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Curriculum Vitae

KENNETH J. SINGLETON

Office Address: Knight Management Center **Phone:** (650) 723-5753
Stanford University
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Education: Ph.D. in Economics, University of Wisconsin, August 1977
Dissertation: The Cyclical Behavior of the Term Structure of
Interest Rates
M.S. in Economics, University of Wisconsin, 1977
B.A. in Mathematics-Economics, Reed College, May 1973

ACADEMIC AND RESEARCH POSITIONS:

Adams Distinguished Professor of Management, Graduate School of Business,
Stanford University, May 2004-present.

Professor of Economics (By Courtesy), Stanford University, March 2012-present.

Special Advisor, Research Division, International Monetary Fund, January –
June, 2009.

Senior Associate Dean for Academic Affairs, Stanford GSB, June 2005-2008.

C. O. G. Miller Distinguished Professor of Finance, Graduate School of Business,
Stanford University, July 1987-April 2004.

Vice-President, Fixed Income Research, Goldman Sachs Corp., September 1991-
December 1992.

Visiting Professor, Department of Economics, University of Tokyo, April-
September 1992.

Visiting Scholar, Fixed Income Research Division, Goldman, Sachs and Co.,
July-December 1990.

Visiting Scholar, Institute for Monetary Studies, Bank of Japan, September-
October, 1988.

Professor of Economics, Graduate School of Industrial Administration, Carnegie-
Mellon University, September 1982-June 1987.

CRSP Visiting Professor of Finance, Graduate School of Business, University of Chicago, September 1986-December 1986.

Associate Professor of Economics, Graduate School of Industrial Administration, Carnegie-Mellon University, September 1981-August 1982. Assistant Professor of Economics, September 1980-August 1981.

Assistant Professor, Department of Economics, University of Virginia, September 1977-June 1980.

PROFESSIONAL ACTIVITIES:

Managing Editor, Journal of Finance (July, 2012-2016)

Editor, Review of Financial Studies (2000-2003)

Associate Editor

Review of Asset Pricing Studies (2011-)

Journal of the Japanese and International Economies (1990-)

Journal of Fixed Income (1991-)

Journal of Computational Finance (1997-)

Journal of Finance (2000-2003)

Journal of Econometrics (1985-2000)

Financial Analysts Journal (1998-2000)

Econometrica (1987- 1993)

Review of Economic Studies (1986-1989)

Review of Financial Studies (1987-90)

Other Activities:

Executive Committee, American Finance Association, 2012-16

Member, Consortium on Financial Systems and Poverty, 2010-

President, Society for Financial Studies, 2011-12

Research Associate, National Bureau of Economic Research, since 1982

Vice-President, Society for Financial Studies, 2008-2011

Board of Directors, American Finance Association, 1994-1997, 2004-2007

Advisory Board, Graduate School of Industrial Administration, Carnegie Mellon University, 1992-1996, 1999, 2005 (Co-chair, 1999 and 2005)

Vice-President, Western Finance Association, 1990-1993

President, Western Finance Association, 1993-1994

Editorial Board, American Economic Review, 1987-90

Economics Panel, National Science Foundation, 1986-1988

Various Program Committees for Summer Meetings of the Econometric Society, Winter Meetings of the Econometric Society, and Western Finance Association Meetings

AWARDS:

Stephen A. Ross Prize in Financial Economics, 2015
Fellow, Society for Financial Econometrics, 2014
All Star Paper, *Journal of Financial Economics*, 2001
Smith-Breeden Distinguished Paper Prize, *Journal of Finance*, 2000
Fellow of the *Journal of Econometrics*, 1998
Smith-Breeden Distinguished Paper Prize, *Journal of Finance*, 1997
Fellow of the Econometric Society, 1988
Frisch Prize from the Econometric Society, 1984
Irving Fisher Award, 1978

