MN5443: RESEARCH METHODS IN FINANCE

MODULE TYPE/SEMESTER: Core (20 credits), Semester 1

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AIM: The aim of this module is to equip students with econometric tools and techniques to analyse and interpret financial data. Students will learn how to organise and characterise a particular set of data (cross-section, time series, and panel data) as well as analysing it using appropriate econometric techniques. The module also develops students’ ability to estimate various models and perform various tests using EViews. The final end of the module is to develop student ability to undertake empirical research using financial data.

METHOD OF TEACHING AND LEARNING:

Teaching Format
One two-hour lecture each week plus one-hour tutorial.

INDICATIVE TOPIC OUTLINE:

Teaching Schedule
Week 1: Introduction to Financial Econometrics
Week 2: Classical Linear Regression I
Week 3: Classical Linear Regression II
Week 4: Classical Linear Regression III
Week 5: Time Series Analysis I
Week 6: No Classes (Independent Learning Week)
Week 7: Time Series Analysis II
Week 8: Time Series Analysis III
Week 9: Panel Data I
Week 10: Panel Data II
Week 11: No Classes
Week 12: Revision Period
Weeks 13 &14: Semester 1 Examination Diet

LEARNING OUTCOMES:
On completion of this module, students should:
• Understand the OLS formulae for estimating parameters and their standard errors
• Explain the desirable properties that a good estimator should have
• Estimate linear regression models and test single and multiple hypotheses
• Determine how well a model fits the data
• Explain the impact of heteroscedasticity or autocorrelation on the optimality of OLS parameter and standard error estimation, as well as solutions to deal with these problems
• Define the characteristics of various time series models
• Estimate time series models, produce forecasts from them and evaluate the accuracy of predictions using various metrics
• Understand the concepts of stationarity and cointegration, and the various tests associated with these concepts
• Understand and estimate error correction model (ECM)
• Understand and estimate conditional volatility (GARCH) models
• Describe the key features of panel data and outline its advantages and disadvantages
• Understand the fixed effect and random effect approaches to panel model specification
• Construct and estimate panel regression models
• Perform various models and tests covered in lectures using Eviews
• Understand the procedure of conducting empirical research in finance

ASSESSMENTS:

Coursework 1 (30%): 60 minutes class test
Coursework 2 (30%): A 2,500 words coursework, topic to be announced
Examination (40%): 90 minutes class test

READING LIST: