#### Paul Anthony Laux

CONTACT Information Department of Finance

Alfred Lerner College of Business and Economics

353 Purnell Hall University of Delaware Newark, Delaware 19716

ACADEMIC APPOINTMENTS

#### Professor of Finance

2004 to present

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Alfred Lerner College of Business and Economics, University of Delaware, Newark, Delaware

- 2017-present: J.P. Morgan Chase Senior Fellow, Institute for Financial Services Analytics, University of Delaware
- 2022-present: Affiliated Faculty, U.D. Data Science Institute
- 2010-2014, 2020-present: Director & Faculty Member, U.D./ISCTE-IUL Microstructure, Trading and Bloomberg Institute (Masters students' short program)
- 2017-2019: Interim Director, University Honors Program, University of Delaware
- 2014-2017: J.P. Morgan Chase Faculty Scholar, Institute for Financial Services Analytics, University of Delaware
- 2010-2014: Professor Catedrático Convidado, Lisbon University Institute-Instituto Superior de Ciências do Trabalho e da Empresa (ISCTE-IUL, Lisbon) (Secondary appointment)
- 2006-2015: Director, Student Exchange between U.D. and ISCTE-IUL, Lisbon
- 2011 (Summer): Visiting Scholar, Finance & Accounting, University of Padova, Italy
- 2008 (Summer): Fulbright Senior Scholar, ISCTE-IUL, Lisbon
- 2004-2006: Chairperson, Department of Finance

#### **Associate Professor of Finance**

1994 to 2004

Weatherhead School of Management, Case Western Reserve University, Cleveland, Ohio

- 2002-2004: Associate Professor of Law (Secondary Appointment)
- 2003: Fulbright Fellow and Distinguished Chair: Luso-American Development Foundation Professor in Banking, Instituto Superior de Ciências do Trabalho e da Empresa (ISCTE), Lisbon, Portugal
- 1997-1999: Faculty Director, MBA Program
- 1997-1998: Visiting MBA Faculty at International Management Center, Budapest, Hungary (Intermittent, for joint MBA Program with Weatherhead)

#### **Assistant Professor of Finance**

1988 to 1994

College and Graduate School of Business, The University of Texas, Austin, Texas

• 1990-1991: Financial Economist, Division of Economic Analysis, Commodity Futures Trading Commission, Washington, D.C. (On leave from UT-Austin; Intergovernmental Personnel Act appointment)

#### **EDUCATION**

#### Harvard University Extension School, Cambridge, MA

Graduate Certificate in Data Science, 2020

• Four Masters courses: Statistical Learning, Big Data Computing, Bayesian Statistics, Intermediate Geographic Information Analysis

#### Vanderbilt University, Nashville, TN

Ph.D., Economics, 1988

- Thesis: Dealer Markets for Securities; Supervisor: Hans R. Stoll
- Main Area of Study: Finance

