Matthew Brigida

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Statement of Teaching Philosophy ● Evidence of Teaching Effectiveness ● Statement of Research Philosophy

EDUCATION:
- Ph.D. in Finance, College of Business (AACSB Accredited), Florida Atlantic University, 2009, Dissertation: "Essays on the Causes and Consequences of Information Leakages Prior to Merger and Acquisition Announcements".
- M.S. Economics, College of Business (AACSB Accredited), Florida Atlantic University, 2004, Thesis: "Off-shoring and Wage Convergence".
- B.B.A., College of Business (AACSB Accredited), Loyola College in Maryland, 2000.

AREAS OF INTEREST
- **Teaching:** Investments, Portfolio Theory, Financial Institutions, Corporate Finance, and Multinational Finance, Energy Finance.
- **Research:** High-Frequency Trading, Energy Markets and Finance, Capital Budgeting in the Energy Sector, Time Series Analysis (particularly allowing unobserved variables), Electricity Derivative Pricing (including real option valuation of generation assets), Market Microstructure, Informed Trading.

PEER-REVIEWED JOURNAL PUBLICATIONS
- Brigida, M., 2018, "Causes of Asymmetric Volatility in Oil Futures", *Pennsylvania Economic Review* forthcoming.
- Brigida, M, 2018, "Parameter Variation & the Components of Natural Gas Price Volatility", *Journal of Energy Markets*, forthcoming.
- Brigida, M, 2018, "State Dependence in the Natural Gas Price and Rig Count Relationship", *New York Economic Review*, forthcoming.
- Brigida, M., 2018, "New Results on the Predictive Value of Crude Oil for US Stock Returns", *Studies in Economics and Finance*, vol. 35, Issue: 1, pp.97–108. https://doi.org/10.1108/SEF-01-2017-0020
- Pratt, W. R., M. Brigida, and D.O. Jackson, 2017, "Financing Regimes", *International Review of Accounting, Banking and Finance* 9, 1–36. http://www.irabf.org/publication/Financing Regimes.pdf
- Brigida, M. and W. Pratt, 2017, "Fake News", *North American Journal of Economics and Finance*, 42C (2017) pp. 564-573, DOI: 10.1016/j.najef.2017.08.012
- Brigida, M., 2016, "The Determinants of Regime-Switching in the Natural Gas Crude Oil Cointegrating Relationship", *The Journal of Energy Markets* vol. 9 issue 3, 17–26.
- Brigida, M., 2014, "Volatility in Electricity Spread Options", *Pennsylvania Economic Review* vol. 21 issue 1, 1–17.
- Brigida, M., 2014, "The Switching Relationship between Natural Gas and Crude Oil Prices", *Energy Economics* 43, 48–55.
- Brigida, M., J. Madura, and A. Viale, 2013, "An Information-based Model of Target Stock Price Runup in the Market for Corporate Control", *Quantitative Finance*, DOI: 10.1080/14697688.2012.749356.
- Brigida, M., and J. Madura, 2012, "Informed Trading Prior to Acquisitions", *Journal of Economics and Business* 64, 185–198.
- Brigida, M., and J. Madura, 2012, "Information Leakages Prior to 13D Filings", *Journal of Financial and Economic Practice*, vol. 12, issue 2, 37–52.
- Brigida, M., 2012, "The Option in Auto Leases", *Pennsylvania Economic Review* vol. 19 issue 1, 33–44.
- Brigida, M., 2009, "A GARCH Analysis of Volatility in Country Indices", *International Journal of Global Management Studies Professional*, vol. 1, issue 3.

WORKING PAPERS
- Trade Intensity and Liquidity.
- "Temporal Change in Capital Structure Determinants", with William Pratt, under review, *The Journal of Business and Economic Perspectives*.
- High-Frequency Trading and Market Efficiency: Evidence from the Weekly Natural Gas Storage Report. Presently a *revise and resubmit* at the *Journal of Futures Markets*.
- State Dependence in the Natural Gas and Rig Count Relationship, under review: *New York Economic Review*.
- How Consistent are the Judges of Portfolio Performance?, under review: *Seoul Journal of Economics*.
- Almost Stochastic Dominance: A Penchant for Risk, presented at the 2007 FMA conference.

