

YUHAO ZHU

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Nationality: China \diamond Country of Permanent Residency: the Netherlands

WORK EXPERIENCE

- Erasmus University Rotterdam** Sep. 2015 to present
Ph.D. Candidate of Financial Economics Rotterdam
- Conducting quantitative research in business economics, banking, and applied econometrics.
 - Building financial and business models on options, executive contracts, risk, and stock prices.
 - Quantitative data analysis, e.g., econometrics, machine learning, non-linear optimization.
 - Presenting and discussing papers at 6 international conferences and 5 research seminars.
 - Teaching graduate-level course “Seminar Advanced Corporate Finance: Corporate Governance”.
 - Giving lectures “Basic Econometrics for Data Analysis” and “Data Analysis with STATA”.
 - Supervising theses of 28 Master students and 2 Bachelor students in Corporate Finance and Banking.

EDUCATION

- VU University Amsterdam & Tinbergen Institute[†]** Sep. 2013 to Aug. 2015
M.Phil. in Economics (Finance track), cum laude Amsterdam
- GPA: 8.0/10.0
 - Teaching assistant for graduate-level courses “Corporate Finance Theory” and “Statistics”.
- University of Groningen** Sep. 2011 to Aug. 2013
BSc (Honors) in Economics and Business Economics Groningen
- GPA: 8.5/10.0
- Fudan University** Sep. 2009 to Aug. 2013
BA in Economics Shanghai, China
- GPA: 3.78/4.00
 - Fudan-Groningen Double Degree Program in International Economics & Business.
 - Ranked 2nd in 2009 National Entrance Examination “*Gaokao*” (Shanghai region, social-science-oriented).

TECHNICAL STRENGTHS

Skills	Econometrics, Machine learning, Statistical inference, Data visualization, Financial modeling, Model calibration, Game Theory, Stochastic calculus
Computer languages	Python (SciPy, pandas, scikit-learn) Matlab, VBA for Excel, STATA, Object Pascal, \LaTeX Git for version control, HTML for building personal website
Certificates	GRE (V:154, Q:170), CFA Level I Passed
Natural languages	Chinese (native), English (proficient), Dutch (basic, A2), Japanese (basic)

[†]Graduate school and Institute for economic research of Erasmus University Rotterdam, University of Amsterdam and VU University Amsterdam.

SELECTED PROJECTS

“The real costs of CEO compensation - the effect of behindness aversion of employees”

We manually collect data from annual reports and construct a database on German executive compensation. We also analyze the big data sets from the German Federal Employment agency using remote access. We show that the CEO compensation incurs extra labor costs.

Theoretical models: behavioral economics, contract theory (game theory)

Quantitative methods: linear regression, logistic regression, diff-in-diff, ML estimation

Data sets: Establishment History Panel (BHP) at Federal Employment Agency (via remote access)
Hand-collected German Executive Compensation data set, Datastream

Tools and packages: STATA, Python (sklearn, statsmodels, matplotlib)

“Wage gap and stock returns”

We establish an asset-pricing model with noise traders and inequality-averse traders. We analyze the big data sets on German labor compensation. We find that firms with higher wage gap has positive risk-adjusted returns, which contributes to a trading strategy.

Theoretical models: asset pricing model, behavioral economics

Quantitative methods: time-series analysis, linear regression, Fama-MacBeth regression, visualization

Data sets: Establishment History Panel, German Executive Compensation data set, Datastream

Tools and packages: STATA, Python (matplotlib, Basemap, shapely, fiona), R

“Disclosure regulation and RMBS Liquidity”

We analyze the effect of the ECB’s policy on the liquidity of RMBS in the secondary market. The policy requires that the RMBS who have collateral at the ECB need to obligatorily disclose the components of the security. We adopt the diff-in-diff model to analyze the data sets. We find that the policy increases liquidity.

Theoretical models: banking, securities, treatment model

Quantitative methods: diff-in-diff, visualization, data cleaning and matching

Data sets: Bloomberg, European Datawarehouse, CABS, ECB eligibility dataset

Tools and packages: Python (openpyxl, matplotlib, pandas), STATA, VBA for Excel

“Probability-weighting CEOs and optimal contracts”

I establish a financial model where the CEO is not only risk-averse but also probability weighting. Her risk attitude results in positive options holding in optimal compensation package. Then I write programs to validate and optimize my model with data on U.S. CEOs contracts.

Theoretical models: behavioral economics, contract theory, option pricing, stochastic calculus

Quantitative methods: calibration, non-linear optimization, integral

Data sets: Execucomp, Compustat, CRSP

Tools and packages: STATA, Python (numpy, scipy, pandas, matplotlib)

“Anti-corruption campaign and land-leasing in China”

We want to see whether the anti-corruption campaign in 2012 affects the land-leasing activities in China. We write a web spider to download millions of land-leasing records from landchina.com and visualize the data set on a choropleth map.

Quantitative methods: web spider, visualization

Data sets: landchina

Tools and packages: Python (urllib, matplotlib, Basemap, shapely, fiona)