# **RAVI JAGANNATHAN**

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# **Education:**

Ph.D. in Financial Economics (1983), Carnegie-Mellon UniversityM.S. in Financial Economics (1981), Carnegie-Mellon UniversityM.B.A. (1972), Indian Institute of Management, Ahmedabad, IndiaB.E. in Mechanical Engineering (1970), University of Madras, India

# **Current Position and Affiliations:**

Chicago Mercantile Exchange Professor of Finance, Kellogg School of Management, Northwestern University (1997+) and Co-Director of the Financial Institutions and Markets Research Center.

Special Term Professor, Shanghai Advanced Institute of Finance, Shanghai Jiao Tong University (July 2012 - 2018)

Special Term Professor, Indian School of Business, Hyderabad, India (2012/4-2014/10); Area Leader for Finance, Economics and Public Policy (2014/11 – 2018/3)

## **Past Positions:**

Visiting Professor, Marshall School of Business, University of Southern California, Fall 2006

Adjunct Professor of Finance, Hong Kong University of Science and Technology, 1998 - 2005

Piper Jaffray Professor of Finance, Carlson School of Management, University of Minnesota, 1993-1997.

Visiting Professor, Finance Department, School of Business and Management, The Hong Kong University of Science and Technology, Hong Kong, 1994 to 1995.

Associate Professor, Finance Department, Carlson School of Management, University of Minnesota, 1989 to 1993.

Adjunct Professor of Finance, Graduate School of Business, Columbia University, Fall 1992.

Assistant Professor, Finance Department, Kellogg Graduate School of Management, Northwestern University, 1983 to 1989; Visiting Assistant Professor, Finance and Insurance Department, Carlson School of Management, University of Minnesota, 1986 to 1988.

## **Research Interests:**

Pricing of Financial Assets, Financial Markets and Institutions, and Portfolio Performance Evaluation.

# **Professional Service:**

President, Society for Financial Econometrics, July 2015 - June 2017 Director, Financial Management Association, 2013-15 President, Financial Intermediation Research Society, 2010-2011 Member, IASB Expert Advisory Panel on "Fair value measurement of financial markets become distressed or illiquid," 2008. instruments when Member, Financial Economists Roundtable, 2008 + Member, Executive Committee, Society for Financial Studies, 2005-8 President, Society for Financial Studies, 2002-2005. President, Western Finance Association, 2004-2005. President Elect and Program Chair, Western Finance Association, 2004. Member, Option Valuation Group, FASB, 2003-2004. Vice President, Western Finance Association, 2003. Director, American Finance Association, 1998-2000 and 2002-2004 Vice-President, Society for Financial Studies, 1999-2002. Member of the Share-based Payment Advisory Group, IASB, 2002 Director, Western Finance Association, 1997-2000

#### **Current Editorial positions:**

Advisory Board Member, *Quarterly Journal of Finance*, 2011+ Advisory Board Member, *Journal of Investment Consulting*, 2010+ Editorial Advisor, *Journal of Investment Management*, July 2003+ Associate Editor, *Review of Quantitative Finance and Accounting*, 1994+ Member of the Advisory Board, *Journal of Financial Econometrics*, 2000+

#### **Past Editorial Positions:**

Co-Editor, Journal of Financial Econometrics, 2008-2009

Associate Editor, *Journal of Portfolio Management*, 2004-2009 Department Editor of Finance, *Management Science*, July 2001- April 2003 Executive Editor, *Review of Financial Studies*, 1996-99 Associate Editor, *Management Science*, 1994-2001 Associate Editor, *The Journal of Finance*, 1994-1996. Editor, *Review of Financial Studies*, 1994-96. Associate Editor, *Finance Letters*, 2003-2009 Associate Editor, *Financial Management*, 1999-2009

# Membership in Professional Organizations:

Research Associate, National Bureau of Economic Research (1998+) Fellow of the Society for Financial Econometrics (2013+) Senior Fellow of the Asian Bureau of Finance and Economic Research (2014+)

## Awards:

2014 Graham & Dodd, Murray, Greenwald Prize for Value Investing Prize for Value Investing (shared with William E. Simon Jr.)