#### University of Cincinnati, Cincinnati, OH

Graduate student, Economics Department, 1983-84 academic year

Xavier University, Cincinnati, OH MBA, Finance, 1983

#### University of Cincinnati, Cincinnati, OH

A.B., Political Science, 1982

#### Refereed Articles

- Learning from Lending in the Interbank Market, with W. Qian and H. Zhang, *Data Science in Science*, forthcoming, 2023.
- The Effect of Media-linked Directors on Financing and External Governance, with A. Di Giuli, *Journal of Financial Economics* 145:2, 2022, 103-131
- Corporate Boards and SEOs: The Effect of Certification and Monitoring, with M. Ferreira, *Journal of Financial and Quantitative Analysis* 51:3, 2016, 899-927
- Examining Bank SEOs: Are Offers Made by Undercapitalized Banks Different, with E. Ergungor, C.N.V. Krishnan, A. Singh and A. Zebedee, Journal of Financial Intermediation 19:2, 2010, 207-234
- Capital flows, Volatility and Growth, with M. Ferreira, Journal of International Money and Finance 28:2, 2009, 271-292
- Legal Advisors: Popularity vs. Performance in Acquisitions, with C.N.V. Krishnan, Corporate Ownership and Control 6:2, 2008, 475-500
- Corporate Governance, Idiosyncratic Risk, and Information Flow with M. Ferreira, *The Journal of Finance* 62:2, April 2007, 951-989
- Misreaction, with C.N.V. Krishnan, Journal of Financial and Quantitative Analysis 40: 2, 2005, 403-435
- The Information Content of Corporate Investment Announcements: The Case of Joint Ventures, with A. Keown and J. Martin, *Research in Finance* 22, Fall 2005
- Fragmentation and Complementarity: The Case of EFPs with S. Brown-Hruska, *Journal of Futures Markets* 22:8, August 2002, 697-727 (Lead Article)
- An Empirical Framework and Teaching Note for Introducing Financial Management in the First MBA Core Class, with B. Simkins, *Journal of Financial Education*, Fall 2002 (Lead Article)
- Operational Hedges and the Foreign Exchange Exposure of US Multinational Corporations, with B. Simkins and C. Pantzalas, *Journal of International Business Studies* 32:4, December 2001
- How US Multinational Corporations Manage Foreign Exchange Rate Exposure, with C. Pantzalis and Betty Simkins, *Corporate Finance Review* 4:6, May/June 2000, 5-14
- The Relative Importance of Competition and Contagion in Intraindustry Information Transfers: An Investigation of Dividend Announcements, with L. Starks and P. Yoon, Financial Management 27:3, Autumn 1998, 5-16

- Trading Costs, Volatility, and the Trading Systems for Nasdaq Stocks, with M. Kothare, The Financial Analysts Journal, March/April 1995, 42-53
- Dealer Market Structure, Outside Competition, and the Bid-Ask Spread, *Journal of Economic Dynamics and Control* 19:4, 1995, 683-710
- Estimating the Bid-Ask Spread in a Heteroskedastic Market: The Case of Currency Futures, with A. J. Senchack, *Review of Quantitative Finance and Accounting* 4, 1994, 219-237 (Lead Article)
- The Sources of GARCH: Empirical Evidence from an Intraday Returns Model Incorporating Systematic and Unique Risks, with L. Ng, *The Journal of International Money and Finance* 12:5, October 1993, 543-560
- Trade Sizes and Theories of the Bid-Ask Spread, *Journal of Financial Research* 16:3, 1993, 237-249
- Bid Ask Spreads in Financial Futures, with A. J. Senchack, *Journal of Futures Markets* 12:6, 1992, 621-634
- On the Existence of an Optimal Tick Size, with S. Brown and B. Schachter, *Review of Futures Markets* 10:1, 1991, 50-71
- Research Issues in Futures Market Microstructure, with G. Gay, Financial Practice and Education 1:2, 1991

NON-REFEREED ARTICLES, CHAPTERS, CASES, AND BOOK REVIEWS

- Financial Services, in *Springer Encyclopedia of Big Data*, L. Schintler and C. McNeely, eds., Springer International, 2022, 483-486.
- Cost, Risk-taking, and Value in the Airline Industry, with H. Yan and C. Zhang, in Studies on Energy Markets and Finance, S. Ramos and H. Veiga, eds., Springer-Verlag, 2014, 33-56
- The Sarajevo Graduate School of Business, with J. Stocker, *Ivey School of Business Case Series*, 2010
- Shareholders, with J. Markham, in *Corporate Governance*, A. Kostyuk, U. Braendle, D. Falaschetti and R. Apreda (eds.), Virtus Interpess, 2007
- Fundamentals of Growth Equity Markets, in Study of a Growth Equity Market for Australia, Report DIST 06097, Department of Industry, Science, and Tourism of the Government of Australia, 1997
- Review of US and European Growth Equity Markets, in *Study of a Growth Equity Market for Australia*, Report DIST 06097, Department of Industry, Science, and Tourism of the Government of Australia, 1997
- Criteria for Successful Growth Equity Markets, in Study of a Growth Equity Market for Australia, Report DIST 06097, Department of Industry, Science, and Tourism of the Government of Australia, 1997
- The Role of EFPs in Futures Markets: An Old Dog Does New Tricks, with S. Brown-Hruska, Catalyst Institute Research Monograph: Chicago, 1997
- Soap and Detergent, with E. Miller and J. Siegfried, in *Handbook of American Business History*, Volume II, D. Whitten and B. Whitten, ed., Greenwood Press, 1996

