RATS Handbook to Accompany
Introductory Econometrics for Finance

Written to complement the second edition of best-selling textbook Introductory Econometrics for Finance, this book provides a comprehensive introduction to the use of the Regression Analysis of Time-Series (RATS) software for modelling in finance and beyond. It provides numerous worked examples with carefully annotated code and detailed explanations of the outputs, giving readers the knowledge and confidence to use the software for their own research and to interpret their own results. A wide variety of important modelling approaches is covered, including such topics as time-series analysis and forecasting, volatility modelling, limited dependent variable and panel methods, switching models and simulations methods. The book is supported by an accompanying website containing freely downloadable data and RATS instructions.

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Preface

This RATS handbook accompanies the second edition of *Introductory Econometrics for Finance* (Cambridge University Press, ISBN: 9780521694681). The first edition of *Introductory Econometrics for Finance* incorporated a discussion of the use of the RATS software into the text, but the inclusion of additional material in the second edition has necessitated the switch to a separate RATS handbook to ensure that the text remains at a manageable length. It is not intended as a stand-alone textbook and it will not repeat all of the theory, background and case studies from *Introductory Econometrics for Finance*. Rather, it is intended to illustrate, using numerous examples with real data taken from that book, how RATS can be used to solve many problems of interest in empirical finance. The focus is on replicating the examples and not on demonstrating the full functionality of the software. Thus this handbook should be of benefit to anyone who wishes to learn how to use RATS, and it assumes no prior exposure to the software. While the illustrations here focus on topics in finance, most of the methodology is generic and hence it may be usefully employed in other areas of application such as economics, business or real estate.

As for the first edition of the main textbook, output from the RATS package is included in Courier 9-point font in a box, while instructions for readers to type, or actions that they must follow, are written in **bold type**. All of the sets of instructions developed in this book together with the data are available on the Cambridge University Press web site at www.cup.cam.ac.uk/brooks

I am grateful to Tom Doan and Tom Maycock at Estima for their support and for their assistance with my programs, and to Tom Doan for many useful comments on an earlier draft manuscript. Naturally, I alone bear responsibility for any remaining errors.
Preface

About Introductory Econometrics for Finance

Now thoroughly revised and updated including two new chapters in its second edition, this best-seller was the first textbook to teach introductory econometrics to finance students. The text is based primarily on intuition rather than formulae, giving students the skills and confidence to estimate and interpret models, while having an intuitive grasp of the underlying theoretical concepts.

The approach, based on the successful courses I have taught at the ICMA Centre, one of the UK’s leading finance schools, and the Cass Business School, London, ensures that the text focuses squarely on the needs of finance students. The book assumes no prior knowledge of econometrics, and covers important modern topics such as time-series forecasting, volatility modelling, switching models, limited dependent variable and panel approaches, and simulations methods. It includes detailed examples and case studies from the finance literature. Sample instructions and output from EViews are presented as an integral part of the text. Advice on planning and executing a project in empirical finance is also given.

About the author

Chris Brooks is Professor of Finance at the ICMA Centre, University of Reading, UK, where he also obtained his PhD. He has published over 60 articles in leading academic and practitioner journals including the Journal of Business, Journal of Banking and Finance, Journal of Empirical Finance, Review of Economics and Statistics, and the Economic Journal. He is author of three Cambridge books in addition to this one and is an associate editor of a number of journals including the International Journal of Forecasting and the Journal of Business Finance and Accounting. He has also acted as consultant for various banks and professional bodies in the fields of finance, econometrics and real estate.