1982 Alexander Henderson Award for excellence in economics

## **OUTSIDE ACTIVITIES**

### Honorary (Unpaid) Position:

Academic Council, BSE Institute Ltd., Mumbai, India (July 2011 – December 2013)

#### **Consulting Positions:**

Advisor, Product Development, DSC Quantitative Group, LLC. 2013+ Advisor, Product Development, Select Innovation Investments, LLC (earlier known as Chicago Alternative Investment Partners, 2005+ Consultant, Federal Reserve Bank of Chicago

## **Past Consulting Activities:**

Have worked as an *ad hoc* consultant to a few Fortune 500 firms and various Federal Reserve Banks

# **Academic Publications:**

With Binying Liu, "Dividend Dynamics, Learning, and Expected Stock Returns," NBER WP 21557, Link: <u>http://www.nber.org/papers/w21557</u>, forthcoming Journal of Finance.

With Jose Liberti, Binying Liu, and Iwan Meier, "A Firm's Cost of Capital," <u>The Annual</u> <u>Review of Financial Economics</u>, 9:259–82, 2017.

With David Matsa, Iwan Meier and Vefa Tarhan, "Why do firms use high discount rates". Journal of Financial Economics 120 No. 3, 2016.

With Srikant Marakani, "Price Dividend Ratio Factors: Proxies For Long Run Risk," <u>Review of Asset Pricing Studies</u>, 5 (1), 2015.

With Andrei Jirnyi and Ann E. Sherman, "Share Auctions of Initial Public Offerings: Global Evidence," Journal of Financial Intermediation, Volume 24, Issue 3, July 2015,

With Mudit Kapoor and Ernst Schaumburg, "Causes of the Great Recession of 2007-9: The Financial Crisis was the Symptom not the Disease!" Journal of Financial Intermediation, Volume 22, Issue 1, January 2013

With Srikant Marakani, Hitoshi Takehara and Yong Wang, "Calendar Cycles, Infrequent Decisions and the Cross Section of Stock Returns," <u>Management Science</u> *March 2012* 58:507-522

With Zhi Da and Re-Jin Guo, "CAPM for Estimating the Cost of Equity Capital: Interpreting the Empirical Evidence," <u>Journal of Financial Economics</u>, Vol 103, 2012, Pages: 204-220

With Zhi Da and Paul Gao, "Impatient Trading, Liquidity Provision, and Stock Selection by Mutual Funds," <u>Review of Financial Studies</u>, Vol 24, Number 3, March 2011, Pages: 675-720.

With Ernst Schaumburg and Guofu Zhou, "Cross-Sectional Asset Pricing Tests," <u>Annual</u> <u>Review of Financial Economics</u>, Vol. 2, December 2010, Pages 49-74.

With Dmitry Novikov and Alexey Malakov, "Do Hot Hands Exist Among Hedge Fund Managers? An Empirical Evaluation," Journal of Finance, February 2010.

With Gopal Basak and Tongshu Ma "Jackknife Estimator for Tracking Error Variance of Optimal Portfolios," <u>Management Science</u>, Vol. 55, No. 6, June 2009, pp. 990-1002.

With Yong Wang, "Lazy Investors, Discretionary Consumption, and the Cross Section of Stock Returns," August 2007, Journal of Finance.

With John Boyd and Jian Hu, "The Stock Market's Reaction to Unemployment News: Why Bad News May Some Times Be Good For Stocks?," Journal of Finance, April 2005.

With Andrew Kaplin and Steve Guoqiang Sun, "An Evaluation of Multi-Factor CIR Models Using LIBOR, Swap Rates, and Cap and Swaption Prices", <u>Journal of Econometrics</u>, Volume 116, Issues 1-2, September-October 2003, Pages 113-146

With Tongshu Ma, "Risk Reduction in Large Portfolios: Why Imposing the Wrong Constraints Helps," Journal of Finance, 58.4 (2003): 1651-1683.

With Iwan Meier, "Do we need CAPM for capital budgeting?" <u>Financial Management</u>, Volume 31, Number 4, Winter, 2002.

With George Skoulakis and Zhenyu Wang, "Generalized Method of Moments: Applications in Finance, <u>Journal of Business and Economic Statistics</u>, Volume 20, Number 4, October 2002.

