Faculty Details proforma for DU Web-site

Title	Dr.	First Name	Pankaj	Last Name	Sinha

Photograph

Designation	**Professor of Financial Engineering** **Faculty of Management Studies**
Address	**56, Akanksha Apartment, B-9/12, Sector 62, Noida**
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Web-Page	**http://econpapers.repec.org/ras/psi282.htm** **http://ideas.repec.org/f/psi282.html**

Educational Qualifications

Degree	Institution	Year
Ph.D. (Bayesian econometrics)	**University of Delhi**	**1992**
M. Sc. (Statistics)	**University of Gorakhpur**	**1984**

Qualified UGC (Net) Examination in Econometrics 1987.

Computational proficiency in C-programming, R, SAS, WinBugs, EViews, Stata and SPSS.

Career Profile

Faculty of Management Studies University of Delhi	**Professor**	**2010- till date**	**Teaching and Research**
Faculty of Management Studies University of Delhi	**Associate Professor**	**2007-2010**	**Teaching and Research**
Kirori Mal College, University of Delhi	**Associate Professor**	**2006- 2007**	**Teaching and Research**
Kirori Mal College, University of Delhi	**Reader**	**2002-2006**	**Teaching and Research**
Kirori Mal College, University of Delhi	**Senior Lecturer**	**1998-2002**	**Teaching and Research**
Kirori Mal College, University of Delhi	**Lecturer**	**1992-1998**	**Teaching and Research**
Department of Statistics, University of Delhi	**Senior Research Fellow (UGC)**	**1989-1992**	**Research**
Department of Statistics, University of Delhi	**Junior Research Fellow (UGC)**	**1987-1989**	**Research**

Areas of Interest / Specialization

Bayesian econometrics, forecasting, financial econometrics, financial engineering, Investments and financial risk management, financial mathematics and computational finance.

Subjects Taught

- Teaching financial modeling, forecasting and quantitative analysis of financial decisions to MBA (II year) students.
- Teaching financial engineering and financial derivatives to MBA (II year) students.
- Teaching financial risk management to MBA (II year) students.
- Teaching econometrics and research methodology to Ph.D. students
- Teaching probability theory and statistical methods to MBA (I year) students.
- Teaching Quantitative Economics to probationers of Indian Economics Service at Institute of Economic Growth since 2004.
- Teaching Bayesian approach to evaluation of evidence, discriminatory power, probability of guilt, value of evidence and transfer of evidence to forensic scientists, police officers and Judges at National Institute of Criminology and Forensic Science since 2004.
- Taught econometrics and forecasting to M. Phil and Master of Business Economics students at Department of Business Economics, University of Delhi (south campus) since 2004 to April 2008.
- Delivered series of lectures on Quantitative Analysis for Management at IIM, Lucknow (Noida campus).
- Key speaker on Derivatives pricing and Trading Strategy in Quality Improvement Programmes(QIP) for Management Teachers conducted by MDI Gurgaon.
- Key speaker on Quantitative Techniques in Labour Research in various refresher courses at V.V. Giri National Labour Institute, Noida.
- Taught Probability Theory, Linear Models, C-programming, Numerical Analysis, Statistical Methods and Econometrics to B.Sc. (H) students at Kirori Mal College, University of Delhi since 1992 to April 2007.

Research Guidance

Supervision of Doctoral Thesis
Awarded : Five;
Under progress: Four

Publications Profile

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- In Indexed/ Peer Reviewed Journals

1. “Sensitivity of Bayesian Sampling Inspection Schemes to a Non Normal Prior Distribution,” ***Journal of Applied Statistics*, 1992, 19, 103-109.**
2. “Sensitivity of Bayes Estimates of Reliability and Reliable Life to a Non –Standard Prior,” ***Defence Science Journal*, 1992, 42 (2), 121-125.**
3. “ Robustness of Predictive Density and Optimal Treatment Allocation to Non-Normal Prior for the Mean,” ***Journal of the Korean Statistical Society*, 1993, 22 (2),235-247.**
4. “Bayesian Optimization Analysis with ML II $\in$ -Contaminated Prior,” ***Journal of Applied Statistics*, 2008, 35, 203-211.**
5. **“**Hierarchical Bayes Prediction for the 2008 US Presidential Election,” ***Journal of Prediction Markets*, 2008, 2, (3), 47-59.**
6. “Algorithm for payoff calculation for option trading strategies using vector terminology,” ***Journal of Applied Economic Sciences* 2009 , 4, 2(8), 273-281.**
7. “Bayes reliability measures of Lognormal and inverse Gaussian distributions under ML-II ε-contaminated class of prior distributions," ***Defence Science Journal 2010, 60(4)***
8. "**Myopic investment view of the Indian mutual fund industry**," Economic and Political Weekly, *2010, 26&27.*
9. “Evaluation of riskiness of Indian Banks and probability of book value insolvency”, ***International Research Journal of Finance and Economics 2010, issue 38*.**