PUBLICATIONS:**Articles:**

- "Interpreting the Likelihood of Ratio Statistic in Factor Models when Sample Size is Small," (with J. Geweke), *Journal of American Statistical Association* 75, March 1980, 133-137.
- "A Latent Time Series Model of the Cyclical Behavior of Interest Rates," *International Economic Review* 21, October 1980, 559-575.
- "Maturity - Specific Disturbances and the Term Structure of Interest Rates," *Journal of Money, Credit and Banking* 12, November 1980, 603-614.
- "Expectation Models of the Term Structure and Implied Variance Bounds," *Journal of Political Economy* 88, December 1980, 1159-1176.
- "Multinational Inflation Under Fixed Exchange Rates: Some Empirical Evidence from Latent Variable Models," (with E. Feige), *Review of Economics and Statistics* 63, February 1981, 11-19.
- "Maximum Likelihood 'Confirmatory' Factor Analysis of Economic Time Series," (with J. Geweke), *International Economic Review* 22, February 1981, 35-52.
- "Latent Variable Models for Time Series: A Frequency Domain Approach with an Application to the Permanent Income Hypothesis," (with J. Geweke), *Journal of Econometrics* 17, December 1981, 287-304.
- "A Test of Separate Families of Distributions Based on the Empirical Moment Generating Function," (With T. Epps and L. Pulley), *Biometrika* 69, August 1981, 391-399 (a condensed version of this paper is reprinted in *1981 Proceedings of Business and Economics Section of the American Statistical Association*).
- "On Unit Roots and the Empirical Modeling of Exchange Rates," (with R. Meese), *Journal of Finance* 37, September 1982, 1029-1035.
- "Generalized Instrumental Variables Estimation of Nonlinear Rational Expectations Models," (with L. Hansen), *Econometrica* 50, September 1982, 1269-1286.

- "Stochastic Consumption, Risk Aversion, and the Temporal Behavior of Asset Returns," (with L. Hansen), *Journal of Political Economy* 91, April 1983, 249-265.
- "Real and Nominal Factors in the Cyclical Behavior of Interest Rates, Output, and Money," *Journal of Economic Dynamics and Control* 5, May 1983, 289-310.
- "An Empirical Analysis of the pricing of Mortgage-Backed Securities," (with K. B. Dunn), *Journal of Finance* 38, May 1983, 613-623.
- "Rational Expectations and the Volatility of Floating Exchange Rates," (with R. Meese), *International Economic Review* 24, October 1983, 721-733.
- "Testing Specifications of Economic Agents' Intertemporal Optimum Problems in the Presence of Alternative Models," *Journal of Econometrics* 30, November 1985, 391-413.
- "Modeling the Term Structure of Interest Rates Under Non-separable Utility and Durability of Goods," (with K. Dunn), *Journal of Financial Economics* 17, 1986, 27-55.
- "Do Equilibrium Real Business Cycle Theories Explain Post-war U.S. Business Cycles?," (with M. Eichenbaum), in *NBER Macroeconomics Annual* 1986, ed. S. Fischer, Cambridge: MIT Press, 91-134.
- "An Omnibus Test for the Two-Sample Problem Using the Empirical Characteristic Function," (with T. W. Epps), *Journal of Statistical Computation and Simulation*, 1986.
- "Asset Prices in a Time Series Model with Disparately Informed, Competitive Traders," Chapter 12 in *New Approaches to Monetary Economics*, Proceedings of The Second International Symposium in Economic Theory and Econometrics, eds. W. Barnett and K. Singleton, Cambridge: Cambridge University Press, 1987.
- "Speculation and the Volatility of Floating Exchange Rates," in K. Brunner and A. Meltzer, eds., *Carnegie-Rochester Conference Series on Public Policy*, Vol 26, Spring 1987, 9-56.
- "A Time Series Analysis of Representative Consumer Models of Consumption and Leisure Choice Under Uncertainty," (with M. Eichenbaum and L. Hansen), *Quarterly Journal of Economics*, February 1988, 51-78.
- "Econometric Issues in the Analysis of Equilibrium Business Cycle Models," *Journal of Monetary Economics*, 21, 1988, 361-386.
- "Modeling the Term Structure of Interest Rates in General Equilibrium," in *Theory of Valuation: Frontiers of Modern Financial Theory*, Vol 1, eds. S. Bhattacharya and G. Constantinides, Rowan and Allenheld Publishers, 1989.

