33.

Trade Journal/Magazine Articles

"The Benefits of Guaranteed Structured Products," with Lionel Martellini and Felix Goltz. *European Pensions & Investment News* 179 (2005), 19-20. Reprinted as "Garantierte Strukturierte Produkte Haben für Instutionelle Investoren Vorteile," (in German). In *Deutsche Pensions & Investment Nachrichten* 4:20 (2005), 59-61.

"Finding Your Balance," with John Mulvey, Hafize Erkan, and Bill Pauling. *European Pensions & Investment News* 165 (2004). Reprinted as "Langfristige Portfoliostrategien im Zeitablauf: Ein Überblick," (in German). In *Deutsche Pensions & Investment Nachrichten* 3:16 (2004), 60-62.

Working Papers/Submitted Manuscripts/Technical Reports

"Structured Forms of Investment Strategies in Institutional Investors' Portfolios," with Felix Goltz and Lionel Martellini. EDHEC Risk and Asset Management Research Centre Report, April 2005.

"Preliminary Analysis of Defined-Benefit Pension Plans," with John M. Mulvey, Zhuojuan Zhang, and Martin Holmer. Princeton University Report (presented to the US Department of Labor), Department of OR and Financial Engineering, September 2004.

"Applications of Valuation Techniques in Privatization Process," with David Pinhas, Gokce Ataman, Miner Asli Kurbay, and Selahattin Zoralioglu. Research Paper FB-IE-10/2000-10. Bogazici University Institute for Graduate Studies in Science and Engineering, Istanbul, Turkey, 2000.

CONFERENCES/PRESENTATIONS

"Optimal Procurement with Take-or-Pay Contracts in the Presence of Storage." Presented at *7th International Research Meeting in Business and Management (IRMBAM-2016),* Nice, France, July 11-12, 2016.

"Optimal Procurement with Take-or-Pay Contracts in the Presence of Storage." Presented at *55th Euro Working Group on Commodities and Financial Modeling (EWGCFM) Meeting,* Ankara, Turkey, May 14-16, 2015.

"Longevity Risk Management for Individual Investors using Multi-stage Stochastic Programming." Presented at *13th International Conference on Stochastic Programming*, Bergamo, Italy, July 8-12, 2013.

"Longevity Risk Management for Individual Investors." Presented at *CFA Society of Istanbul*, Istanbul, Turkey, February 12, 2013.

"Portfolio Diversification with Structured Products: Benefits of Principal-Protected Securities." (in Turkish) Presented at *CFA Society of Istanbul*, Istanbul, Turkey, February 27, 2012.

"Portfolio Insurance 'Alla Turca': Capital-Protected Mutual Funds." (in Turkish) Presented at *14th National Finance Symposium*, Konya, Turkey, November 3-6, 2010.

"Performance Enhancements for Defined-Benefit Pension Plans." Presented (as Session Chair) at *24th European Conference on Operational Research EURO XXIV*, Lisbon, Portugal, July 11-14, 2010.

"Performance Enhancements for Defined-Benefit Pension Plans." Presented at *24th Mini EURO Conference MEC EUROPT 2010*, Izmir, Turkey, June 23-26, 2010.

"Optimal Myopic Allocation Decisions in the Presence of Portfolio Insurance." Presented at *Bilkent University School of Engineering*, Ankara, Turkey, December 4, 2009.

"Comparing the Risk-Adjusted Performance of Dynamic Asset Allocation Strategies." Presented (as Session Chair) at *INFORMS Annual Meeting*, San Diego, CA, October 11-14, 2009.

"Optimal Myopic Allocation Decisions in the Presence of Portfolio Insurance." Presented at *43rd Euro Working Group on Financial Modeling (EWGFM) Conference,* London, UK, September 4-5, 2008.

"Improving Investment Performance for Pension Plans." Presented at *11th Conference on Stochastic Programming (SPXI)*, Vienna, Austria, August 26-31, 2007.

"Improving Investment Performance for Pension Plans." Presented at *22nd European Conference on Operational Research EURO XXII*, Prague, Czech Republic, July 8-11, 2007.

"Static Allocation Decisions In The Presence Of Portfolio Insurance." Presented at *Third International Conference on Business, Management and Economics (ICBME),* Izmir, Turkey, June 14-17, 2007.

"Static Allocation Decisions in the Presence of Portfolio Insurance." Presented at *Koc University Graduate School of Business*, Istanbul, Turkey, March 16, 2007.

"Asset-Liability Management and Portfolio Insurance via Stochastic Programming." Presented at *Bogazici University School of Engineering*, Istanbul, Turkey, November 18, 2006.

