WU Taizhi

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Education

Washington University in St. Louis St. Louis, United States
Master Science in Finance - Quantitative Track; GPA: 3.98/4.00 *Expected: Dec. 2022*

- **Core Courses**: Fixed Income Derivatives; Data Analysis, Forecasting & Risk Analysis; Mathematical Finance; Advanced Continuous Time Finance (PhD level); Introduction to Lebesgue Integration

Southern University of Science and Technology Shenzhen, China
Bachelor of Science in Financial Mathematics; GPA: 3.58/4.00 *Sept. 2017 - Jun. 2021*

- **Core Courses**: Real Analysis; Partial Differential Equation; Time Series Analysis; Asset Pricing and Risk Management; Security Investments; Models and Pricing of Financial Derivatives
- **Awards**: Third Prize of College Scholarship (2019, 2020)

Peking University Beijing, China
Summer Program *Jul. 2019 - Aug. 2019*

- **Courses Taken**: Stochastic Calculus and its Application in Quantitative Finance; Macroeconomic Analysis with Big Data and Machine Learning

King's College London London, United Kingdom
Summer Program *Jul. 2018 - Aug. 2018*

- **Courses Taken**: Applied Mathematics; International Business

Research Experience

Research Assistant St. Louis, United States
Prof. Filippou Ilias, Washington University in St. Louis *May 2022 - Present*

- Assisted research on ETF Flows and Currency Risk Premia
- Fetched country ETFs quote data from WRDS database and constructed order imbalances as in Filippou et al. (2021)
- Cleaned currency spot rate and forward rate data and constructed currency excess returns following Lustig et al. (2012)
- Performed a Fama-Macbeth regression with exchange rates on ETF order imbalances

Research Assistant St. Louis, United States
Dr. Dan Zhao, Washington University in St. Louis *Aug. 2021 - Jun. 2022*

- Assisted research on Equifax Data with 320,000 individual credit data
- Investigated the credit demand of individuals in areas narrowly missed by severe tornadoes
- Developed multiple DNN models for robustness checks by using SHapley Addictive exPlanations (SHAP) method
- Used Orthogonal Random Forest to estimate heterogeneous treatment effect

Fixed Income Derivatives Project Leader St. Louis, United States
Professor Anatoliy Belaygorod, Washington University in St. Louis *Mar. 2022 - Apr. 2022*

- Leading 4 team members on the Hull-White Model Calibration project
- Calibrated the Hull-White model to the market Caps and Floors using both analytic and simulating methods
- Applied the Nelder-Mead method to optimize model parameters
- Winner project among 20 teams

Teaching Assistantship

Teaching Assistant St. Louis, United States
Washington University in St. Louis

- Investments FIN 441 for Prof. Ilias Filippou | 2021 Fall
- Options and Futures FIN 451 for Prof. Jian Cai | 2022 Fall
- Data Analysis for Investments for Prof. Guofu Zhou | 2022 Fall

Work Experience

Quantitative Risk Management Online Intern Shenzhen, China
Department of Quantitative Risk Management, J.P. Morgan *Oct. 2020 - Nov. 2020*

- Assisted European Based Option Pricing and American Option Pricing projects
- Reduced pricing variance through importance sampling and bootstrap
- Replicated the simple least-squares regression approach purposed by Longstaff and Schwartz
- Priced American options under both Black-Scholes-Merton Model and Heston Stochastic Model

Financial Engineering Intern Guangzhou, China
Department of Financial Engineering, Wanlian Securities Company Limited *Jun. 2020 - Aug. 2020*

- Assisted CTA Strategy Development, Arbitrage Trading Research and Option Monitor System Development projects
- Utilized VNPY station for quantitative trading in Chinese forward markets
- Examined and copied CTA strategy from existing report using Python, such as Turtle Strategy
- Compared component stocks between 50 ETF and H ETF to find motivation of the arbitrage opportunity to give timing of calling and selling
- Developed a monitoring system by python which can calculate portfolio's Greeks (cash) automatically from Wind real time data

Skills Summary

Programming: Python, SQL, R, LaTeX

Big Data: Linux, Apache Hadoop, PySpark

Risk Management: FRM I&II Passed

References

Professor Philip H. Dybvig
Boatmen's Bancshares Professor of Banking and Finance, Washington University in St. Louis

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- Phone: 314-935-9444

Professor Ilias Filippou
Visiting Assistant Professor of Finance, Washington University in St. Louis

- Email: IliasFilippou@wustl.edu
- Phone: 314-935-2317

Dan Zhao
Postdoctoral Research Scholar in Finance, Washington University in St. Louis

- Email: DanZhao@wustl.edu
- Phone: 734-249-8686