Seyedeh Dorsa Ghamkhar

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Education

- PhD in Businesss Administration, Finance, Schulich School of Business 2022- 2027(Expected)
- M.B.A., Finance, Sharif University of Technology 2019- 2022
- B.Sc. in Civil Eng., Sharif University of Technology 2013- 2018

Research Interests

Asset pricing
Risk management
Investment & Portfolio management
Derivative markets

Honors and Awards

- Schulich Entrance Scholarship of Merit PhD
- The Invesco Doctoral Scholarship
- Ranked 8th among more than 9700 participants (**top 0.08%**) in the Iranian entrance exam for Master of Business Administration in 2018 with an exceptional performance in mathematics (97%) and GMAT (81%)
- Ranked 184st among more than 230,000 participants (**top 0.08%**) in the Iranian national university entrance exam in 2013 with an exceptional performance in mathematics (90%)
- Accepted 3 times in the first round of Iran National Mathematics Olympiad (2009, 2010, 2011)
- Accepted 3 times in the first round of Iran National Informatics Olympiad (2009, 2010, 2011)

Certificates

- Financial Markets (Coursera)
- Business Applications of Hypothesis Testing and Confidence Interval Estimation (Coursera)
- Introduction to Data Analysis Using Excel (Coursera)
- Inspiring and Motivating Individuals (Coursera)

Academic Course Projects

Master Thesis (Supervisor: Professor Zamani)

This research is an event study about the effects of the Corona Virus Outbreak on different industries in the Iran Stock Exchange. This study examines which industries had been affected more negatively or positively by the COVID-19 pandemic outbreak. In the first step, we calculate Alphas, Betas, and expected returns of stocks in an estimation window before the event using the market model. Then, we group all stocks in 17 different industries and calculate average cumulative abnormal returns in the event period as good measures for examining defects of this outbreak. Our results show that transportation, chemical products, processed products, real estate, and automobile manufacturing were negatively affected by the event. On the other hand, industries like finance, investment funds, food, and information & communication were positively affected by this event. We guess that these results are due to the potential of each industry to perform well in remoteness.

Financial Engineering (Supervisor: Professor Zamani)

- Generating sample data using Monte Carlo Simulation in python for option pricing.
- Using binomial tree method for pricing standard options.
- Using Monte Carlo simulation method for pricing Asian barrier options.

Risk Management (Supervisor: Professor Zamani)

- Drawing histograms for probabilities of gain and loss with respect to price changes in python.
- Calculating VaR using Monte Carlo, Historical, Variance-Covariance, EWMA, GARCH and RiskMetrics methods in python.
- Generating random samples from copula structures in python.
- Plotting the histogram of loss-severity and total loss distribution to calculate operational risk in python.

Econometrics (Supervisor: Professor Ebrahimnejad)

Examining presence of seasonality in the cross-section of stock returns in Tehran Security Exchange stocks using published method by Steven L.Heston and Ronnie Sadka:

- Building long-short portfolios in python
- Using Fama-Mcbeth regression and determining meaningfulness of t-statistics in Python

Organizational Behavior (Supervisor: Professor Banki)

Implementation of different theories of organizational behavior in analyzing people's behavior:

- Analyzing individuals' perceptions and biases.
- Using different leadership perspectives for leaders' decision making.
- Analyzing how values would affect team work.

Asset pricing (Supervisors: Professor Mohaghegh, Professor Ebrahimnejad)

Presenting two papers:

- Black, Fischer, and Myron Scholes. "The pricing of options and corporate liabilities." Journal of political economy 81, no. 3 (1973): 637-654.
- Frazzini, Andrea, David Kabiller, and Lasse Heje Pedersen. "Buffett's alpha." Financial Analysts Journal 74, no. 4 (2018): 35-55.

Summarizing three papers:

- Cochrane, John H. Portfolio advice for a multifactor world. No. w7170. National Bureau of Economic Research, 1999.
- Cochrane, John H. New facts in finance. No. w7169. National Bureau of Economic Research, 1999.
- Gromb, Denis, and Dimitri Vayanos. "Limits of arbitrage." Annu. Rev. Financ. Econ. 2, no. 1 (2010): 251-275.

Teaching Experience

Course	Semester	Instructor
Risk Management	Spring 2021	Prof. Shiva Zamani
Financial Engineering	Fall 2020	Prof. Shiva Zamani
Corporate Finance	Fall 2019	Prof. Mohsen Bahramgiri

Work Experience

- Data Analyst at Digikala — Jul 2021 – Aug 2022
- Editor Chief at Sharif Civil Magazine — Sep2015 – Sep 2016
- Education Advisor at Modaresan Sharif — Sep 2018 – Jul 2020

Knowledge and Skills

- Programming Language: **Python, R**
- **Microsoft Excel, Microsoft Power BI**