OTHER PUBLICATIONS & SOFTWARE DEVELOPMENT
- Barth, J., A. Betru, M. Brigida, and C. Lee, 2018, "Minority-Owned Depository Institutions: A Market Overview" *Milken Institute: Access to Capital Paper Series*
- `EIAdata` R package available on CRAN (stable) and Github (development). The package is an R wrapper for the U.S. Energy Information Administration's API, which allows programmatic access to over a million unique

energy related time series.
- 5MinuteFinance (2016) Created interactive educational materials in R/Shiny to be featured in the Milken Institute site 5MinuteFinance.org.
- Yang, C.W., K. Hung, and M.D. Brigida, 2013, 'The Le Chatelier Principle of the Capital Market Equilibrium', The Encyclopedia of Finance, Chapter 48, pages 565-568. Published by Springer.
- Hung, K., C.W. Yang, M.D. Brigida, and D. Means, 2013, 'A Critical Evaluation of the Portfolio Performance Indices Under Rank Transformation', The Encyclopedia of Finance, Chapter 21, pages 351-356. Published by Springer.

PRESENTATIONS
- Eastern Finance Association 2017 Annual Meeting (Jacksonville, Florida). "High-Frequency Trading and Market Efficiency: Evidence from the Weekly Natural Gas Storage Report".
- R/Finance 2016 Annual Meeting, (Chicago, Illinois). "Community Finance Teaching Resources with R/Shiny".
- International Association for Energy Economics, 2015 North American Conference (Pittsburgh, Pennsylvania), "The Components of Natural Gas Price Volatility".
- R/Finance 2015 Annual Meeting (Chicago, Illinois), "Markov-Switching (and some State-Space) Models in R".
- Eastern Finance Association Annual Conference, 2014, The Switching Relationship between Natural Gas and Crude Oil Prices.
- International Association for Energy Economics, 2013 North American Conference, "The Switching Relationship between Natural Gas and Oil Prices", *IAEE/USAEE Best Working Paper for 2012*.
- Southern Finance Association, 2010 Annual Meeting, "Information Leakages Prior to 13D Filings".
- Financial Management Association, 2007 Annual Meeting , "Almost Stochastic Dominance: A Penchant for Risk".

GRANTS AWARDED
- For research on the determinants of Markov-regime switching in the natural gas and crude oil cointegrating relationship.
- For research into the determinants of asymmetric volatility in crude oil (WTI) futures.
- To reconstruct the portfolio theory course using R code to allow fast theory and strategy testing.

PROGRAM DEVELOPMENT
- MBA/Finance, Clarion University
  - Full responsibility for curriculum development.
  - Program has been approved at all university levels, and plans to admit students in 2015.
  - Program may be completed fully online.
- Master in Data Analytics, Clarion University
  - Coordinated the curriculum development.
  - Program approved July 2015.
  - Program may be completed fully online.

TEACHING EXPERIENCE
Associate Professor of Finance, College of Business (AACSB Accredited), SUNY Polytechnic Institute.
- Investments, 2018–present.
- Graduate Investments (online), 2018–present.
- Financial Problems, 2018–present.
- Intro. to Corporate Finance, 2018–present.
Associate Professor of Finance, College of Business (AACSB Accredited), Clarion University of Pennsylvania.
- Portfolio Theory, 2009–2017.
- Investments, 2009–2017.
- Multinational Finance, 2009–2017.
- Financial Markets and Institutions, 2009–2017.
- Graduate Corporate Finance (online and in-person), 2010–2017.
- Intro. to Corporate Finance, 2009–2011.
Finance Instructor, College of Business (AACSB Accredited), Florida Atlantic University.
- Principles of Financial Management, Spring 2008, Fall 2008, Spring 2009.
Mathematics Instructor, College of Arts and Sciences, Florida Atlantic University.
- Introductory Statistics (3 sections, each 2 credit hours), Fall 2004.
Economics Teaching Assistant, College of Business (AACSB Accredited), Florida Atlantic University.
- Advanced Econometrics, Advanced Mathematical Economics, Advanced Micro & Macro, 2003 - 2004.

TEACHING RELATED PROJECTS
- Created a MySQL database relating hourly PJM electricity prices and FTR auction values by network node.

- Created a PostgreSQL database of all Fannie Mae and Freddie Mac loan-level files.
- Created an operating system for students to run as a live CD. This enables students to have all programs they need for my courses (and quantitative finance in general) available on any computer anywhere.
- Supervised student research papers.