- "Specification and Estimation of Intertemporal Asset Pricing Models," in *Handbook of Monetary Economics*, eds. B. Friedman and F. Hahn, Amsterdam: North Holland, 1990.
- "Computing Semiparametric Efficiency Bounds for Linear Time Series Models with Moving Average Errors," in *Nonparametric and Semiparametric Methods in Econometrics and Statistics*, eds. W. Barnett, J. Powell, and G. Tauchen, Cambridge University Press (with L. Hansen), 1990.
- "Interpreting Changes in the Volatility of Yields on Japanese Long-Term Bonds," in *Monetary and Economic Studies*, Vol. 8 No. 1, Bank of Japan, January 1990.
- "Kokusai no taumu storakuchya moderu," (with Tadashi Kikugawa), *Shoken Analysts Journal* 30, June 1992, 18-23 (in Japanese). Reprinted in *Shoken Analysts Journal* Shurai Ronbunshu, Nihon Shoken Analysts Kyokai, 1992.
- "Econometric Implications of Consumption-Based Asset Pricing Models," in *Advances in Econometrics, Sixth World Congress* J. J. Laffont and C. A. Sims, eds., Cambridge University Press, 1993.
- "Japanese Corporate Investment and Bank of Japan Guidance of Commercial Bank Lending," (with T. Hoshi and D. Scharfstein), in *Japanese Monetary Policy*, K. Singleton, ed., University of Chicago Press, 1993.
- "Simulated Moments Estimation of Markov Models of Asset Prices," (with D. Duffie), *Econometrica*, Vol. 61 (1993), pp. 929-952.
- "Yield Curve Risk Management for Government Bond Portfolios: An International Comparison," in *Risk Management: Challenges and Solutions*, W. Beaver and G. Parker, eds., McGraw Hill, 1995, 295-321.
- "Institutional and Regulatory Influences on Price Discovery in Cash and Futures Bond Markets," in *The Industrial Organization of Securities Markets*, A. Lo editor, National Bureau of Economic Research, forthcoming, 1994.
- "Yield Curve Risk in Japanese Government Bond Markets," *Japanese Journal of Financial Economics*, Vol. 1, December 1994, 5-32.
- "Modeling the Term Structure of Interest Rates in Japan," (with T. Kikugawa), *Journal of Fixed Income*, Vol. 4, September 1994, 7-16.
- "Efficient Estimation of Linear Asset Pricing Models with Moving Average Errors," (with L. Hansen), *Journal of Business and Economic Statistics*, Vol. 14, 1996, 53-68.
- "An Econometric Model of the Term Structure of Interest-Rate Swap Yields," (with Darrell Duffie), *Journal of Finance*, Vol. LII, September 1997, 1287-1321.

- "Equilibrium Asset Prices and Savings of Heterogeneous Agents in the Presence of Portfolio Constraints," *Macroeconomic Dynamics*, 3, 1999, 243-277.
- "Modeling Term Structures of Defaultable Bond Yields," (with Darrell Duffie), *Review of Financial Studies*, 12, 1999, 687-720.
- "Specification Analysis of Affine Term Structure Models," (with Qiang Dai), *Journal of Finance*, LV, 2000, 1943-1978.
- "Transform Analysis and Asset Pricing for Affine Jump-Diffusions," (with D. Duffie and J. Pan), *Econometrica*, 68, 2000, 1343-1376.
- "Yield Curve Risk in Japanese Government Bond Markets," *International Review of Finance*, 1:2, 2000, 97-121.
- "Estimation of Affine Asset Pricing Models Using the Empirical Characteristic Function," *Journal of Econometrics*, 102, 2001, 111-141.
- "Expectations Puzzles, True-Varying Risk Premia, and Affine Models of the Term Structure," (with Qiang Dai), *Journal of Financial Economics*, 63, 2002, 415-441.
- "Pricing Coupon Bond Options and Swaptions in Affine Term Structure Models," (with Len Umantsev), *Mathematical Finance*, 12, 2002, 427-446.
- "Modeling Sovereign Yield Spreads: A Case Study of Russian Debt," (with D. Duffie and L. Pedersen), *Journal of Finance*, 55, 2003, 119-159.
- "Term Structure Modeling in Theory and Reality," (with Qiang Dai), *Review of Financial Studies*, 16, 2003, 631-678.
- "Fixed Income Pricing," (with Qiang Dai), *Handbook of Economics and Finance*, Chapter 20, C. Constantinides, M. Harris, and R. Stulz, eds., North Holland, 2003.
- "Interpreting Recent Changes in the Credit Spreads of Japanese Banks," (with Jun Pan), *Monetary and Economic Studies*, Bank of Japan, 24, 2006, 129-150.
- "Regime Shifts in a Dynamic Term Structure Model of U.S. Treasury Bond Yields," (with Qiang Dai and Wei Yang), *Review of Financial Studies*, 20, 2007, 1669-1706.
- "Default and Recovery Implicit in the Term Structure of Sovereign CDS Spreads," (with Jun Pan), *Journal of Finance*, LXIII, 2008, 2345-2384.
- "Discrete-time Affine Q Term Structure Models with Generalized Market Prices of Risk," (with Qiang Dai and Anh Lee), *Review of Financial Studies*, 23, 2010, 2184-2227.
- "An Equilibrium Term Structure Model with Recursive Preferences," (with Anh Le), *American Economic Review, Papers and Proceedings*, 100, May, 2010, 557-61.

