ELSEVIER

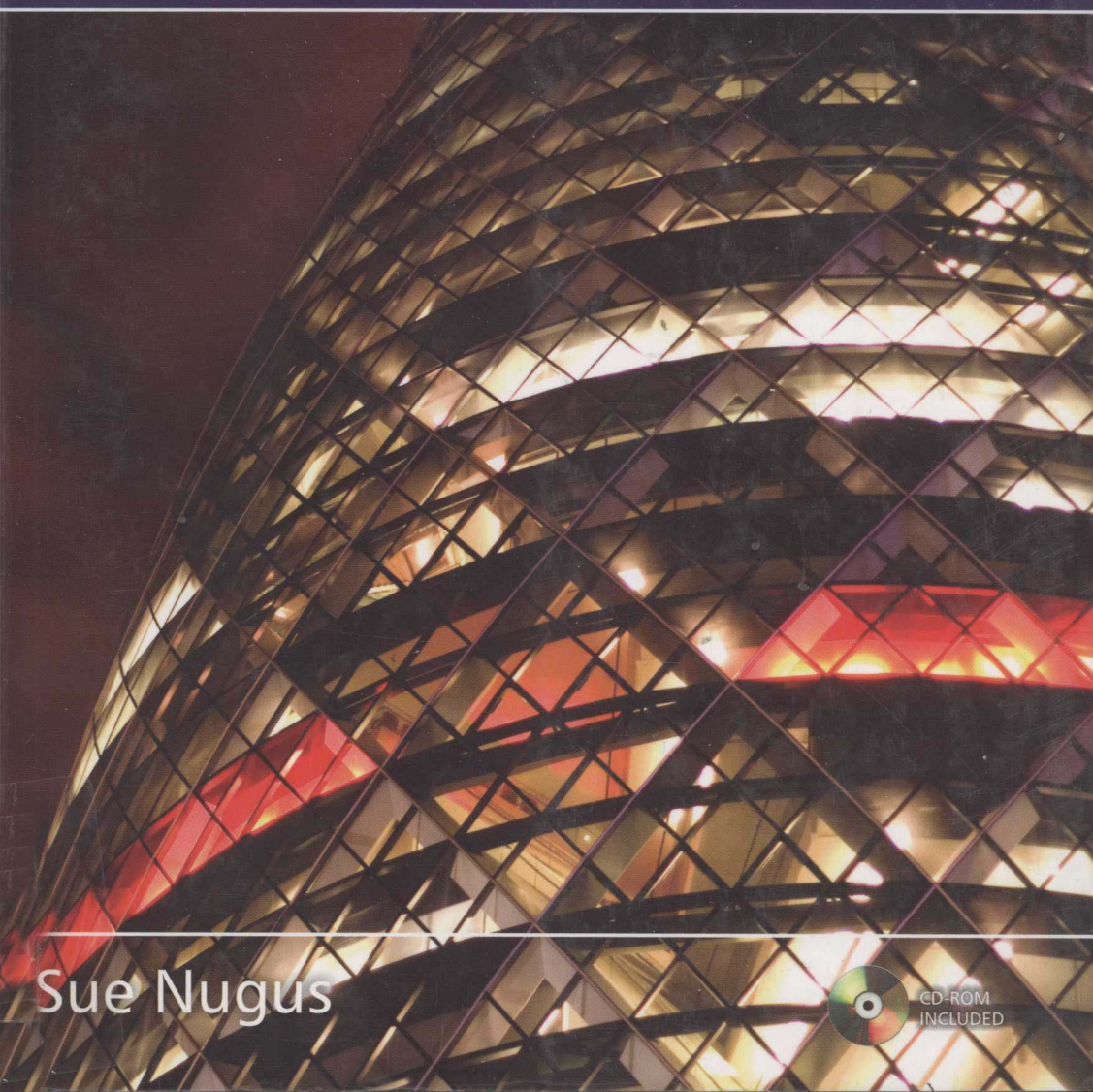
CIMA

PUBLISHING

Financial Planning using Excel

Forecasting, planning and budgeting techniques

Second edition



Sue Nugus

CD-ROM INCLUDED

Financial Planning Using Excel

Forecasting Planning and Budgeting Techniques

Second Edition

Sue Nugus

江苏工业学院图书馆
藏书章

ELSEVIER

AMSTERDAM • BOSTON • HEIDELBERG • LONDON
NEW YORK • OXFORD • PARIS • SAN DIEGO
SAN FRANCISCO • SINGAPORE • SYDNEY • TOKYO