10. “Hedging Greeks for a portfolio of options using linear and quadratic programming,” ***Journal of Prediction Markets*, 2010, 4, (1)**

11. Active Hedging Greeks of an Options Portfolio Integrating Churning and Minimization of Cost of Hedging Using Quadratic & Linear Programing, **Journal of Prediction Markets,** University of Buckingham Press, 2010 vol. 4(2), pages 1-14.

12. Modeling & Forecasting of Macro-Economic Variables Of India: Before, During & After Recession**, Journal of Applied Economic Sciences, 2011, 6(1(15)/ Sp), pages 43-60.**

13. Modelling profitability of Indian banks**," Research Journal of Social Sciences and Management, 2011, vol. 1. Number 4, 1-14.**

14. **"** Evolution of Security Transaction Tax in India" **International Journal of Intelligent Technologies and Applied Statistics, 2012, Vol.5, No.4, pp.405-422.**

15. **“**Prediction for the 2012 United States Presidential election using multiple regression model **" The Journal of Prediction Markets, 2012, vol6 2, 78-98.**

16. **“**Let PSUs breathe easy**, Upkram, 2012, vol 10 No38, pp.20-23.**

17. **"** Algorithm for construction of portfolio of stocks using Treynor’s ratio'**" Journal of Applied Research in Finance, 2012, Volume IV, Issue 1(7), Summer 2012**

18. **"**Securities Transacton Tax and Stock Market - An Indian Experience **" Finance India, June 2014, vol xxviii, No 2, pp 441-452**

19. Sinha, Pankaj & Chandwani, Abhishek & Sinha, Tanmay. 2014. "**Algorithm of construction of Optimum Portfolio of stocks using Genetic Algorithm**," International Journal of System Assurance Engineering and Management, vol.6, 1-19 ISSN: 0975-6809

20. Sinha, Pankaj & Mathur, Kritika, 2015. "**Price, Return and Volatility Linkages of Base Metal Futures traded in India**," *International Research Journal of Finance and Economics,*

Issue 130.April 2015, 35-54, ISSN: 1450-2887

21. Vardhan, Harsh, Sinha, Pankaj and Vij, Madhu. 2015. **Behavior of Indian sectoral stock price indices in the post subprime crisis period",** Journal of Advances in Management Research, Vol. 12 Issue 1 pp. 15 – 29,ISSN:0972-7981.

22. Sinha, Pankaj & Kohli, Deepti. 2015, "**Modeling exchange rate dynamics in India using stock market indices and macroeconomic variable**, *Amity Global Business Review*. PP 1-15, ISSN:0975-511X

23. . Sinha, Pankaj & Sharma, Sakshi & Sondhi, Kriti, "Market Valuation and Risk Assessment of Indian Banks using Black-Scholes -Merton Model," (Accepted for publication in Finance India March 2016).

24. Sinha Pankaj, Agnihotri Shalini, 2015. "Impact of non-normal return and market capitalization on estimation of VaR", Journal of Indian Business Research, Vol. 7 Iss: 3, pp.222 – 242.