- “Estimation and Evaluation of Conditional Asset Pricing Models,” (with Stefan Nagel), *Journal of Finance*, 66, 2011, 873-909.
- “A New Perspective on Gaussian DTSMs,” (with Scott Joslin and Haoxiang Zhu), *Review of Financial Studies*, 24, 2011, 926-970.
- “How Sovereign is Sovereign Credit Risk?” (with Francis Longstaff, Jun Pan, and Lasse Pedersen), *American Economic Journal: Macroeconomics*, 3, 2011, 75-103.
- “Why Gaussian Macro-Finance Term Structure Models are (Nearly) Unconstrained Factor-VARs,” (with Scott Joslin and Anh Le), forthcoming, *Journal of Financial Economics*, 2012.
- “Term Structure Models and the Zero Bound: An Empirical Investigation of Japanese Yields,” (with Don Kim), *Journal of Econometrics*, 170, 2012, 32-49.
- “Investor Flows and the 2008 Boom/Bust in Oil Prices,” *Management Science*, 60, 2013, 300 – 308.
- “Gaussian Macro-Finance Term Structure Models with Lags,” (with Scott Joslin and Anh Lee), *Journal of Financial Econometrics*, 11, 2013, 581-609.
- “Risk Premiums in Dynamic Term Structure Models with Unspanned Macro Risks,” (with Scott Joslin and Marcel Pribsch), *Journal of Finance*, 69, 2014, 1197-1233.

Books:

- New Approaches to Monetary Economics*, Second International Symposium in Economic Theory and Econometrics, co-editor with William Barnett, Cambridge University Press, 1987.
- Japanese Monetary Policy*, Proceedings of an NBER conference on Japanese Monetary Policy, conference organizer and proceedings editor, University of Chicago Press, 1993.
- Credit Risk: Pricing, Management, and Measurement*, Princeton University Press, 2003.
- Empirical Dynamic Asset Pricing*, Princeton University Press, 2006.

Invited Comments:

- "Extracting Measures of Ex Ante Real Interest Rates from Ex Post Real Rates: A Comment," in *Carnegie-Rochester Conference Series on Public Policy: Vol. 15*, eds. K. Brunner and A. H. Meltzer, Amsterdam: North Holland, 1981, 201-212.
- "Risk Averse Speculation in the Forward Foreign Exchange Market: A Comment," in *Exchange Rates and International Economics*, ed. Jacob Frenkel, Chicago: University of Chicago Press, 1983.

"Comments on 'The Mechanisms of the Business Cycle in the Postwar Era'," in *The American Business Cycle - Continuity and Change*, ed. R. J. Gordon, Chicago: University of Chicago Press, 1985.

"Discussion of 'Adjustment Costs and Capital Asset Pricing'," *Journal of Finance*, Vol. 40, 1985, 705-709

Working Papers:

"Ratings-Based Term Structures of Credit Spreads," (with D. Duffie), September, 1998.

"Simulating Correlated Defaults," (with D. Duffie), April, 1999.

"The Asymptotic Distribution of Reduced-Rank Regression Estimators," (with Anh Le), November, 2010.

"Risk Premiums Implicit in the Term Structure of Oil Futures Prices," (with Kristoffer Laursen), November, 2014.

"A Robust Analysis of the Risk-Structure of Affine Equilibrium Models of Bond Yields," (with Anh Le), November, 2015.

"Learning, Dispersion of Beliefs, and Risk Premiums in an Arbitrage-free Term Structure Model," (with Marco Giacometti and Kristoffer Laursen), December, 2015.

TEACHING EXPERIENCE:

Graduate Courses:

Econometrics, Empirical Issues in Finance, Financial Economics, and Macroeconomics.

