ANAND SRINIVASAN

Citizenship: Indian

Dept of Finance, NUS Business School 07-45 15 Kent Ridge Drive Singapore 119245

Email: bizas@nus.edu.sg

Phone: + 65 9009-2385 (Singapore)

Education

New York University
 1995- 2000 Ph.D. in Finance

Cornell University
 Indian Institute of Technology
 1993-1995 M.S. in Aerospace Engineering
 1989-1993 B.Tech. in Aerospace Engineering

Areas of expertise

• Teaching: Corporate Finance, Fixed Income, International Finance

• Research: Banking, Default, Bankruptcy, Real Estate

Work Experience

• Department of Finance, National University of Singapore

Associate Professor of Finance

January 2008 – present

• Center for Advanced Financial Research and Learning

Additional Director (Research)

July, 2017 to March, 2020

• Center for Advanced Financial Research and Learning

Senior Research Director

September 15, 2016 – June 30, 2017

• Department of Finance and Control, IIM Bangalore

Visiting Faculty

December 2014-June 2015

• Department of Finance and Accounting, National University of Singapore

Assistant Professor of Finance

July 2005 - December 2007

• Department of Banking and Finance, University of Georgia

Assistant Professor of Finance

June 2000 – May 2005

Awards and Honors

- Academic Fellow, Center for Advanced Financial Research and Learning, 2014-2015.
- Best paper award in the 7th annual conference on Asia Pacific Financial Markets, 2012.
- Dean's Chair in NUS Business School, 2009-2016.
- NUS Business School Outstanding Researcher Award, 2009
- FAMA-DFA second prize in Corporate Finance in the Journal of Financial Economics in 2007 for paper titled 'Does industry-wide distress affect defaulted firms: Evidence from creditor recoveries'
- Best paper award in International conference on Business and Finance in 2008, for paper titled 'Executive stock options: Value to the executive and cost to the firm.'

• Best paper award in the Financial Management Association meetings in the Financial Institutions category, in 2004 for paper titled 'So what do I get? The bank's view of lending relationships.'

Research

a. Research performance indicators

- My citation count using Google scholar is 3717 (H Index=13), total citations using Scopus (Author ID: 827-869-680-00) is 1088 with H Index of 7, and total citations using Web of Science (Researcher ID: L-8913-2015) is 944 with H-index of 6. I have received four international awards, three in conferences and one in the Journal of Financial Economics.
- My applied work on airline industry was used as one of the justifications for an international treaty on secured debt financing for the airline industry. This treaty has been signed and ratified by several developed and developing countries including the US, United Arab Emirates, Malaysia and India. My work has been presented at several central banks and policy institutions.
- I have been Additional Director (CAFRAL), a think tank sponsored by the Reserve Bank of India where I have been involved in setting up an international standard research group and advising RBI on a variety of issues such as commercial paper markets, secondary loan trading, stress testing as well as foreign exchange outflows.
- I have advised the Office of the Chief Economic Advisor to the Ministry of Finance, Government of India on financial stress in Indian firms arising out of the Covid crisis.
- My doctoral students (Ruichang Lu, Yupeng Lin) are tenured at Peking University and NUS
 Accounting respectively. My Ph.D. student (Yan Li) has secured the best dissertation proposal
 award at the FMA meetings in 2008. My undergraduate honors thesis student (One Jun Yu) has
 secured the best undergraduate thesis in NUS.

b. Published Academic Research Articles

- Informational Price Cascades and Non-Aggregation of Asymmetric Information in Experimental Asset Markets, co-authored with Jason Shachat forthcoming in *Journal of Behavioral Finance* https://doi.org/10.1080/15427560.2022.2081970.
- Bank Dependent Firms and Bank Financing in Corporate M&A, co-authored with Sheng Huang and Ruichang Lu, 2022, *Management Science* Vol 68, No 3, 2250-2283. Working paper version in SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3010410.
- Banking Relationships and Creditor Rights, 2019, co-authored with Vidhan Goyal and S. Lakshmi Naaraayanan, *Quarterly Journal of Finance* Volume 9, No 4, 1950016 (29 pages).
- Relationship bank behavior during borrower distress, 2019, co-authored with Yan Li and Ruichang Lu, *Journal of Financial and Quantitative Analysis* Vol 54 (3), 1231-1262.