25. Vardhan, Harsh & Sinha, Pankaj, 2016. "Influence of Foreign Institutional Investments (FIIs) on the Indian Stock Market: An Insight by VAR Models", Journal of Emerging Market Finance 15(1) 1–35

26. Sinha Pankaj & Sharma Sakshi, 2016. " Operational risk : Impact Assessment of the revised standardized approach on Indian Banks, Journal of Operational Risk, vol. 11, No 2

27. Sinha Pankaj, Agnihotri Shalini, (2016), Investigating Impact of Volatility Persistence and Information Inflow on Volatility of Stock Indices Using Bivariate GJR-GARCH", Global Business Review, 17(5) 1–17

28. Sinha, Pankaj & Sharma, Sakshi, 2016. "Determinants of bank profits and its persistence in Indian Banks: A study in a dynamic panel data framework," Journal of System Assurance Engineering and Management, DOI 10.1007/s13198-015-0388-9. (Springer)

29. Sinha, Pankaj & Sharma, Sakshi & Sondhi, Kriti, ,(2016), "Market Valuation and Risk Assessment of Indian Banks using Black-Scholes -Merton Model", Finance India Vol. XXX

No 1, 65-84.

30. Sinha, Pankaj & Sharma, Sakshi (2018), "Dynamics of Competition in the Indian Banking Sector", Economic and Political Weekly Vol. LIII No 13, 144-152.

- **Working Papers**:

1. Sinha, Pankaj & Kohli, Deepti, 2013. "**Modeling exchange rate dynamics in India using stock market indices and macroeconomic variables**," MPRA Paper 45816, University Library of Munich, Germany.
2. Sinha, Pankaj & Singhal, Anushree, 2013. "**FDI in Retail in India: An Empirical Analysis**," MPRA Paper 46833, University Library of Munich, Germany.
3. Sinha, Pankaj & Mathur, Kritika, 2013. "**A study on the Price Behavior of Base Metals traded in India**," MPRA Paper 47028, University Library of Munich, Germany.
4. Sinha, Pankaj & Mathur, Kritika, 2013. "**Price, Return and Volatility Linkages of Base Metal Futures traded in India**," MPRA Paper 47864, University Library of Munich, Germany.
5. Sinha, Pankaj & Sharma, Sakshi & Sondhi, Kriti, 2013. "**Market Valuation and Risk Assessment of Indian Banks using Black -Scholes -Merton Model**," MPRA Paper 47442, University Library of Munich, Germany.
6. Sinha, Pankaj & Singhal, Anushree & Sondhi, Kriti, 2012. "**Economic scenario of United States of America before and after 2012 U.S. Presidential Election**," MPRA Paper 41886, University Library of Munich, Germany.
7. Sinha, Pankaj & Thomas, Ashley Rose & Ranjan, Varun, 2012. "**Forecasting 2012 United States Presidential election using Factor Analysis, Logit and Probit Models**," MPRA Paper 42062, University Library of Munich, Germany.
8. Sinha, Pankaj & Goyal, Lavleen, 2012. "**Algorithm for construction of portfolio of stocks using Treynor's ratio**," MPRA Paper 40134, University Library of Munich, Germany.
9. Sinha, Pankaj & Bansal, Vishakha, 2012. "**Algorithm for calculating corporate marginal tax rate using Monte Carlo simulation**," MPRA Paper 40811, University Library of Munich, Germany.