SERVICE
University-wide:
- University-Wide Planning and Budget Committee, 2018–present.
- Mohawk Valley Mini Maker Faire Steering Committee, 2018.
- Faculty Senate Technology Subcommittee, 2015 – 2017.
- Conduct Board, 2015 – 2017.
- Search Committee: Vice President for Finance & Administration, 2014.
- University-wide Faculty Development Committee, 2011 – 2017.
- Institutional Review Board, 2010 – 2017.
- Clarion University Technology Advisory Council (UTAC), 2013 – 2015.
- APSCUF Finance Department Council Representative, 2014 – 2017.

College of Business:
- AACSB Steering Committee, 2018.
- Dean Search Committee, 2018.
- AQ/PQ Policy Review Committee, 2009 – 2010.
- MBA Program & Assessment Committee, 2009 – 2017.
- Scholarship & Awards Committee, 2011 – 2017.

Department:
- Accounting Faculty Search Committee, 2018.
- Promotion Committee, 2009 – 2014.
- Recruitment Committee, 2009 – 2017.
- Chair of the Scholarship Committee, 2009 – 2017.
- Chair of the Finance Faculty Recruiting Committee, 2010.
- Finance Department Faculty Advisor to the MBA Program, 2011 – 2017.
- Faculty Advisor for finance undergraduate students, 2009 – 2017.
- Evaluation Committee, 2014 – 2017.
- Tenure Committee, 2014 – 2017.

Student Organizations
- FMA Club Advisor, 2010 – 2017.

State System of Higher Education:
- Served on the Proposal Review Committee for the 2013 PASSHE Academic Innovation Conference.

Community:
- Deacon: First Presbyterian Church of Clarion PA.
- YMCA Soccer Coach.
- Contribute through documentation writing, and online help, to many Open Source Software initiatives (particularly the Debian Project, Arch Linux, and the R Project for Statistical Computing).

Journals:
- Reviewer for *Energy Journal, Applied Financial Economics, Financial Review, Energy Economics,* and *Economics and Business Letters.*

INDUSTRY EXPERIENCE

Milken Institute, Center for Financial Markets   10/2014–present
Financial Education Advisor

- Securitized equity stakes in various pharmaceutical patents to increase funding available in phase 1 trials.
- Created a web application which modeled the decision to purchase a house, as well as other finance related web applications.
- Created interactive presentations in R/Shiny for 5MinuteFinance.org.

NextEra Energy, NextEra Energy Resources, Juno Beach, FL   2/2009–7/2009
Business Management Analyst/Consultant
- Calculated the real option value of natural gas fired generation assets to assist electricity forward sale decisions and set asset optimization budgets. The pricing was done by applying Monte Carlo to a spread option where the two underlyings were mean-reverting stochastic processes with price proportional volatility.
- Determined profitability drivers of wind farms.
    - Software used: SAP ERP Financials, Oracle databases, R, Excel, Access, some SQL query writing.

Florida Atlantic University, Boca Raton, FL   1/2006–5/2009
Finance Instructor & Research Assistant
- Modeled time series and volatility (including ARCH/GARCH models with endogenous regime-switching and a GJR leverage effect), and implemented conditional autoregressive Value-at-Risk .
- Priced options with Stochastic Volatility models (including Heston calibration).

World Omni Financial Corp. (Southeast Toyota Finance), Deerfield Beach, FL   12/2004–1/2006
Senior Modeling Analyst
- Created a nested Logit model to estimate delinquency and default probabilities for multi-billion dollar portfolios of auto loans and leases.
- Priced the option sold in our auto leases.
    - Software used: SAS, Excel, Access, SQL query writing.

TECHNICAL SKILLS:
- Software: R, SAS, SQL (MySQL), Advanced Excel, Access, Word, SAP ERP, C++, UNIX/Linux, LaTeX, Emacs.
- Databases/Interfaces: Oracle, WRDS, CRSP, Datastream, SDC Platinum, Compustat, TAQ data.
- Operating Systems: GNU/Linux, Windows.

MEMBERSHIPS
- United States Association for Energy Economics (USAEE)
- Phi Kappa Phi
- Omicron Delta Epsilon, International Honor Society in Economics.
- Financial Management Association (FMA).
- Eastern Finance Association (EFA).