With Zhenyu Wang, "Empirical Evaluation of Asset Pricing Models: A Comparison of the SDF and Beta Models," <u>Journal of Finance</u>, Vol. 57, No. 5, October 2002, pages 2337-2368.

With Gopal Basak and Guoqiang Sun, "A Test for Mean Variance Efficiency When Shortselling is Prohibited", <u>Journal of Economic Dynamics and Control</u>, 26, 2002, 1195–1215.

With Shaker Srinivasan, "Does product market competion reduce agency costs?", Special <u>Finance Issue of the North American Journal of Finance</u>, 10, 1999, 387-399.

With Jane Saly and Steven J. Huddart, "Valuing the Reload Features of Executive Stock Options", Accounting Horizons, September 1999. Abstracted in "Status Report", Financial Accounting Series, Financial Accounting and Standards Board of the Financial Accounting Foundation, September 29, 2000.

With Zhenyu Wang, "An Asymptotic Theory For Estimating Beta-Pricing Models Using Cross-Sectional Regression", Journal of Finance, July 1998.

With Zhenyu Wang, "A note on the asymptotic covariance in Fama-MacBeth regression", Journal of Finance, April 1998.

With Keiichi Kubota and Hitoshi Takehara, 'Relationship between labor-income risk and average return: Empirical evidence from the Japanese stock market", <u>Journal of Business</u>, July 1998.

With Murray Frank, "Why do stock prices drop by less than the value of the dividend? Evidence from a country without taxes", <u>Journal of Financial Economics</u>, Volume 47, Issue 2, February 1998.

With Lars Peter Hansen, "Assessing specification errors in stochastic discount factor models, Journal of Finance, June 1997

With Zhenyu Wang, "The Conditional CAPM and the Cross-section of Expected Returns", <u>Journal of Finance</u>, Vol 51, No. 1, March 1996. Summarized in "Investments" by Zvi Bodie, Alex Kane and Alan J. Marcus, Chapter 13, pages 386-390, 4<sup>th</sup> Edition, Irwin McGraw-Hilll, 1999.

With John Boyd, "Ex-Dividend Price Behavior of Common Stocks", <u>Review of Financial</u> <u>Studies</u>, Vol. 7, Issue 4, 1994.

With Lawrence Glosten, "A Contingent Claims Framework for Analyzing the Performance of Portfolio Managers", Journal of Empirical Finance, **1**, 1994, pages: 133-160.

With Lawrence Glosten and David Runkle, "On the relation between the expected value and the volatility of the nominal excess return on stocks", <u>The Journal of Finance</u>, Vol. 48, No.5, December 1993, pages: 1779-1801.

With Lars Peter Hansen, "Implications of security market data for models of dynamic economies", Journal of Political Economy, vol.99, no.2, 1991. Summarized in "Economic Survey of Japan", 1997; "The Econometrics of Financial Markets" by John Y. Campbell, Andrew W. Lo and A. Craig MacKinlay, Princeton University Press, 1997, pages 296-304; "Recursive Macroeconomic Theory" by Lars Ljungqvist and Thomas J. Sargent, The MIT Press, 2000, pages 265-271; "Asset Pricing" byJohn H. Cochrane, Princeton University Press, 2001, pages 95-100.

With Fumio Hayashi, "Ex-day behavior of Japanese stock prices: New insights from new methodology", Journal of Japanese and International Economies, 4, 1990.

With V. V. Chari and Larry E. Jones, "Price Stability and Futures Trading in Commodities," <u>Quarterly Journal of Economics</u>, May 1990.

With William Breen and Lawrence Glosten, "Economic Significance of Predictable Variations in Stock Index Returns", Journal of Finance, December 1989, Vol. 44, No.5.

With V. V. Chari, "Adverse Selection in a Model of Mortgage Lending", <u>Journal of Finance</u>, June 1989, Vol. 44, No. 2.

With Thomas R. Palfrey, "The Effects of Insider Trading Disclosures on Speculative Activity and Futures Prices", <u>Economic Inquiry</u>, 1989, Vol XXVII, No.3.