"Pension Fund Risk Management Models: Defined Benefit and Defined Contribution Compared." Panelist at *OECD Seminar on Pension Fund Regulation and Risk Management,* Istanbul, November 9, 2006.

"Assisting Defined-Benefit Pension Plans." Presented at *9th Karlsruher Ökonometrie-Workshop: Risk Assessment: Decisions in Banking and Finance,* Karlsruhe, Germany, April 5-7, 2006.

"Integrating Hedge Funds into Asset-Liability Management." Presented at *EDHEC Institutional Investor's Summit*, London, UK, February 14, 2006.

"Structured Investment Strategies in Institutional Investors' Portfolios: Benefits of Dynamic Asset Allocation through Buy-and-Hold Investment in Derivatives." Presented at *Sabancı University Faculty of Management*, Istanbul, Turkey, October 21, 2005.

"Assisting Defined-Benefit Pension Plans in the U.S." Presented at *Workshop Finance and Decisions 05*, Bolzano, Italy, April 28-30, 2005.

"The Benefits of Structured Products in Institutional Investors' Asset Allocation." Presented at *EDHEC Asset Management Days*, Geneva, Switzerland, April 21-22, 2005.

"Valuation of DB & DC Pension Plans in the U.S." Presented at *Oxford-Princeton Mathematical Finance Workshop*, Oxford, UK, March 19-21, 2004.

"Integrated Pension and Corporate Financial Planning: Optimal Contribution Strategies." Presented at *INFORMS Annual Meeting*, Atlanta, GA, October 19-22, 2003.

"A Stochastic Network Approach for Integrated Pension and Corporate Financial Planning." Presented at *EURO/INFORMS Joint International Meeting*, Istanbul, TURKEY, July 6-10, 2003.

SERVICE TO THE PROFESSION

Editorial Board Member of *Journal of Capital Markets Studies*, 2017 – present.

Program Committee Member of *IEEE Computational Intelligence for Financial Engineering & Economics (CIFEr) 2017*, Hawaii, USA, November 27 – December 1, 2017.

Program Committee Member of *IEEE Computational Intelligence for Financial Engineering & Economics (CIFEr) 2016*, Athens, Greece, December 6-9, 2016.

Program Committee Member of *IEEE Computational Intelligence for Financial Engineering & Economics (CIFEr) 2015*, Cape Town, South Africa, December 8-10, 2015.

Organizing Committee Member of *2nd Borsa Istanbul Finance & Economics Conference*, Istanbul, TURKEY, October 1-2, 2015.

Organizing Committee Member of *1st Borsa Istanbul Finance & Economics Conference*, Istanbul, TURKEY, September 30 - October 1, 2013.

Scientific Committee Member of *International Conference on Applied and Computational Mathematics (ICACM)*, Ankara, TURKEY, October 3-6, 2012.

Program Committee Member of *IEEE Computational Intelligence for Financial Engineering & Economics (CIFEr) 2012*, New York City, USA, March 29-30, 2012.

Scientific Committee Member of *International Conference on Mathematical Finance and Economics*, Istanbul, TURKEY, July 6-8, 2011.

Ad Hoc referee for *Annals of Operations Research*, *Emerging Markets Finance and Trade*, *European Financial Management*, *European Journal of Operational Research*, *Finance Research Letters*, *Frontiers in Finance and Economics*, *International Review of Economics and Finance*, *Journal of Capital Markets Studies*, *Journal of Computational Finance*, *Journal of Financial Research*, *Journal of Risk*, *Operations Research*, *Quantitative Finance*.

SCHOLARSHIPS, GRANTS, AWARDS & ACHIEVEMENTS

Cornell Distinguished Faculty in Crummer Award, Rollins College, 2022-23.

EAMBA Professor of the Year Award, Rollins College, Crummer Graduate School of Business, 2016-17.

Turkish Science Foundation (TUBITAK) Grant (#115K179), 2015-2018 (approximately $140,000).

Chartered Financial Analyst (CFA), 2012, CFA Institute.

Excellence in Teaching Award, Princeton University, Undergraduate Engineering Council, Fall 2001.

Bogazici University Fellowship, 1996-2000: Given to top 3 students admitted to each department.

Top 10 rankings in the Higher Education Student Selection and Placement Tests, April-June 1996: 3rd (sciences) among more than 1 million students; 4th (equal-weighted) among 1.4 million students.

MEMBERSHIPS

American Finance Association (AFA), 2006-present
CFA Institute, 2012-present
Financial Management Association (FMA), 2008-present
Institute for Operations Research and Management Science (INFORMS), 2003-present
Professional Risk Managers' International Association (PRMIA), 2008-present
Western Finance Association (WFA), 2007-present