ANDREW PERRY

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EDUCATION

University of California - Berkeley **August 2020 - May 2026**
PhD, Finance

University of California - Berkeley **August 2020 - May 2022**
Master's, Business

Stanford University **September 2018 - June 2020**
Master's, Management Engineering

Stanford University **September 2015 - June 2020**
Bachelor's, Economics

Stanford University **September 2015 - June 2020**
Bachelor's, Mathematics & Computational Science

PROFESSIONAL EXPERIENCE

University of California, Berkeley Haas School of Business **January 2022 - May 2026**
Graduate Student Instructor *Berkeley, California*

- MFE 230A: Investments and Derivatives 2022, 2023
- MFE 230E: Empirical Methods in Finance 2024, 2025
- MFE 230I: Fixed Income Markets 2023, 2025
- MFE 230S: Behavioral Finance 2024, 2025
- UGBA 101A: Microeconomic Analysis for Business Decisions 2025, 2026

Stanford University School of Engineering **January 2018 - June 2020**
Graduate Course Assistant, ACE Program *Stanford, California*

- CME 102A: Ordinary Differential Equations for Engineers
- ACE supports underprivileged students and improves math mastery, confidence, and STEM retention.
- Taught a course on analytical and numerical methods for solving ordinary differential equations in engineering. Covered first and second order ODEs, Laplace transforms, and MATLAB based numerical methods, including stability analysis and boundary value problems.

PROJECTS & OUTSIDE EXPERIENCE

Geometry of the SDF: The Factor Zoo as Structured Ambiguity

- Built a greedy factor-selection algorithm for asset pricing models using information geometry and formal hypothesis testing
- Tested 157 candidate return factors against 73 portfolios, selecting a compact 14-factor pricing model
- Found profit growth to be the dominant factor, excluded accruals from every specification, and traced much of the model's explanatory power to non-normal return patterns

Selling Distress: The Economics of Failed Bank Resolutions

- Built a novel dataset of FDIC bank resolution terms from over 40 years of press releases. Used it to build a structural model of failed bank auctions covering both sides of the balance sheet.
- Found that the FDIC's share of retained assets, the "Toxic Ratio," is the dominant driver of resolution pricing and cost. A one percentage point rise in a bank's pre failure loan loss provisions raises resolution costs by about 86 basis points of total assets.
- Showed that faster pre failure deposit runoff lowers bid premiums and raises resolution costs. This points to a shift in bank regulation from liquidation toward more complex deal structuring, with implications for moral hazard and "too big to fail" policy.

Calibrating the Scan Statistic: Finite Sample Performance Versus Asymptotics

- Journal of the Royal Statistical Society Series B: Statistical Methodology, Volume 84, Issue 5, November 2022, Pages 1608–1639

- Showed that the theoretical case for a popular signal detection method breaks down in practice. Asymptotic theory turns out to be too imprecise to predict real performance, especially for short signals. Proposed a new finite sample way to measure performance instead.
- Developed three practical calibration methods for signal detection that perform well across a range of signal lengths. One is a simple method based on weighted Bonferroni correction. Showed how to apply all three across many real world data settings, including data with unknown or uneven variance and tests based on ranks and signs.
- *Link to project*

FinToolsAP
- Built FinToolsAP, a Python package for economics and finance researchers working with large datasets.
- Designed a local SQLite based system for storing, processing, and querying that data efficiently.
- Added data manipulation utilities compatible with both pandas and polars.
- *Link to project*

Depositing Trust: Deposit Market Distortions and Too-Big-To-Fail
- Built a continuous time structural model of deposit markets with spatial competition and default risk. It predicts a "scissors" pattern. Distressed small banks lose margin, while too big to fail banks widen spreads to monetize perceived safety.
- Built a continuous default probability measure for the full universe of U.S. commercial banks using a weighted ensemble machine learning model. Then used difference in differences to identify a shift in bank behavior after the 2008 financial crisis.
- Found that a one percentage point rise in default probability raises uninsured deposit share by about 48 percent at the largest, systemically important banks. Local banks show almost no such effect. This suggests regulation has repriced, not removed, the too big to fail subsidy.

SKILLS

Skills: autogluon, Bash, C/C++, Data Engineering, Excel/Numbers/Sheets, Git, Java, Julia, Jupyter, Keras, latex, Linux/Unix, Machine Learning, MATLAB, Matplotlib, NumPy, Pandas, polars, Postgres, probability theory, Python, Scikit-learn, SQL, R, Data Science, Data Analysis, AI, Data Modeling, Forecasting, prediction, Mathematica, Regression, Data Structures & Algorithms, algorithm development, predictive models, Data Visualization, Risk Management, credit modeling, A/B Testing, Quantitative Research
Languages: English