With V. V. Chari, "Banking Panics, Information and Rational Expectation Equilibrium," Journal of Finance, vol. 43, No. 3, July 1988. Reproduced in "The Regulation and Supervision of Banks" edited by Maximilian J.B. Hall, Edward Elgar Publishing Limited, 2000.

With V. V. Chari and Aharon R. Ofer, "Seasonalities in Security Returns: the Case of Earnings Announcements," Journal of Financial Economics, vol 21, No.1, May 1988.

With Robert A. Korajczyk, "Assessing the Market Timing Performance of Managed Portfolios," Journal of Business, 59, #2, 1986.

With William Breen and Aharon R. Ofer, "Correcting for Heteroscedasticity in Tests for Market Timing Ability," Journal of Business, vol. 59, No. 4, Part 1, October 1986.

"An Investigation of Commodity Futures Prices Using the Consumption Based Intertemporal Capital Asset Pricing Model," Journal of Finance, March 1985.

"Call Options and the Risk of Underlying Securities," <u>Journal of Financial Economics</u>, 13 (1984).

# **Applied Insights:**

With Ashwin Ravikumar and Marco Sammon, "Environmental, Social, and Governance (ESG) Criteria: Why Investors Should Care," *Journal of Investment Management, Vol. 16, No. 1, (2018), pp. 18–31* under . Appeared as "Environmental, Social, and Governance (ESG) Criteria: Why Investors are Paying Attention", NBER WP No. 24063. Link: http://www.nber.org/papers/w24063.ack

With Robert A. Korajczyk, "Market Timing." Book chapter. *Handbook of Portfolio Theory and Practice*, Ed. William B. Ziemba, World Scientific Press, 2016.

With Morten Sorensen, "Public Market Equivalents and Private Equity Performance", *Financial Analyst Journal*, No 4, Vol 71, 2015.

With Arik Ben Dor, Iwan Meier, and Zhe Xu, "What Drives the Tracking Error of Hedge Fund Clones?" *The Journal of Alternative Investments*, Fall 2012

With John H. Boyd and Sungkyu Kwak, "What Caused The Current Financial Mess and What Can We Do About It?" Journal of Investment Management, Fourth Quarter, 2009.

With John H. Boyd, "Avoiding the Next Crisis," *Economists' Voice*, Vol. 6 : Iss. 7, Article 1, 2009.

With John Boyd and Qianqiu Liu, "The Stock Market's Reaction to Unemployment News, Stock-Bond Return Correlations, and the State of the Economy, Journal of Investment Management, Vol 4, No. 4, Fourth Quarter 2006, Pages 73-90.

With Ann E. Sherman, "Reforming the Book Building Process," Forthcoming, <u>Journal of Applied Corporate Finance</u>, 2005.

With Arik Ben Dor and Iwan Meier, "Understanding Mutual Fund and Hedge Fund Styles Using Return Based Style Analysis," Journal of Investment Management, Vol. 1, No. 1, 2003, pages: 97-137.

With Ellen R. McGrattan and Anna Scherbina, "The Declining U.S. Equity Premium", NBER working paper 8132, Federal Reserve Bank of Minneapolis <u>Quarterly Review</u>, Fall 2000.

With Narayana Kocherlakota, "Why Should Older People Invest Less in Stocks than Younger People?: An Economic Analysis of Financial Planners' Advice", Federal Reserve Bank of Minneapolis <u>Quarterly Review</u>, Summer 1996. Abstracted in "The CFA Digest", Spring 1997, Vol. 27, No. 2.

Relation between the slopes of the conditional and unconditional mean-standard deviation frontiers of asset returns, 1996, <u>Modern Portfolio Theory and Applications: Inquiries into</u> <u>Asset Valuation Problems</u>, Edited by S. Saitou, K. Sawaki, and K. Kubota, Published by the Center for Academic Societies Japan, Osaka, pages: 1-8.

With Ellen McGrattan, The CAPM Debate, Federal Reserve Bank of Minneapolis <u>Quarterly Review</u>, Fall 1995.

With V.V.Chari, "The simple analytics of commodity futures markets: Do they stabilize prices? Do they raise welfare?", Federal Reserve Bank of Minneapolis <u>Quarterly Review</u>, Summer 1990.