Liquidity, Volatility, and Price Formation of Individual Stocks around Index Arbitrage Trading, with D. Furbush, abstract in The Journal of Finance 50, July 1995. Preliminary version published in *Proceedings*, Seminar on the Analysis of Security Prices, Center for Research in Security Prices, University of Chicago, November 1993

Joint Ventures, Latent Asset Value, and the Information Content of Corporate Announcements, with A. Keown and J. Martin, abstract in The Journal of Finance 48, July 1993

Book Review of Theoretical Studies in Islamic Banking and Finance, in *Journal of* Development Economics, 1990

The Effect of Market Structure on the Cost of Borrowing, with R. Blitz, B. Bolch and J. Siegfried, in Issues After a Century of Federal Competition Policy, R. Wills, J. Caswell, and J. Culbertson, eds., 1987, Lexington Books

GRANT ACTIVITY Investigador (Reseacher, similar to co-PI), Portugal FCT Fundação para a Ciência e Tecnologia Project PTDC/EGE-GES/119274/2010 €140,000 (across all co-PI's)

> Investigador (Reseacher, similar to co-PI), Portugal FCT Fundação para a Ciência e Tecnologia Project PTDC-GES-65650/2006 €198,000 (across all co-PI's)

#### Working Papers

Variance Risk Premia around Macroeconomic News Announcements, with G. DeSimone

Credit Ratings Agencies' Accuracy, Stability, and Advertising, with P. Carvalho and J. Pereira

#### Presentations & R/Finance Conference, 2018, 2022

### DISCUSSIONS AT Professional MEETINGS

International Finance and and Banking Society, Oxford Conference (paper presented by co-author), 2017

Financial Management Association, October 2014 (paper presented by co-author)

Spanish Finance Association, October 2013 (paper presented by co-author)

American Accounting Association, August 2010 (paper presented by co-author)

European Finance Association, August 2008 (paper presentation and session chair)

Mid-Atlantic Finance Conference, March, 2008 (discussant)

American Finance Association, January 2006 (paper presentation)

European Financial Management Association, June 2002 (paper presentation and instructor for doctoral student seminar)

Southern Finance Association, October 1999 (paper presentation)

Financial Management Association, October 1999 (paper presentation)

European Financial Management Association, June 1999 (paper presentation)

Financial Management Association, October 1998 (paper presentation and discussant)

Financial Management Association, November 1997 (paper presentation)

American Finance Association, January 1997 (discussant)

International Association for Financial Engineering, November 1996 (paper presentation)

Western Finance Association, June 1996 (paper presentation)

Georgia State University Conference on International Finance, May 1996 (paper presentation)

American Finance Association, January 1995 (paper presentation)

Western Finance Association, June 1994 (paper presentation)

Western Finance Association, June 1993 (paper presentation)

American Finance Association, January 1993 (paper presentation)

Texas Finance Symposium, September 1992 (paper presentation)

Western Finance Association, June 1992 (paper presentation)

Eastern Finance Association, April 1991 (paper presentation)

American Finance Association, December 1990 (discussant)

Chicago Board of Trade Symposium, December 1990 (paper presentation)

Texas Finance Symposium, September 1990 (paper presentation)

Financial Management Association, October 1990 (paper presentation)

Western Finance Association, June 1990 (discussant)

Southwestern Finance Association, April 1990 (paper presentation and discussant)

Financial Management Association, October 1989 (two paper presentations and discussant)

Western Finance Association, June 1989 (discussant)

Financial Management Association Doctoral Student Seminar, October 1987 (paper presentation)

INVITED TALKS

What's So Scary about Machine Learning?: Drexel University Honors Colloquium, April 2022

Bloomberg as Chem Lab for Finance: Bloomberg Educators Institute, June 2015

Credit Rating Agencies' Stability, Accuracy, and Advertising: Oberlin College, February, 2015

Opacity and Executive Compensation: University of Padova, Padova, Italy, October, 2009; ISCTE-Lisbon, November, 2009