 (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1773069)
- The effect of relationships with government owned banks on cash flow constraints, co-authored with Ashok Thampy, 2017, *Journal of Corporate Finance*, Volume 46, 361-373. (Working paper version: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3014551)
- Information asymmetry and organizational structure: Evidence from REIT's, 2017, co-authored with Yongheng Deng and Maggie Rong Hu, *Journal of Real Estate Finance and Economics*, Vol 55, No. 1, 32-64. (Working paper version: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3000001)

- Long run relationships in Banking, 2014, Foundations and Trends in Finance, Vol. 8(2), 1-91.
- Lending relationships and loan contract terms, 2011, co-authored with Sreedhar Bharath, Sandeep Dahiya and Anthony Saunders, *Review of Financial Studies*, Vol. 24, No. 4, 1141-1203.
- So what do I get? The bank's view of lending relationships, 2007, co-authored with Sreedhar Bharath, Sandeep Dahiya and Anthony Saunders, *Journal of Financial Economics*, Vol. 85, No. 2, 368-419.
- Does industry-wide distress affect defaulted firms: Evidence from creditor recoveries, 2007, co-authored with Viral Acharya and Sreedhar Bharath, *Journal of Financial Economics*, Vol. 85, No. 3, 787-821.
- Perpetual Call Options with non-tradability, 2005, co-authored with Ashay Kadam and Peter Lakner, *Optimal Control Applications and Methods*, Vol. 26, No. 3, 107-127.
- Limited partnerships and reputation formation, 2004, co-authored with Jarl Kallberg and Crocker Liu, *Journal of Financial and Quantitative Analysis*, Vol. 39, No. 3, 631-659.
- Financial Distress and Bank Lending Relationships, 2003, co-authored with Sandeep Dahiya and Anthony Saunders, *Journal of Finance*, Vol. 58, No. 1, 375-399.
- Dividend Pricing models and REIT's, 2003, co-authored with Jarl Kallberg and Crocker Liu, *Real Estate Economics*, Vol 31, No. 3, 435-450.

c. Working papers

- Operational Risk Management of Political Risk: Evidence from Customer Concentration, co-authored with Ruichang Lu, Jingmeng Zhang and Xiaojun Zhang.
- Regulatory Uncertainty and TARP, co-authored with Yupeng Lin and Xin Liu.
- Government Bank Lending during a crisis, co-authored with Yupeng Lin and Takeshi Yamada.

d. Work in Progress

- Culture and Loan Contract Terms, co-authored with Ruichang Lu, Haotian Zhi and Xiaojun Zhang.
- Expected Credit Losses and Systemic Risk, co-authored with Juejin Chen, Ruichang Lu and Xiaojun Zhang.
- Effects of Mandatory GHG disclosure, co-authored with George Ye, Yupana Wiwattanakantang and Rachel Zhang.

e. Applied Research

- The Economic implications of International Secured Transaction Law reform: a case study, 1999, co-authored with Anthony Saunders, Ingo Walter, and Jeffrey Wool, *University of Pennsylvania Journal of International Economic Law* Vol. 20 No. 2, 309-352.
- Price formation in the OTC corporate bond markets: A field study of the inter-dealer market, 2002, co-authored with Anthony Saunders and Ingo Walter, *Journal of Economics and Business*, Vol. 54, No. 1, 95-113.
- A simple formula to calculate the cost of executive stock options, co-authored with Ashay Kadam and Yan Li.
- Rating Efficiency of the Indian Commercial Paper Market, Working Paper, CAFRAL.
- <u>Stress Testing of firm-level credit risk</u>, co-authored with Manjusha Senapathy and Kriti Mahajan, Working Paper, CAFRAL

f. Presentations (includes co-author presentations of joint work)

