

Market Models: A Guide to Financial Data Analysis

The purpose of this book is to educate the reader to design and implement their own models of the relationships between important variables in financial markets. This CD has been provided with this aim in mind. It contains programs to illustrate many of the models that are described in the text: in the list of contents an asterisk is placed beside those sections that have supporting software on this CD. All Excel workbook applications are designed for use with Excel 2000 (or higher versions when available). Excel 97 or previous versions will not be able to run most of the spreadsheets. The Excel spreadsheets and figures are password protected. Readers may obtain the password from the Market Models website:

www.wiley.co.uk/marketmodels

Minimum specifications required for the successful operation of this CD content are:

Pentium class processor

Windows 95 or later with 20MB RAM

or Windows NT4.0 or later with 36MB RAM

CDROM Drive

50MB Hard Disk Space

Internet Connection

Excel 2000

The **Excel Workbooks** folder contains several spreadsheets that have been written specifically for the book by two outstanding students from the Financial Engineering and Quantitative Analysis (FEQA) MSc course at the ISMA Centre, University of Reading: **Steffen Hennig** and **Sujit Narayanan**. Each contains a help file to explain the usage and the technical background of the model. Interim calculations are in hidden sheets that should be viewed by readers that wish to understand more fully the calculations involved. Readers may also wish to use the programs as a basis for their own working models. More details about Steffen and Sujit can be found in the pdf file **AboutAuthors**.

The **PCA by Optimization** file contains illustrations of the optimization approach to principal component analysis, with spreadsheet written by my esteemed colleague at the ISMA Centre, Ubbo Wiersema. Since the optimization approach is not covered in the text, Ubbo has also provided an extensive tutorial on the subject - see the file **Tutorial.doc**.

PcGive contains a fully functional version of the OxMetrics software suite: PcGive, PcGets and STAMP. This is limited only by the data that it can use and has all the facilities of these software packages available. In addition to the standard OxMetrics tutorial files, this version has been tailored to work on some of the data used in the book. Dr. Jurgen Doornik, of Nuffield College, Oxford has kindly provided a tutorial (**tutorial.htm**) on the models that are developed in Chapter 4 (GARCH models). For more details about OxMetrics, please contact:

Dr Jurgen A Doornik

Address: Nuffield College, Oxford OX1 1NF, UK

Tel. UK: +44 1865 278610 Fax +44 1865 278557 Tel. US: +1 650 497 1439

US address: 74 Barnes court, Apt 4H, Stanford 94305, CA.

Web: <http://www.nuff.ox.ac.uk/Users/Doornik/> and <http://www.oxedit.com>

The files in the folder **Universal Excel Add-ins** have been provided by Dr. Mamdouh Barakat of MB RiskManagement. Mamdouh has tailored two of the Universal Add-ins to data used in Chapters 4 (GARCH models) and Chapter 6 (Principal Component Analysis); these are called **MBRM_GARCH** and **MBRM_PCA**. To use these, Mamdouh has given readers a free 30-day trial of the Universal Add-in software suite. Run the **Set-up** executable in the **MBRM's Universal Add-ins - Full Install (30-day trial)** subdirectory, but read the **Readme** document first. More information about MBRMs Universal Add-ins is obtainable from:

Dr. Mamdouh Barakat
Managing Director, MB Risk Management
Address: Warnford Court, Throgmorton Street, London EC2N 2AT
Tel: +44 20 7628 2007 Fax: +44 20 7628 2008
Web: www.mbrm.com

There are approximately 230 figures in this book and more than a few have had their glorious Technicolor suppressed by the confines of monochrome print. An appealing feature of the CD is that the **Colour Figures** file contains the original colour versions of all figures and a wealth of useful supporting data. Readers are kindly requested to read and comply with the copyright information given on this CD.

It should be stressed that the CD is provided free of charge and for educational purposes only. It is not guaranteed to work and no additional software or hardware support will be given to the user. Neither are the spreadsheets guaranteed to be free of errors. Any errors should be reported to the market models user discussion forum that will be provided on the website for the book: www.wiley.co.uk/marketmodels. It is hoped that this forum will provide a basis for the users to exchange ideas on the aspects of model development that are covered in the text.

With this CD *Market Models* has extended the boundaries of standard texts; it is indeed rare that a text book should have so many programs as tailored accompaniments. I hope that many readers will gain much from this CD. If you are one such reader, I would be very glad if you made favourable comments on this, and the book itself, on the Web.

Carol Alexander, August 2001

Biography of the Author



Professor Carol Alexander obtained her PhD in Algebraic Number Theory in 1980, under the supervision of Professor Walter Ledermann (to whom this book is dedicated). She then held a research post at the Gemeente Universiteit in Amsterdam. In 1982 she joined UBS Phillips and Drew as a bond analyst before working in the Mathematics and Economics faculties of the University of Sussex from 1985 to 1998. She also holds a first class BSc in Mathematics with Experimental Psychology from the University of Sussex and an MSc in Econometrics and Mathematical Economics from the London School of Economics.

In 1996 she became the Academic Director of Algorithmics Inc. and in 1998 she joined Nikko Global Holdings as a Director and Head of Market Risk Modelling. Since 1999 she has worked at the ISMA centre, the Business School of Reading University, as Professor of Finance and Chair of the Risk Management group. She is shown here with her husband, Jacques Pézier, who has had a considerable influence on her career.

She has published numerous papers in international journals in the areas of algebra, game theory, econometrics and finance. Her editorial experience includes 12 books on mathematics and finance including the Handbook of Risk Management and Analysis (Wileys, 1996) and two companion volumes on 'Measuring and Modelling Financial Risk' and 'New Markets and Products' (Wileys, 1998), *Visions of Risk* (FT-Prentice Hall, 2000) and *Mastering Risk Volume 2* (FT-Prentice Hall, 2001). Her comprehensive text book on '*Market Models: a Guide to Financial Data Analysis*' is being published by John Wiley in September 2001. Carol was also the founding Editor-in-Chief of NetExposure, the Electronic Journal of Financial Risk.

Market Models

Since 1990 Carol has developed many models of risk management and investment analysis through consulting, training and research. Consultancy experience includes building the first generation GARCH models, volatility trading models, design and construction of fund management software based on cointegration, internal VaR models, orthogonal GARCH implementation, and spot-futures arbitrage models. Professor Alexander also designs commercial software for risk management, portfolio management and trading.