Faculty Information

NAKAJIMA Katsushi

Specialization:

- Accounting and Finance (AF)
- Entrepreneurship, Innovation and Operations Management (EIM)
- Japanese Management (JM)

Research Area:

- Finance, Financial Economics, Asset Pricing Theory, Financial Derivatives,
- Economic Theory, General Equilibrium,
- Financial Econometrics,
- Data Science Applied to Finance and Economics

Keywords:

- Financial Economics,
- Asset Pricing, Derivative Pricing, Commodity Pricing,
- Portfolio Theory,
- Corporate Finance, Financial Statement Analysis,
- Financial Econometrics, Macroeconometrics,
- Quantitative Methods, Statistical Methods, and other methods including Machine Learning and Neural Networks

Seminar Topic:

- Finance, Asset Pricing Theory, Portfolio Theory, Corporate Finance,
- Economics,
- Data Science

Seminar Teaching Method: For 1st-year students, we will be reading chapters from books and journal articles mainly achieving theoretical knowledge and technical skills for the research project. One chapter or an article will be given and the student will present it for each session. At the end of the 1st-year, we will discuss the research topic for the master's thesis or independent final report. From the 2nd year, we will be retrieving data and analyzing it under the topic

chosen. If required, we will be reading additional materials in order to tackle our topic.

Possible Research Topics for Students:

- Empirical Asset Pricing: Analyzing the impact of specific factors including socially responsible factors using the Fama-French factor model and other econometric models including time series analysis.
- Empirical analysis on ESG: Analyze ESG factors of firms with financial performance.
- Portfolio Theory: Construct a trading strategy that can beat the market index using Machine Learning techniques including Deep Learning, and so on.
- Analyzing Impact of Corporate Action: Collect M&A, dividend data, etc. and analyze the impact of how it effects the stock prices.
- Macroeconometrics: Analyze country-wise economic growth with factors including financial market size, trading volume, market volatility, etc.
- Financial Statement Analysis: Applying time series analysis to investigate the impact of innovation on financial ratios. Categorize firms into two or three groups (such as conventional banks and Islamic banks) and compare its financial ratios among those groups to see which the groups' characteristics.
- Applications of Machine Learning (Statistical Learning): Applying machine learning techniques to finance, economics, or management topics.
- Valuation: Evaluating companies using the discount dividend model and/or the discount cash flow model and other techniques.
- Other Applications of Statistical, Mathematical Techniques to Business and Economics.

Research Method: Use statistical (including econometric) and financial engineering techniques such as t-test, F-test, linear regression, nonlinear regression, panel data analysis, vector autoregressive model, cointegration model, financial models, event studies, Monte Carlo simulation, machine learning, neural network, etc.

Research Projects for Supervision:

- Master's Thesis
- Independent Final Report

Comments: My strength is applying quantitative methods to social science. Although it may be tough, you will achieve scientific techniques/methods/skills for tackling a research topic and build a foundation that will definitely be your strength in order to develop your career after graduating APU. I will guide you through those technical skills step by step so that you can use, understand, and apply it. However, students must be willing to make effort on understanding the process and the results.

Requirements for students:

1. Not allergic to statistics, mathematics, or programming.
2. Be able to use or willing to use Excel and statistical software or programming such as R or Python. (You can achieve these methods through my seminar or other classes. It is better to consult with what technical skills you want to achieve so that I can help you to adapt easily.)

For students who are aiming for PhD, please notify me since we will be focusing on a research project that will be a PhD thesis.

APU Researcher Database:

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