MBA Courses:

Market and Credit Risk Management for Financial Institutions, Global Financial Risk Management, Money and Capital Markets, Statistics and Regression Analysis.

Executive Education:

Stanford Visa SAFEA program, 2012 – 2015.

Empirical Asset Pricing, International Monetary Fund, 2002, 2003, 2004.

Credit Risk Management and Pricing (multiple offerings).

Market and Credit Risk Management for Financial Institutions (Summer 1997, Spring, 1998, Spring, 1999).

Stanford Financial Management Program

London-Stanford International Investment Management Program, July 1988-1991.
Nomura Management School (Japan) Finance Program, October 1992-1995.
US Trust Program, Stanford, 2007, 2008.

UNIVERSITY SERVICE:

Carnegie-Mellon University:

Search Committee for new Dean of GSIA, 1981-82.
Chair, Economics and Finance Recruiting Committee, 1983-85. University Policy Committee, 1985-1987.
University Committee for Tenured Appointments, 1985-1987.

Stanford University:

Faculty Advisor, GSB Impact Fund, 2015-
Dean's Advisory Group, 2015-
Recruiting, Stanford Center for Innovation in Developing Economies, 2013
Research Oversight Committee, Stanford Center for Innovations in Developing Economies, 2012-
Chair, Recruiting, Stanford Center for Innovation in Developing Economies, 2012
Senior Associate Dean for Academic Affairs, GSB, 2005-2008.
Director, Ph.D. Program, GSB, 2003-2008.
Steering Committee, Financial Mathematics Program, 2001-
Finance Committee, Board of Trustees, 2000-2002.
University Advisory Panel on Investment Responsibility, 1996.
Co-director, Financial Research Initiative, 1995-98.
Search Committee for new Dean of GSB, 1989-90.
Area Coordinator for Finance, 1989-91, 1994-95.
Faculty Advisory Committee for Computing at the GSB, 1989-1991.

External Review Committees:

Finance Department, Wharton School, 2006. GSIA,
Carnegie Mellon University, 1999, 2005. Finance
Department, Northwestern University, 1998.
Economics Department, University of North Carolina, 1999.

DOCTORAL STUDENT SUPERVISION:

| Student | Completion date | Current Affiliation |
|---------------------------------|------------------------|----------------------------|
| Ravi Jagannathan - reader | 1983 | Northwestern University |
| G. Peter Wilson - reader | 1985 | Boston College |
| Matthew Richardson - reader | 1989 | New York University |
| Mary Barth - reader | 1989 | Stanford University |
| Tom Smith - reader | 1990 | AGSM |
| Jacob (Kobi) Boudoukh - advisor | 1991 | Israel |
| Richard Stanton - advisor | 1992 | U.C. Berkeley |
| Robert Whitelaw - advisor | 1993 | New York University |
| Rui Kan - reader | 1994 | Morgan Stanley |
| Stephen Gray - advisor | 1996 | Queensland University |
| Ming Huang - reader | 1996 | Cornell University |
| Qiang Dai - advisor | 1998 | Independent |
| Guojun Wu - advisor | 1998 | University of Houston |
| Andrew Ang - advisor | 1999 | Columbia University |
| Jun Liu - advisor | 1999 | UCSD |
| Jun Pan - advisor | 2000 | MIT |
| Lasse Pedersen - advisor | 2001 | Copenhagen Business |
| Len Umantsev - advisor | 2001 | Morgan Stanley |
| Joe Chen - reader | 2002 | UC-Davis |
| Neng Wang - advisor | 2002 | Columbia University |
| Don Kim – advisor | 2004 | Federal Reserve Board |
| Wei Yang – advisor | 2005 | Indiana University |
| Peyron Law – reader | 2005 | Capula Asset Mngmt |
| Jeremy Graveline – advisor | 2006 | Blackrock |
| Leandro Saita – reader | 2006 | Lehman Brothers |
| Albert Chun – reader | 2006 | Copenhagen Business |
| Scott Joslin – advisor | 2007 | USC |
| Haoxiang Zhu- advisor | 2012 | MIT |
| Marcel Priebisch, advisor | 2013 | Federal Reserve Board |
| Kristoffer Laursen, advisor | 2015 | AQR Capital |
| Marco Giacoletti, advisor | | |