CIMA Publishing is an imprint of Elsevier

CIMA
PUBLISHING

CIMA Publishing is an imprint of Elsevier
Linacre House, Jordan Hill, Oxford OX2 8DP, UK
30 Corporate Drive, Suite 400, Burlington, MA 01803, USA

First published 2005

Copyright © 2009, Elsevier Ltd. All rights reserved

The right of Sue Nugus to be identified as the author of this work has been asserted in accordance with the Copyright, Designs and Patents Act 1988

No part of this publication may be reproduced in any material form (including photocopying or storing in any medium by electronic means and whether or not transiently or incidentally to some other use of this publication) without the written permission of the copyright holder except in accordance with the provisions of the Copyright, Designs and Patents Act 1988 or under the terms of a licence issued by the Copyright Licensing Agency Ltd, 90 Tottenham Court Road, London, England W1T 4LP. Applications for the copyright holder's written permission to reproduce any part of this publication should be addressed to the publisher

Permissions may be sought directly from Elsevier's Science and Technology Rights Department in Oxford, UK: phone: (+44) (0) 1865 843830; fax: (+44) (0) 1865 853333; e-mail: permissions@elsevier.com. You may also complete your request on-line via the Elsevier homepage (http://www.elsevier.com), by selecting 'Customer Support' and then 'Obtaining Permissions'

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN-13 978-1-85617-551-7

09 10 11 12 10 9 8 7 6 5 4 3 2 1

For information on all CIMA Publishing Publications visit our website at www.cimapublishing.com.

Typeset by Charon Tec Ltd., A Macmillan Company. (www.macmillansolutions.com)

Printed and bound in Great Britain

Working together to grow libraries in developing countries

www.elsevier.com | www.bookaid.org | www.sabre.org

ELSEVIER BOOK AID International Sabre Foundation

Preface

The objective of this book is to help financial planners improve their spreadsheet skills by providing a structured approach to developing spreadsheets for forecasting, financial planning and budgeting applications.

The book assumes that the reader is familiar with the basic operation of Excel and is not intended for beginners.

The book has been divided into four parts covering the areas of spreadsheet design for all types of planning, forecasting, business planning and budgeting. Although it is recommended that readers follow the book from the beginning, the text is also intended as a reference book that will be a valuable aid during model development.

The structure of the book has been designed to help financial managers develop Excel skills. The first part on Spreadsheet Design aims to ensure that a disciplined approach to spreadsheet development is undertaken to ensure that whatever the purpose of the spreadsheet, it has been designed in a robust manner that will facilitate updates and enhancements.

In Part 2, the area of Spreadsheet Forecasting is tackled. The focus here is to look at some of the analysis tools provided by Excel that can assist in the forecasting process.

Part 3 looks at Business Planning. A number of different approaches to business planning are considered, including deterministic, stochastic and optimising. Furthermore, in this part of the book what-if anaylsis is considered in some detail and pivot tables are introduced.

The fourth part looks at Budgeting Techniques, an area that most financial managers have to tackle on a regular basis. The focus in this part of the book is helping users manage modular budgetary control systems, including how to aggregate data from multiple sources.

This edition of the book includes the use of Excel 2007. There is an introductory chapter that explains the key differences between

Excel 2007 and Excel 2003, for example the ribbon menu system. The remainder of the book indicates the menu selections required for both Excel 2003 and Excel 2007 and will indicate new features of Excel 2007 where appropriate. Excel 7 commands are placed in brackets after the Excel 2003 command and are bold.

