Banks N. Osborne

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Education

Ph.D.	University of Tennessee, Knoxville	Finance	2024 *(Expected)*
M.S.	University of North Carolina Wilmington	Mathematics	2020
B.S.	University of North Carolina Wilmington	Mathematics	2018
B.A.	University of North Carolina Wilmington	Economics	2018

Research Interests

FinTech, Cybersecurity, P2P Lending, Blockchain, Cryptocurrencies, Innovation

Skills

Programming	R, SAS, Stata, Python, Mathematica, Excel, Git, Maple
Data Collection	WRDS, Bloomberg, Eikon, FRED, Survey Design
Typesetting	LaTeX, Markdown, Word, Adobe Acrobat
Soft	Leadership, Teamwork, Research, Persistence, Communication

Publications

A study of bivariate generalized Pareto distribution and its dependence structure among model parameters, 2020, with Indranil Ghosh, *Sankhya B* 83:575-604.

Several variants of the classical bivariate and multivariate generalized Pareto distributions have been discussed and studied in the literature (see Arnold (1983, 1993, 2015), Arnold and Laguna (1977), Ali and Nadarajah (2007), Rootzen and Tajvidi (2006) and the references cited therein). Ali and Nadarajah (2007) studied a truncated version of the most popular long-tailed generalized bivariate Pareto distribution (GBPD, henceforth, in short) involving six parameters. However, not much discussion exists in the current literature on the structural properties as well as on the dependence structure among the parameters in this model. In this paper we re-visit the GBPD and discuss several other new properties. In addition, we study the shape of GBPD for varying choices of the model parameters and subsequently study their interdependence. Also, we provide copula based construction of GBPD and discuss the associated local dependence measures.

Working Papers

Catching the Bug: Cyberattack Spillovers onto Partner Firms

I examine how cyberattacks affect the wealth, operational performance, and business strategies of non-targeted joint venture/strategic alliance partners, suppliers, and customers. Cyberattacks are associated with large losses in stakeholder value around attack announcements. Contrary to expectations, I find that, on average, cyberattacks do not tend to adversely affect stakeholder firms over the long term. Instead, managers appear to make temporary changes that help protect their firms from potentially adverse spillovers that they later reverse. However, responses vary based on the nature of information lost from the attack and the potential damage the events may inflict on the stakeholder relationship with the target. Lastly, suppliers are more likely to retain their relationship with targeted customers post-attack, and this

effect is potentially driven by their reliance on relationship-specific investments. In contrast, other stakeholders do not make adjustments to their supply chains.

- Under review at *Management Science*
- Will present at 2023 Southwestern Finance Association Meeting

Conflicts of Interest between Peer-to-Peer (P2P) Platforms and Investors
Peer-to-peer (P2P) lending is a revolutionary financial service that seeks to usurp the role of the bank in the lending process by directly matching borrowers to lenders. Like many other FinTech innovations, P2P lending platforms enjoy less regulatory oversight and less restrictive "skin-in-the-game" requirements than their traditional financial counterparts. On one hand, proponents of the relaxed regulatory environment argue that the freedom allows P2P platforms to meet unmet financial needs and there are mechanisms in place (like data transparency) that are as good as official regulatory oversight. Others argue, however, that the existing mechanisms that should align the interests of P2P platforms and their investors fail to mitigate potential conflicts of interest between the two parties. Using a regulatory event as a shock to LendingClub's investors' trust, my preliminary results support the latter perspective by showing LendingClub inflated the credit ratings of its loan products prior to its 2016 investment fraud scandal, consequently subjecting its investors to unnecessary risk and financial loss.

Honors and Achievements

Graduated *cum laude* with Departmental Honors in Economics, *UNC Wilmington*, 2018
Inducted into Pi Mu Epsilon and Omnicron Delta Epsilon, *UNC Wilmington*, 2018
Named Gene T. and Elizabeth J. Fales Scholar, *UNC Wilmington*, 2016
SOAR Ambassador, *UNC Wilmington*, 2014-2018
Awarded Marine Corps Scholarship Foundation Scholarship, 2014-2018
Awarded 2nd Marine Corps Division Association Scholarship, 2014-2016

Teaching Experience

University of Tennessee
Instructor
Personal Finance (BUAD 202) — Fall 2022 (4.5/5.0), Spring 2023 (TBD)

Teaching Assistant
Introduction to Investments (FINC 425) — Fall 2021
Financial Management (FINC 306) — Spring 2022

University of North Carolina Wilmington
Instructor
Introduction to Statistics with Applications in the Health Sciences (STT 210) — Fall 2019, Spring 2020

Teaching Assistant
Design of Experiments and Analysis of Variance (STT 411) — Spring 2019
Linear Algebra and Matrices (MAT 335) — Fall 2018, Spring 2019
Introduction to Statistics (STT 215) — Fall 2018
Introduction to Statistics with Applications in the Health Sciences (STT 210) — Fall 2018
Basic Calculus (MAT 151) — Spring 2019
College Algebra (MAT 111) — Spring 2019

Work Experience

Independent Statistical Consulting, Wilmington, NC **2019-2020**

• Assist clients with model selection, interpretation of results, and presentation of data

Mind Over Math, Wilmington, NC **2016-2020**

Tutor

• Tutor elementary school to college students in math, statistics, economics, and physics concepts

• Assist in a variety of roles, such as grading, leading review sessions, teaching new material, and creating practice exams

Stapleton Research Lab, Wilmington, NC **2018-2019**

Data Science Research Assistant

• Utilize R to analyze GxE data using profile regression

• Visualize results through various methods, including Shiny apps

• Update EnviroTyping ReadtheDocs, including methodology and tutorial sections