HANDBOOK OF
FINANCIAL
ECONOMETRICS,
MATHEMATICS,
STATISTICS, AND
MACHINE LEARNING
(In 4 Volumes)

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This four-volume handbook covers important concepts and tools used in the fields of financial econometrics, mathematics, statistics, and machine learning. Econometric methods have been applied in asset pricing, corporate finance, international finance, options and futures, risk management, and in stress testing for financial institutions. This handbook discusses a variety of econometric methods, including single equation multiple regression, simultaneous equation regression, and panel data analysis, among others. It also covers statistical distributions, such as the binomial and log normal distributions, in light of their applications to portfolio theory and asset management in addition to their use in research regarding options and futures contracts.

In recent times, an increased importance has been given to computer technology in financial research. Different computer languages and programming techniques are important tools for empirical research in finance. Hence, simulation, machine learning, big data, and financial payments are explored in this handbook.

Led by Distinguished Professor Cheng Few Lee from Rutgers University, this multi-volume work integrates theoretical, methodological, and practical issues based on his years of academic and industry experience.

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Cheng Few Lee is a Distinguished Professor of Finance at Rutgers Business School, Rutgers University and was chairperson of the Department of Finance from 1988–1995. He has also served on the faculty of the University of Illinois (IBE Professor of Finance) and the University of Georgia. He has maintained academic and consulting ties in Taiwan, Hong Kong, China and the United States for the past four decades. He has been a consultant to many prominent groups including, the American Insurance Group, the World Bank, the United Nations, The Marmon Group Inc., Wintek Corporation and Polaris Financial Group, etc.


In the past 45 years, Dr Lee has written numerous textbooks ranging in subject matter from financial management to corporate finance, security analysis and portfolio management to financial analysis, planning and forecasting, and business statistics. Dr Lee has also published more than 230 articles in more than 20 different journals in finance, accounting, economics, statistics, and management. Professor Lee has been ranked the most published finance professor worldwide during 1953–2008. In addition to this new handbook, Dr Lee published Handbook of Quantitative Finance and Risk Management with John C Lee and Alice C Lee in 2010 and Handbook of Financial Econometrics and Statistics with John C Lee in 2015. Both handbooks have been published with Springer.

John C. Lee is a Microsoft Certified Professional in Microsoft Visual Basic and Microsoft Excel VBA. He has a Bachelor and Masters degree in accounting from the University of Illinois at Urbana-Champaign. John has worked over 20 years in both the business and technical fields as an accountant, auditor, systems analyst and as a business software developer. He is the lead author of Essentials of Excel VBA, SAS, and MINITAB for Statistical and Financial Analysis published in 2017 by Springer. This book is a companion text to Statistics of Business and Financial Economics, of which he is one of the co-authors. In addition, he also published Financial Analysis, Planning and Forecasting, 3e (with Cheng Few Lee). John has been a Senior Technology Officer at the Chase Manhattan Bank and Assistant Vice President at Merrill Lynch. Currently, he is the Director of the Center for PBBEF Research.

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