Corporate Boards and SEOs: Financial Markets Center Conference, Vanderbilt University, 2013; University of Padova (Italy) Finance and Accounting Conference, September, 2010; ISCTE-Lisbon, June, 2008; Instituto de Empresa, Madrid, Spain, January 2008; State University-Higher School of Economics, Moscow, Russia, Corporate Governance Conference, November 2007

Legal Advisors: Popularity versus Economic Performance in Acquisitions: Kent State University, December 2003; University of Delaware, April 2004; Harvard Law School, September 2004

Misreaction: ISCTE-Lisbon, Lisbon, Portugal, April 2003

- What Do They Know and When Do They Know It—A Closer Look at Value Line Rank Changes: University of Cincinnati, March 2001; Kent State University, April 2000
- Liquidity, Volatility, and Price Formation of Individual Stocks around Index Arbitrage Trading: Federal Reserve Bank of Cleveland, January 1995
- Intraday Price Formation in the Stock Index Futures Market: Case Western Reserve University, May 1994
- Liquidity, Volatility, and Price Formation of Individual Stocks around Intermarket Trading—What's Different about Index Arbitrage: Center for Research in Security Prices (CRSP), The University of Chicago, November 1993
- Market Microstructure: Class for Ph.D. candidates in Business Administration, Instituto Tecnologico y de Estudios Superiores de Monterrey, Mexico, July 1993
- Joint Ventures, Latent Asset Value, and the Information Content of Corporate Announcements: The University of New Mexico, April 1992
- The Sources of GARCH—Empirical Evidence from an Intraday Returns Model Incorporating Systematic and Unique Risks: Georgetown University, March 1991
- Asymmetric Information, Imperfect Competition—Trade Sizes and Pricing: Financial Markets Research Center, Vanderbilt University, April 1990
- Dealer Market Structure and the Bid-Ask Spread: Syracuse University, November 1991; Commodity Futures Trading Commission, December 1989; University of Houston, November, 1989
- Courses Taught Fintech and Data Science for Finance (Undergraduate Elective Course), 2020-2022
  - Financial Services Risk Management (Ph.D. Core Course, Financial Services Analytics Ph.D. Program), 2017, 2019, 2021, 2023
  - Financial Services Markets (Ph.D. Core Course, Financial Services Analytics Ph.D. Program), 2014
  - Workshop in Financial Economics: Seminar (Ph.D. Economics Elective Course/Master of Finance Required Course), 2007-2023
  - Financial Markets and Institutions (Undergraduate Elective Course), 2021
  - Advanced Corporate Finance (Undergraduate Elective Course, including standard and Honors sections), 2008-2016
  - Introduction to Finance (Undergraduate Honors Core Course), 2008-2013
  - International Finance (Undergraduate Elective), 2016
  - International Finance (MBA Elective), 2006-2015; taught in Delaware classroom setting (2006), in Sarajevo, Bosnia for U.D.'s MBA program in the Balkans under a USAID Contract (2007), as a distance learning course in the U.S. via live audio-visual conference (2008-20011), and as an asynchronous online course with synchronous online case meetings (2014-2017)
  - Corporate Finance (Master of Finance Core Course, ISCTE-IUL, condensed course, under secondary faculty appointment), 2009-2013
  - International Finance (Master of Finance/Master of International Management Elective, ISCTE & ISCTE-IUL, Lisbon, Portugal), 2003-2008 & 2012 (summers); also Nova School of Business & Economics, Lisbon (short course) 2013

Accounting Information and Financial Markets (Ph.D. short course, University of Padova, 2009)

Corporate Governance (MBA Elective), 2005-2007; one offering taught via live video-conference with MBA students in Sarajevo, Bosnia and in Delaware

MBA Iberia Institute (MBA Elective; Study abroad course), 2004

Financial Principles for Lawyers (Law School Elective), 2001-2004

Finance, Law and Corporate Governance (MBA Elective), 2002-2004

Financial Management (MBA Core Course, Full Time and Evening Programs), 1994-2003

Accelerated Financial Management (Condensed MBA Core Course), 1998-2003

Financial Modeling (MBA Elective), 2000

MBA South African Institute (MBA Elective; Study abroad course), 2000

Advanced Managerial Finance (MBA Elective), International Management Center, Budapest, Hungary, 1997 and 1998 (3 offerings total)