10. Sinha, Pankaj & Jayaraman, Prabha, 2012. "**Empirical analysis of the forecast error impact of classical and bayesian beta adjustment techniques [Empirical Analysis of the Forecast Error Impact of Classical and Bayesian Beta Adjustment Techn**," MPRA Paper 37662, University Library of Munich, Germany.
11. Sinha, Pankaj & Arya, Deepshikha & Singh, Shuchi, 2012. "**Evolution of Financing Needs in Indian Infrastructure**," MPRA Paper 38741, University Library of Munich, Germany.
12. Sinha, Pankaj & Arora, Varun & Bansal, Vishakha, 2011. "**Determinants of Public Debt for middle income and high income group countries using Panel Data regression**," MPRA Paper 32079, University Library of Munich, Germany.
13. Sinha, Pankaj & Gupta, Sushant, 2011. "**Mergers and Acquisitions: A pre-post analysis for the Indian financial services sector**," MPRA Paper 31253, University Library of Munich, Germany.
14. Sinha, Pankaj & Gupta, Akshay, 2011. "**Analysis of WIMAX/BWA Licensing in India: A real option approach**," MPRA Paper 31280, University Library of Munich, Germany.
15. Sinha, Pankaj & Sharma, Gopalakrishna & Shah, Akash & Singh, Abhijeet, 2011. "**Algorithms for merging tick data and data analysis for Indian financial market**," MPRA Paper 32058, University Library of Munich, Germany.
    a. Sinha, Pankaj & Mudgal, Hemant, 2011. "**Valuation of 3G spectrum license in India: A real option approach**," MPRA Paper 31281, University Library of Munich, Germany.
16. Sinha, Pankaj & Sinha, Gyanesh, 2010. "**Volatility Spillover in India, USA and Japan Investigation of Recession Effects**," MPRA Paper 21873, University Library of Munich, Germany.
17. Sinha, Pankaj & Agnihotri, Shalini, 2014. "**Investigating impact of volatility persistence, market asymmetry and information inflow on volatility of stock indices using bivariate GJR-GARCH**," MPRA Paper 58303, University Library of Munich, Germany.
18. .Sinha, Pankaj & Bansal, Vishakha, 2014. "**Interrelationship between taxes, capital structure decisions and value of the firm: A panel data study on Indian manufacturing firms**," MPRA Paper 58310, University Library of Munich, Germany, revised 30 Jul 2014.
19. Sinha, Pankaj & Sharma, Sakshi, 2014. "**Determinants of bank profits and its persistence in Indian Banks: A study in a dynamic panel data framework**," MPRA Paper 61379,

University Library of Munich, Germany, revised 16 Jan 2015.

20. Sinha, Pankaj & Agnihotri, Shalini, 2014. "**Sensitivity of Value at Risk estimation to NonNormality of returns and Market capitalization**," MPRA Paper 56307, University Library of Munich, Germany, revised 26 May 2014.
21. Sinha, Pankaj & Mathur, Kritika, 2014. "**Efficient Indian Commodity Markets – Need for Comprehensive Warehousing System**," MPRA Paper 59930, University Library of Munich, Germany.
22. Sinha, Pankaj & Mathur, Kritika, 2015. "**Impact of Commodities Transaction Tax on Indian Commodity Futures**," MPRA Paper 63677, University Library of Munich, Germany.
23. Vardhan, Harsh & Sinha, Pankaj, 2015. "**Influence of Macroeconomic Variable on Indian Stock Movement: Cointegration Approach**,"MPRA Paper 64369, University Library of Munich, Germany, revised 10 May 2015
24. Vardhan, Harsh & Sinha, Pankaj, 2014. "**Influence of Foreign Institutional Investments (FIIs) on the Indian stock market**," MPRA Paper 53611, University Library of Munich, Germ
25. Vardhan, Harsh & Sinha, Pankaj, 2015. "Influence of Macroeconomic Variable on Indian Stock Movement: Cointegration Approach," MPRA Paper 64369, University Library of Munich, Germany, revised 10 May 2015.
26. Sinha, Pankaj & Mathur, Kritika, 2015. "Impact of Commodities Transaction Tax on Indian Commodity Futures," MPRA Paper 63677, University Library of Munich, Germany.
27. Sinha, Pankaj & Sharma, Sakshi & Ghosh, Sayan, 2015. "An empirical analysis of competition in the Indian Banking Sector in dynamic panel framework," MPRA Paper 68556, University Library of Munich, Germany, revised 28 Dec 2015.
28. Sinha, Pankaj & Agnihotri, Shalini, 2015. "Macroeconomic risk and firms financing decision: An empirical panel data investigation using system GMM," MPRA Paper 67088, University Library of Munich, Germany, revised 30 Sep 2015.
29. Kohli, Deepti & Sinha, Pankaj, 2014. "A Review Paper on Carbon Trading," MPRA Paper 69455, University Library of Munich, Germany, revised 30 Jan 2016.
30. Sinha, Pankaj & Mathur, Kritika, 2016. "Impact of Global Financial Crisis and Implied Volatility in the Equity Market on Gold Futures Traded on Multi Commodity Exchange, India," MPRA Paper 72966, University Library of Munich, Germany.

31. Sinha, Pankaj & Sharma, Sakshi, 2016. "Relationship of financial stability and risk with market structure and competition: evidence from Indian banking sector," MPRA Paper 72247, University Library of Munich, Germany.