The CD-ROM that accompanies the book contains all the examples described. Instructions for installing and using the CD-ROM are supplied on the CD itself and it is recommended that readers consult the README file contained on the CD.

试读结束：需要全本请在线购买： www.ertongbook.com

About the Author

Sue Nugus has been conducting seminars and workshops for accountants and other executives for more than 20 years. She works with the Chartered Institute of Management Accountants and the Institute of Chartered Accountants in England and Wales, and also with the equivalent institutes in Ireland and Scotland.

These seminars and workshops have mostly involved helping accountants and financial managers get the most from their spreadsheets.

The course on which this book is based runs for management and chartered accountants and other executives at least 12 times a year.

In addition to her teaching, she has authored and co-authored some 20 books on a wide range of IT subjects that have been published by McGraw-Hill, NCC-Blackwell and Butterworth-Heinemann.

sue@academic-conferences.org

Using Excel 2007

This edition of Financial Planning with Excel incorporates the use of Excel 2007. Excel 2007 introduces a number of new features. However, the most obvious change is the way in which commands are selected.

Ribbon is the term given to the series of **Tabs** that replace menus, toolbars and most of the task panes that were familiar in Excel 2003. The ribbon is located at the top of the screen. The tabs are organised by different types of task. The options on each tab are organized into **groups** and the **buttons** in each group execute a command, display a menu of commands or a drop-down list of options.

Figure 1 shows the ribbon for a new spreadsheet.

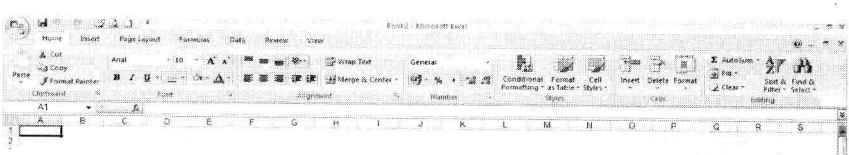


Figure 1 Ribbon displayed on a blank spreadsheet

There are three different types of Tab in Excel 2007.

The **standard** tabs can be seen in Figure 1 towards the top of the screen and include Home, Insert, Page Layout, Formulas, Data, Review and View. These will be on view whenever Excel is opened. The Home tab is selected by default and the buttons relating to this tab are then displayed on the lines below. By clicking on the Insert tab the buttons will change to offer the options related to Insert, etc.

There are then **contextual** tabs that only appear when they are needed, and are based on the task being performed at the time. Examples include Picture tools, Drawing, Table, etc.

The third type of tab is **Program** and includes Print Preview, Save, Open and these can be seen in Figure 1 at the top left of the screen.

The symbol at the extreme top left of the screen is the **Office** button and this is used to access the file-related commands.

Throughout this book the selections required from the ribbons and tabs are provided alongside the menu sequences for Excel 2003.

If the functionality has changed or if something is only available in Excel 2007, this will be indicated and explained.

Contents

Preface ix

About the Author xi

Using Excel 2007 xiii

Part 1

1 Spreadsheet Skills for all Types of Planning 3
Introduction 5
Spreadsheet 1: Getting started 6
Spreadsheet 2: Ownership and version 6
Spreadsheet 3: Formatting 7
Spreadsheet 4: Documentation 10
Spreadsheet 5: Minimising absolute values 12
Spreadsheet 6: Separating growth and cost factors 13
Spreadsheet 7: Optimising layout 15
Spreadsheet 8: Arithmetic cross-checks 17
Spreadsheet 9: Charts 18
Spreadsheet 10: Multiple sheets 18
Templates 19
Data input forms 21
Summary 22

Part 2

2 Forecasting 27
Introduction 29
Approaches to forecasting 29

3 Collecting and Examining the Data 33
Data collection 35
Using statistical measures 39
Summary 45

4 Smoothing Techniques 47
Introduction 49
Moving averages 50

Weighted moving average 51
Adaptive filtering 54
Exponential smoothing 56
Summary 58