Investment Management (MBA Elective), 1995-98, 2004

MBA European Summer Institute (MBA Elective; Lecture/tour study abroad course), 1995-96

Seminar in Futures and Options (MBA Elective), 1996

Applications of Investment Theory (MBA Elective), 1989-94

Derivative Markets (MBA Elective), 1991-94

Investments (Undergraduate Elective), 1988-89

## RECENT PH.D. STUDENTS

Emma Lin, Financial Services Analytics, Dissertation chair. Completed Fall 2021. Now at Microsoft, Redmond.

Hao Jiang, Economics, Dissertation co-chair. Completed Spring 2020. Now at Charles Schwab, San Francisco.

Garrett DeSimone, Economics, Dissertation co-chair. Completed Spring 2017. Now at OptionMetrics, New York.

Lan Ma, Financial Services Analytics, Dissertation chair. Underway. Proposal defended Fall 2017. Now at Amazon, Seattle.

Yu Gu, Economics, Dissertation co-chair. Underway. Proposal defended Fall 2018.

Haici Zhang, Financial Services Analytics, Dissertation chair. Underway. Proposal defended Winter 2018.

# EXECUTIVE EDUCATION & SHORT COURSES

Finance & accounting instruction and case-writing for a large risk management consultancy, 2005-2009

Research in Finance, Short course for Ph.D. students, University of Padova (Italy), 2009

International Finance: A Managerial Perspective, Executive MBA Course, ISCTE-Lisbon, 2005

Finance for Lawyers, Cuyahoga County, Ohio, Bar Association, 2004

Using Financial Thinking to Manage for Value Creation, Case Western Reserve University Open-enrollment Executive Education Program, 2002

Finance in the U.S., Presentations at Case Western Reserve University for visiting executives in co-operation with Erasmus University, Netherlands, 2001-2003

Markets and Institutions for Securities Trading, Module for Coca-Cola Visiting Executive Fellows at Case Western Reserve University, 2000

Takeovers and Valuation in the U.S., Case Western Reserve University Open-enrollment Executive Education Program, 1998

Investment Vehicles and Portfolio Theory, University of Texas-sponsored management development program for executives at Cementos Mexicanos, S.A., Monterrey, Mexico, 1994

#### Honors and Awards

#### Teaching

- Faculty Senate Excellence in Teaching Award (University-level top teaching award),
  University of Delaware, 2017
- Best Teacher Award, ISCTE-IUL Master of Finance Program, 2011
- Nominee for University of Delaware Faculty Senate Excellence in Teaching Award, 2008, 2011, 2013, 2014, 2015, 2017
- Dorney Grant for Development of Finance Instructional Software, 2000
- Finalist for Weatherhead School of Management Best Teacher Award, 1995, 1999
- Department of Finance Nominee for CBA Foundation Teaching Award (Graduate School of Business, University of Texas Award for Assistant Professors), 1993
- Rendigs Fels Award for Teaching Excellence, Economics Department, Vanderbilt University, 1988

#### Research

- Award for Outstanding Paper, University of Padova (Italy) Finance and Accounting Conference, 2010
- Award for the Outstanding Paper in Derivatives, Southern Finance Association, 1999
- CBOT Award for Best Paper in Futures and Futures Options, Western Finance Association Meetings, 1993
- CBOT Award for Best Paper in Futures and Futures Options, Southwestern Finance Association Meetings, 1993

#### UNIVERSITY SERVICE

#### Leadership Service Positions

- Chair, U.D. Graduate College Council, 2022-2023
- Chair, U.D. Lerner College Promotion and Tenure Committee, 2021-2023
- Secretary, U.D. Graduate College Council, 2020-2022
- Interim Director, U.D. University Honors Program, 2017-2019
- Chair, U.D. Department of Finance Ad-hoc Committee on Fintech Programs, 2019
- Chair, U.D. Department of Finance Promotion and Tenure Committee, 2013-2017
- Chair, U.D. Department of Finance Recruiting Committee, 2012