32. Sinha, Pankaj & Mathur, Kritika, 2016. "Empirical Analysis of Developments in the Day Ahead Electricity Markets in India," MPRA Paper 72969, University Library of Munich, Germany.

33. Sinha, Pankaj & Nagarnaik, Ankit & Raj, Kislay & Suman, Vineeta, 2016. "Forecasting United States Presidential election 2016 using multiple regression models," MPRA Paper 74641, University Library of Munich, Germany, revised 17 Oct 2016.

34. Sinha, Pankaj & Sharma, Sakshi, 2016. "Derivative use and its impact on Systematic Risk of Indian Banks: Evidence using Tobit model," MPRA Paper 72251, University Library of Munich, Germany.

35. Sinha, Pankaj & Mathur, Kritika, 2016. "Linkages between Gold Futures Traded in Indian Commodity Futures Market and International Commodity Futures Market," MPRA Paper 72967, University Library of Munich, Germany.

36. Sinha, Pankaj & Srinivas, Sandeep & Paul, Anik & Chaudhari, Gunjan, 2016. "Forecasting 2016 US Presidential Elections Using Factor Analysis and Regression Model," MPRA Paper 74618, University Library of Munich, Germany, revised 17 Oct 2016.

- Conference Organization/ Presentations

Conference Presentations

- Sensitivity of Optimum Treatment Allocation To a Non-Normal Prior, at Fourth Valencia International Meeting on Bayesian Statistics, Peniscola, Spain, 15-20 April,1991.

- Bayes Estimates for Inverse Gaussian Distribution with Truncated Edgeworth Prior, in the National Seminar on Bayesian Statistics and its Applications, B.H.U., Varansi, 6- 8 April, 1996.

- Hierarchical Bayes Approach to Prediction in the International Symposium on Economic Theory, Policy and Applications in Athens, Greece, 21-23 August 2006.

- Hierarchical Bayes prediction in Ray Fair's Presidential Vote Model in the 43rd Annual Conference of the Indian Econometric society at IIT Bombay, 5-7 January 2007

- Hierarchical Bayes Approach to Prediction in a Regression Model in the International

Symposium of Forecasting held at New York, June 24-27, 2007.

- "Hedging Greeks for a portfolio of options using linear and quadratic programming," in the International Symposium of Forecasting held at San dieago, California, June 19-23, 2010.

- Participated in Case Writing and Course Development Seminar organized by Harvard Business School at Mumbai, March 12-15, 2012 Mumbai, India

- Participated in Harvard Business School's Global Colloquium on Participant-Centered Learning (GCPCL) held at Harvard Business School, Boston, July 24- July31, 2011, Boston USA.

Research Projects (Major Grants/Research Collaboration)

UGC Minor Research Project: "Bayesian approach to Prediction", 2007-2009.

Awards and Distinctions

- Gold Medal for first position in the University in M.Sc. (Statistics) examination.
- Junior and Senior Research Fellowship of UGC 1987-1992.

Association With Professional Bodies

- International Institute of Forecasters, New York
- Indian Society of Probability and Statistics
- Indian Econometrics Society

Other Activities

Dr. Sinha's research, professional and teaching interests revolve around the areas of Bayesian econometrics, financial forecasting, financial engineering, financial mathematics and computational finance. He has published papers in leading academic international journals as well as in international conferences.

He teaches financial modeling and forecasting, financial engineering, quantitative analysis of financial decisions, Investments and financial risk management and Statistics to the students of MBA at the Faculty of Management Studies. He teaches Quantitative Economics to the probationers of Indian Economics Service at the Institute of Economic Growth.

Over the years, he has delivered lectures on financial econometrics, computational finance, advanced quantitative methods and advanced forecasting in India, USA and Europe. He has been regularly invited as a key speaker at IIM Lucknow, MDI, Gurgaon , National Labour Institute, National Academy of Customs, Excise & Narcotics, Gail and National Institute of Criminology and Forensic Science. Dr. Sinha also has expertise in the area of Bayesian evaluation of evidence, Probability of guilt, Discriminatory power and value of forensic evidence. He is associated with the various training programmes for higher judicial officers, forensic scientists and police officers conducted by NICFSc, Ministry of Home affairs, Govt. of India.