Canadian Annual Accounting Conference, International Risk Management Conference (Italy), Risk Management Institute Annual Conference, FMA, Texas Christian University,

- Federal Reserve Bank of Dallas, IIM Bangalore, University of Connecticut, University of Alabama, University of Louisville, University of Mississippi.
- 2022 Distinguished Speaker at VIT, Vellore India
- 2021 Distinguished speaker in EduTek International Convention on Business, Philippines
- 2020 CFA-CAFRAL roundtable on central bank risk, Securities and Exchange Board of India, Financial Benchmarks India Limited Oversight Committee
- 2019 Securities and Exchange Board of India, Office of Chief Economic Advisor (Ministry of Finance, Government of India), IIM Trichy.
- 2018 Panelist at India Economic Outlook 2018 the Vision forward by Indian Chamber of Commerce.
- Distinguished Speaker at SDIMD conference on Economic Growth and Sustainable Development, Guest of Honor and keynote speaker, ICC Fintech Summit.
- 2016 Federal Reserve Board of Philadelphia, Federal Reserve Board of Dallas, Fordham University
- 2015 China International Conference in Finance, HKUST Institute of Emerging Market studies conference on Financial Inclusion in Asia, City University of Hong Kong.
- ANU summer camp, Australian Banking and Finance conference, University of New South Wales.
- Asian Bureau of Finance and Economics Research, Asian Finance Association, China International Conference in Finance, FMA (US and Europe), Shanghai Institute of Finance, Summer Institute of Finance (Suzhou).
- Asian Finance Association, China International Conference in Finance, FMA, Hitosubashi University, Development Bank of Japan, Ministry of Finance, Government of Japan, Econometric Society (Australia), University of Melbourne, ISPIM conference on financial Innovation (keynote speaker and panelist).
- 2011 Federal Reserve Board of Chicago, Financial Intermediation Research Society conference, Summer Research Conference at the Indian School of Business, Asian Financial Association, Economic Sciences Association.
- Asian Finance Association, China International Conference in Finance, European Finance Association, Financial Management Association, Financial Intermediation Research Society Conference, Western Finance Association, Xiamen University.
- 2009 CEPR-European Banking Center-University of Amstredam conference on competition in banking markets, American Finance Association
- Financial Intermediation Research Society, International Conference on Business and Finance held at the Indian Business School, Summer Research Conference at the Indian School of Business, Boston College.
- 2007 Federal Reserve Board of Chicago Bank Structure and Competition conference, 14th Annual conference on the theories and practices of securities markets held at National Sun-Yat Sen University (Taiwan), NYU Down Under Derivatives conference at the University of Melbourne.
- 2006 University of Pennsylvania Federal Reserve Board of New York joint conference
- Western Finance Association annual meeting, American Finance Association annual meeting
- INQUIRE/Q-Group annual conference, MOODY's/NYU conference on credit risk, GRETA/Bank of Italy conference on credit risk, Financial Management Association annual meeting, Federal Reserve Board of Chicago, Ohio State University JFE conference, Office of the Comptroller of Currency (USA), American University, National University of Singapore, Singapore Management University, Nanyang Technological University, University of Washington at St.Louis, Financial Intermediation Research Society meetings at Capri, Italy

- University of Pennsylvania, University of California at Los Angeles, Indiana University conference on Finance & Accounting, Western Finance Association annual meeting, Federal Reserve Board of Atlanta, European Finance Association.
- New York University, London Business School, University of Michigan
- 2000 London Business School, University of Notre Dame, University of Iowa, University of Georgia, City University of New York, Case Western Reserve University, Penn State University
- 1999 American Financial Association annual meeting, University of Pennsylvania Law School
- 1998 American Financial Association annual meeting

