LIYA GUAN

Tel: (608) 886-8819 | Email: liya.guan.1@gmail.com | 110 River Dr S Apt 1205, Jersey City, NJ 07310

EDUCATION

Rutgers University, New Brunswick, NJ, USA

Master of Science, Financial Statistics & Risk Management, Overall GPA 3.4, Major GPA 3.5 — *Dec 2017*

Princeton University, NJ, USA

Princeton-Rutgers Exchange Program, Risk Averse Optimization, GPA 3.8 — *2015 – 2016*

University of Wisconsin Madison, WI, USA

Bachelor of Arts, Economics, Statistics, GPA 3.1 — *2010 – 2014*

PROFESSIONAL EXPERIENCE

Bank of China Headquarters *Beijing, China*

Strategic Development Department Research Associate — *Summer 2016*

- Conducted research on CNY offshore centers' (Hong Kong and Singapore) development
- Analyzed offshore CNY financing and deposit taking, and proposed trading strategies
- Collected data on China's GDP, CPI, interest rates and exchange rates from 15 agencies and organizations biweekly
- Authored economics reports and visual dashboards that describe data characteristics and highlight trends and issues

Apple Inc. *Lansing, MI*

Specialist — *March 2015 – June 2015*

- Collaborated with overseas colleagues to develop a consistent after-sales service policy for oversea merchandise by promoting AppleCare Service Agreements
- Established 5 profiles every week for enterprise customers, including business shareholders, and explained available lifecycle services. Assisted store manager to improve the store's retail strategies based on customer feedback

PricewaterhouseCoopers LLP *Beijing, China*

Summer Intern — *Summer 2013*

- Prepared the interim financial report, including Key Performance Indicators (KPIs), for a client company
- Used the SAP accounting information system to audit interim financial reports

Applied Population Laboratory *Madison, WI*

Student Research Assistant — *May 2013 – June 2013*

- Collected, cleaned, and analyzed three years of FDA pharmaceutical benefits research data from 50 states using statistical software R for US Pharmaceutical Beneficial Regulation Research

RESEARCH PROJECTS

Stock Prices Prediction Using Monte Carlo Simulation and GARCH Model Forecasting — *2017*

- Inferred closing prices and prediction intervals with 80% significance level for 10 trading days from 12/02/16.
- Used Python to do Monte Carlo simulation on Brownian Motion behaviors of stock prices.

Market Skewness Risk and the Stock Returns — *2016*

- Introduced measures of innovations in market moments using ten-year S&P500 index, and fitted CAPM models for NASDAQ100 with skewness factors. Stocks with high exposure to risk premium exhibit low returns on average
- Used R and packages including "PerformanceAnalytics" and "TTR" to extract historical prices from yahoo finance website, and to calculate returns, and volatilities.
- Washed off the interactions in the non-linear regression model. Fitted ARMA(1,0)+GARCH(1,1) model iteratively to the residuals of CAPM models in order to get converged beta values in the CAPM model. (Implemented by R packages, including "quantmod", and "fGarch".)

Risk Averse Optimization Project — *2015*

- Formulated and solved a two-stage stochastic optimization problem to determine the production plan that maximizes the expected profit.
- Assessed the influence of the risk aversion coefficient using mean-semideviation VaR risk measure.

TECHNICAL AND OTHER SKILLS

Core Domain Expertise: Market Risk, Capital Valuation, Finance Product Control, Quantitative Analysis, Portfolio Management (including factor model and APT model), Regression, Time Series, Advanced Probability, Advanced Inference

Strong Computing & Programming: Java, Python, VBA, R, SAS, STATA, SQL, SAP Accounting, Bloomberg BMC Certificate

Communication: Full professional proficiency in English. Native proficiency in Chinese Mandarin

HONORS AND ACTIVITIES

PRMIA Risk Management Regional Challenge Regional Competition Finalist *(Team Leader)* — *January 2016*

- Top 20 team in the New York regional finalist
- Analyzed the case study of foreign exchange (FX) risk management issue for a large European company and provided a systematical hedging plan to mitigate the risk while maintaining the cash flow hedging treatment