- Honors Student Advisor and Honors Program Liaison, U.D. Department of Finance, 2011-2016
- Chair, U.D. Lerner College of Business & Economics College Committee on Organization, 2008-2010
- Chair, Faculty Council, Weatherhead School of Management, Case Western Reserve University, 2000-2002
- Chair, International Programs Task Force, Weatherhead School of Management, 2000
- Chair, Faculty Senate Nominating Committee (Committee on Committees), Case Western Reserve University, 1998-2000
- Weatherhead School Representative to Board of Directors, International Management Center, Budapest, Hungary, Spring 1998

#### Additional University Service

- Member, Provost's Brainstorming Group on Fintech, 2022
- Advisor, Hens of Wall Street (student organization), 2022-2023
- Member, Lerner College Ad-hoc Committee for Honors Program Proposals, 2020
- Member, University Senate Awards Committee, 2018
- Member, University-level Title IX Oversight Committee, 2015-2018
- Member, Institute for Financial Services Analytics Founding Committee, 2014-2016
- Member, Faculty Senate Commission on Sexual Assault and Harassment Policies, 2015-2016
- Faculty Senator, University of Delaware, 2012-2015
- Member, Faculty Council, Weatherhead School of Management, 1997-2004
- Faculty Advisor, JD-MBA Student Association, 2001-2004
- Various Faculty Committees at the University of Delaware: Graduate College Council (2019-2022), Finance Department Promotion and Tenure Committee (2006-2022), Finance Faculty Recruiting Committees (2014-16, 2020), Ad-hoc Business and Engineering College Joint Committee to Develop Curriculum for Financial Services Analytics Ph.D. Program (2012-2013), College Promotion and Tenure Committee (2011-2013, 2020-2022), Faculty Senate (2010-2014), College MBA Committee (2009-2010), College Graduate Programs Committee (2006-2008, 2014-2017), College Organization Committee (2006-2010), Assessment of Learning Task Force (2009), Dean's International Task Force (2006-2007), Dean's MBA Task Force (2007), University Interim Accreditation Report Task Force (2006)
- Various Faculty Committees at Case Western Reserve University: Department of Banking and Finance Recruiting Committee (1994-2001, chair in some years), Dean Search Committee (2000-2001), Information Systems Committee (1994-1995 and 1998-1999), Professional Degree Programs Committee (1998-2004), Action Learning Task Force (1999-2000), eLearning Task Force (1999-2000), Lewis Campus Building Committee (1998-2000), Dean's Strategic Planning Task Forces (2000 and 2001)

ADDITIONAL PROFESSIONAL SERVICE AND OTHER PROFESSIONAL ACTIVITIES

Student in Fintech and the Future of Finance, 6 week course from The Economist

Session Chair, American Economics Association Meetings, 2013

Consultant to a currency, interest rate and real estate risk-management firm, 2006-2008

Consultant (lecturing) for the International Finance Corporation, Albania and Bosnia, 2006

Consultant to the Chicago Stock Exchange, 1998-2000

Consultant to the Government of Australia, 1997

Consultant to the Sydney Futures Exchange, 1996

Consultant to the National Association of Securities Dealers, 1995-96

Occasional expert/consultant on finance topics, various other clients

Program Chairman for Futures and Options Track, Financial Management Association, 1996 meetings

Program Committee, Southern Finance Association, 2008 meetings

Program Committee, Western Finance Association, 1992 meetings

Program Committee, Financial Management Association, 1991-2004 meetings

Best Paper Awards Committees, Financial Management Association, 1992, 1994, 2000 meetings

Reviewer: The Journal of Finance, Journal of Financial and Quantitative Analysis, Management Science, The National Science Foundation, Financial Management, Journal of Financial Intermediation, Journal of Money, Credit and Banking, Journal of Banking and Finance, Journal of Empirical Finance, Journal of International Business Studies, Journal of Futures Markets, Journal of International Money and Finance, European Financial Management, Journal of Economic Dynamics and Control, Journal of Corporate Finance, The Economic Journal, Journal of Financial Research, Review of Quantitative Finance and Accounting, Advances in Futures and Options Research, International Review of Financial Analysis, Quarterly Review of Business and Economics

November 2022