Service

a. University Service

- Chair, Department Evaluation Committee 2023.
- Head, Department of Finance, July 2011-June 2014, July 2021-June 2023
- Deputy Head, Dept of Finance, May 2009- June 2011.
- Financial Industry Competency Standards (FICS) Exam Board Chairman, Dec 2009-Dec 2015.
- Chair, Search Committee, NUS Department of Finance 2010-2011, 2023-present.
- Member, MS in Finance Program Curriculum Committee, 2016
- Member, BBA Curriculum Review Committee, 2016
- Board Member, Risk Management Institute (2011-2014)
- MAS Term Professorship selection committee (2011-2014)
- Chair, NUS MBA review committee, 2011.
- Ph.D. coordinator, Dept of Finance, NUS: 2008-2010
- Seminar coordinator, Dept of Finance, NUS: 2006-2008
- Member of the Faculty Recruitment Committee, Dept of Finance, NUS: 2005 2007, 2009-2010, 2014-2016, 2019-2020.
- Member of Honors Committee and Undergraduate Programs Committee, Dept of Finance, University of Georgia: 2002-2005.
- Ad hoc member and chair, Department Evaluation Committee for Promotion and Tenure (multiple years)

b. Service to International Community

- Associate Editor, Journal of Banking and Finance, 2021-Present
- Program Committee: EFA (2017, 2021, 2022, 2023), Canadian Annual Accounting Conference (2023), Indian School of Business Summer Research conference (2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023), NUS RMI annual conference (2009, 2010, 2013, 2014), Singapore International Conference in Finance (2007, 2008, 2009, 2010, 2011, 2012), FMA (2008, 2010, 2011, 2012, 2013) & FMA Europe (2008), Asian Finance Association (2010, 2011, 2012), FIRS (2011, 2012, 2014), Washington University Conference on Corporate Finance (2010, 2011),
- Organizing and Program Committee, CAFRAL-World Bank conference on State Intervention in Financial Markets (2020)
- Program Committee, CAFRAL-Imperial College conference on financial intermediation in emerging markets, 2019.
- Chair, Program Committee Singapore International Conference in Finance (2011), Asian Finance Association (2011)

- Organizing Committee Singapore International conference in finance (2011, 2012, 2013), RMI annual conference (2009, 2010)
- Discussant: FMA (2000, 2004), FIRS (2008), Singapore International Conference in Finance (2008), NUS Risk Management Institute annual conference (2008, 2013), AFA (2009), Asian Bureau of Finance and Economics Research (2013, 2014, 2022), CGIO conference (2013), NBER East Asia (2016), ISB Summer Research Conference (2017, 2021), Society for Economic Research Indian Workshop (2022), SG Fin Green Finance Research conference (2023), Global AI Finance Research Conference (2022),
- Reviewer: American Economic Journal (Macroeconomics), Economic Inquiry, European Financial Management, Financial Management, Journal of Banking and Finance, Journal of Empirical Finance, Journal of Corporate Finance, Journal of Finance, Journal of Financial and Quantitative Analysis, Journal of Financial Intermediation, Journal of Financial Markets, Journal of Financial Services Research, Journal of Financial Stability, Journal of Money, Credit and Banking, Management Science, Manchester School, Quarterly Review of Finance, Review of Finance, Review of Financial Studies.
- External reviewer for Austrian Science Foundation, Hong Kong Research Grants Council, Department of Finance, Economics and Management at the Xi'an Jiatong Liverpool University.

c. Industry Engagement

- Advisor, Athena India Income Fund (Mauritius), Oct 2021 Oct 2022
- Independent Non-Executive Director, Financial Benchmarks India Limited (Feb 2019-June 2021)
- Report of the Task Force on Development of the Secondary Market for Corporate Loans, <u>RBI Report</u> 2019.
- SITA (earlier named 'Société Internationale de Télécommunications Aéronautiques'), 2004-2005: (jointly with Anthony Saunders and Ingo Walter), a Switzerland based organization to study country level cost savings by signing the Cape Town Treaty for mobile aircraft equipment.
- JPMorganChase (earlier J.P.Morgan), 2000: Emerging Markets Group (supervised by Anthony Saunders and Ingo Walter): Examined whether asset correlations were more amongst stocks within emerging markets or whether theses stocks were more correlated with their industry group peers in all countries.
- JPMorganChase (earlier J.P.Morgan), 1997: Fixed Income Research Group (supervised by Anthony Saunders and Ingo Walter): Evaluated proposal for potential trading cost of ERISA (Employee Retirement Income Security Act) on bond trading of pension fund managers.
- World Bank (supervised by Anthony Saunders and Ingo Walter), 1996: Evaluated benefits of Securitization of Aircraft Finance and possible benefits of uniformity in the treatment of secured assets in the airline industry.