With Zhenyu Wang, "The CAPM Is Alive and Well", Staff Report 165, Federal Reserve Bank of Minneapolis, November 1993. Reproduced in the "The Valuation Compilation" of Center for Economic and Industry Research.

# **Book Chapters:**

With George Skoulakis and Zhenyu Wang, "Analysis of large cross-sections of security returns", Aït-Sahalia, Yacine, and Lars Peter Hansen, eds. <u>Handbook of Financial Econometrics: Tools and Techniques</u>, Vol. 1, Elsevier, 2009.

With Arik Ben-Dor, "Style Analysis: Asset Allocation and Performance Evaluation", in "The Handbook of Equity Style Management", Edited by T. Daniel Coggin, and Frank J. Fabozzi, John Wiley, 2002.

With Wayne E. Ferson, "Econometric Evaluation of Asset Pricing Models", 1996, <u>Handbook of Statistics, Vol 14: Statistical Methods in Finance</u>, Edited by G.S. Maddala, Published by Elsevier Science Publishers B.V.

# **Book Reviews:**

Review of "Options: Theory, Strategy, and Applications" by Peter Ritchkin; Glenview, IL, Scott Foresman and Co., 1987 for the Journal of Finance

## Cases:

Joint with Iwan Meier, "Trump Entertainment Resorts, Inc," November 2010

Joint with Iwan Meier, "Liz Claiborne Inc," November 2010

Joint with Iwan Meier, "MEMC Electronic Materials," December 2010

Joint with Iwan Meier, "Hudson General Corporation," January 2010

Joint with Zhi Da, "Convertible Bonds of Countrywide Financial Corportion," January 2007

Joint with Paul Gao, and Eric Green "Extraordinary Value Partners," January 2007

## Working Papers:

With Kent Daniel and Soohun Kim, "A Hidden Markov Model of Leverage Dynamics, Tail Risk, and Value-Momentum Correlation," WP December 2017. Presented at the 2018 Annual Meeting of the American Finance Association.

With Mila Getmansky, Loriana Pelizzon, Ernst Schaumburg, and Darya Yuferova "Stock Price Crashes: The Role of Capital Constrained Traders", NBER WP No. 24098, December 2017. Link: <u>http://www.nber.org/papers/w24098</u>.

With Ben Chabot and Eric Ghysels,"Momentum Trading, Return Chasing, and Predictable Crashes," SSRN WP 2516796, November 2014. Link: http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2516796

With Zhi Da and Jianfeng Shen, "Growth Expectations, Dividend Yields, and Future Stock Returns," NBER Working Paper 20651, October 2014. Link: http://www.nber.org/papers/w20651

With Zhi Da and Jianfeng Shen, "Investor Optimism, Sales Fixation, and Firm Life Cycle," December 2013. Earlier version appeared under the title "Building Castles in the Air: Evidence from Industry IPO Waves". Link: <u>http://www.nber.org/papers/w18555</u>

With Suman Banerjee, "Destabilizing Commodity Market Speculation", WP October 2013.

"Momentum Cycles and Limits to Arbitrage: Evidence from the Stock Exchanges of Victorian England and the Post-Depression United States," NBER w15591 December 2009. Link: <u>http://www.nber.org/papers/w15591</u>

With Paul Gao and Joey Engelberg, "An Anatomy of Pairs Trading: The Role of Idiosyncratic News, Common Information, and Liquidity," Revised February 2009. Link: http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=1330689

# **MBA Courses:**

Investments, Value Investing, and Analytical Finance Practicum.

# PhD Students (Chair):

S. Maheswaran, Gahng Sohk Koh, Chandra Subramanyam, Zhenyu Wang, Gary TeSelle, Guoqiang Sun, Yan Gao, Anna Shcherbina, Ronnie Sadka, Andrew Kaplin, Antonio Silva, Arik Ben-Dor, Dmitry Novikov, Lubomira Ivanova, Yong Wang, Alexey Malakhov, George Skoulakis, Zhi Da, Paul Gao, Andrei Jirnyi, Srikant Marakani, Sharon Yang, Jingling Guan, Soohun Kim, Dermot Murphy, Andrea Yinjia Lu, Zhuo Chen, Chun-kai (Kevin) Tseng, Andrew Thompson, Binying Liu