5 Regression Analysis 59
Introduction 61
Calculating the least square line 65
Function vs command 68
The graphic approach 68
Standard error 69
Multiple linear regression 71
Summary 74

6 Time Series Analysis 75
Introduction 77
Multiplicative time series analysis 78
A time series analysis model 79
Summary 84

7 Expected Values 85
Introduction 87
A model for analysing expected values 87
Summary 92

8 Selecting and Evaluating Forecasting Techniques 93
Introduction 95
Selecting the right technique 95
Accuracy and reliability 95
Charts 97
Statistical methods 97
Subjective methods 99
Summary 100

Part 3

9 Business Planning 103
Introduction 105
Approaches to business planning 106
Summary 112

10 Developing a Financial Plan **113**
Introduction 115
The model 115
Getting started 117
Developing the Profit and Loss Account 117
Developing the Profit and Loss Appropriation Account 121
Developing the balance sheet 122
Funds flow statement 124
Ratio analysis 125
Cash flow statement 126
Summary 127

11 Business Plans **129**
Introduction 131
Capital investment appraisal 131
Developing a capital investment appraisal plan 133
Learning curve costing 139
Break-even analysis 142
Economic order quantities 144
Sales campaign appraisal 146
Summary 149

12 What-if Analysis **151**
Introduction 153
Three approaches to what-if analysis 154
Summary 164

13 Pivot Tables **167**
Introduction 169
Creating a Pivot Table in Excel 2003 169
Pivot Tables using Excel 2007 175
Summary 179

14 Risk Analysis **181**
Introduction 183
Preparing a plan for risk analysis 184
Incorporating the RAND function 186
The results worksheet 187
Frequency distribution 189
Using the risk analysis model 190
Summary 191

试读结束：需要全本请在线购买： www.ertongbook.com

Part 4

15 Budgeting **195**
Introduction 197
Scope of budgeting 197
Benefits of budgeting 198
Different approaches to budgeting 198
Budget preparation 200
Spreadsheets for budgets 201
Summary 201

16 A Spreadsheet Budgeting System **203**
Introduction 205
Preparing the budget template 206
Preparing the actual template 206
Preparing the variance report template 208
Preparing the year-to-date report template 209
Summary 211

17 Consolidating Data **213**
Introduction 215
Using the CONSOLIDATE command 215
Summary 219

Index **221**

Part 1

Spreadsheet Skills for all Types of Planning

The most popularly claimed pitfall of planning concerns commitment. The assumption is that with the support and participation of the top management, all will be well. But the questions must be asked: well with what and well for whom? For planners? To be sure. But for the organisation?

–Henry Mintzberg, *The Rise and Fall of Strategic Planning*, 1994.

Introduction

Whether a spreadsheet is being developed as a forecasting plan, a profit and loss account or a marketing plan, it is essential that due care and attention be given to the design and structure of the plan. Establishing some rules as to how all the spreadsheets in a department or organisation are developed enables different people to look at different plans and feel familiar with the layout, style, reports, charts, etc. This is similar to the way users feel familiar with software applications that have a common interface such as those in the Microsoft Office suite of products.

The objectives of good design in spreadsheet terms are exactly the same as those required for any other software development:

- To ensure that the spreadsheet is as error free as possible.
- To ensure that the spreadsheet can be used without much training or control.
- To minimise the work required to enhance or change the spreadsheet.

If care is taken to ensure sound structure and good design, a spreadsheet will be straightforward to develop, easy to read, simple to use, not difficult to change and will produce the required results.

The plan developed over a number of developmental stages in this chapter illustrates a variety of aspects of the principles of spreadsheet design and development. The series begins with a plan that has had little or no thought put into its design and layout, and as the chapter proceeds ways of improving and enhancing the plan are identified and explained. These plans can be found on the CD accompanying the book under the names **STYLE01** through **STYLE10**.

试读结束：需要全本请在线购买： www.ertongbook.com