d. Press Citations and articles

- Citation by Straits Times on 26 Nov, 2021 on article on digitization by banks.
- Article titled "The Price of the lockdown", joint with Apoorva Javadekar, published in Business Standard, May 12, 2020.
- Secondary Market Loan trading report was cited in Reuters (Sept 3, 2019), Bloomberg Quint (Sept 3, 2019), Yahoo Finance (Sept 3, 2019), News18.com (Sept 3, 2019), Economic Times (Sept 3, 2019), Business Standard (Sept 4, 2019), Business Today (Sept 4, 2020), PWC India (Sept 5, 2019), moneycontrol.com (Dec 9, 2019)
- Article titled "Default Prediction around the world: the effect of constraints on pessimistic trading" covered in Capital Ideas, Winter 2013-14 published by the University of Chicago Booth School of Business.

- Interviews by Channel News Asia (Oct 16, 2008, Oct 22, 2008, Jan 15, 2009, June 28, 2010, Dec 21, 2010), Asia Times Online (Nov 6, 2008), Bloomberg Television (Sept 15, 2009), Hong Kong Cable Television (Oct 31, 2009).
- Article titled 'Credit risk models should embed industry-specific factors,' June 30, 2010.
- Article titled 'The Bank's view of lending relationships,' in Business Times, June 17, 2009.
- Article titled 'Which credit products are suited for the masses,' joint with Oliver Chen, in the Straits Times, Oct 29, 2008.
- Article titled 'Getting a firm grip on securitization,' in the Straits Times, Oct 9, 2008.
- Article titled 'Hedging risk in uncertain climes,' in the Business Times, May 12, 2008, reprinted by the Central Provident Fund Board of Singapore.
- Consulting study for SITA was cited in Wall Street Journal (Feb 27, 2006), Irish Independent (Feb 28, 2006), Flight International (Feb 28, 2006) and Irish Times (Feb 27, 2006).

Teaching

a. Courses taught

Bank Management (undergraduate), International Financial Management (MBA), International Finance (undergraduate), Corporate Finance (undergraduate), Fixed Income Securities (undergraduate and MBA), Transaction Banking (undergraduate), Theory of Finance (Ph.D.), Corporate Finance and Financial Intermediation Theory (Ph.D).

b. Executive Teaching

- Commercial Paper and Money Markets to Indian Economic Service Officers, 2020
- Indian School of Business, PGP Executive Program, Global Economics, 2019
- ISB advanced management program
- SimCorp Asia (2009) Bubbles and fires sales and impact on risk measurement.
- Berkeley NUS Certificate in Financial Engineering (2007, 2008, 2009) Introduction to bonds, Introduction to Swaps, Black-Scholes formula and applications
- Hedge funds and alternative investments.

c. Ph.D. Students Supervised

Yan Li (co-chair, first placement – Korea University, current job: World Bank, Singapore)

Rong Hu (chair, first placement- University of New South Wales, Australia; current job: Chinese University of Hong Kong)

Yupeng Lin (co-chair, first placement – City University of Hong Kong, current job: tenured at National University of Singapore)

Ruichang Lu (chair, first placement – Guanhua School of Management, Peking University, tenured now) Zhe Du (chair, first placement – China Life Investment Holding Company)

Yingshi Jin (chair, first placement: Visiting scholar, Monash University, Australia)

Kang Ya (committee member, City University of Hong Kong)

d. Cases developed

Ivey Case: Premier Foods: Tasting Interest Rate Swaps, co-authored with Jumana Zahalka, translated into Chinese.