



SOCIETY OF ACTUARIES

Article from:

CompAct

July 2008 – Issue No. 28

Spreadsheet Check and Control: A Book Review

by Mary Pat Campbell

Spreadsheet Check and Control: 47 key practices to detect and prevent errors
Patrick O’Beirne
Systems Publishing, 2005

In these days of Enron, Sarbanes-Oxley, and Société Générale, it would be hard to overemphasize the need to control financial calculations, especially as they are handled in spreadsheets. To that end, I could stand atop a pile of skulls, broadsword in hand, proclaiming: “Take heed – control your spreadsheets or suffer DOOM!” That would be overemphasis...but not by much.

Of course, most of us don’t know exactly where to begin. Few people have had a formal course in spreadsheet style and standards. My own experience in learning to deal with Excel and its attendant problems was to have assignments and other people’s spreadsheets thrown at me on the fly, trying to tease apart what other people had done and trying to get calculations done on a deadline. I learned good spreadsheet techniques slowly and haphazardly, and gained this wisdom the old-fashioned way: by screwing up repeatedly. Clearly, this learning method, while having its effects deeply felt, is inefficient and likely to leave gaps of knowledge.

Patrick O’Beirne’s **Spreadsheet Check and Control** comes to fill in these gaps. Published in 2005 as a supporting text for the Advanced Course of the European Computer Driving License (ECDL), this book takes you through the basics of spreadsheet design to spreadsheet review. The theme is twofold: learning techniques to check other

people’s spreadsheets, and gaining good spreadsheet habits to prevent errors in your own spreadsheets.

The book is eminently practical, peppered with concrete examples to illustrate techniques as well as cautionary tales warning of that DOOM that did actually occur due to the absence of these techniques. As an example, in a section about tracing links to external spreadsheets, O’Beirne highlights stories where improper use of links led to impacts of millions of dollars—in one case, deliberate fraud costing \$700 million, and in another, a link to incorrect information that had an impact of \$2 million.



Mary Pat Campbell is a senior actuarial associate for TIAA-CREF in New York, N.Y. She can be contacted at marypat.campbell@gmail.com

	Year 1	Year 2
	729,750	2,450,450
	387,714	1,081,714
	1,117,464	3,532,164
	176,608	176,608
	247,252	600,468

Taking the reader step-by-step through the techniques, without spending much time on tangential obscurities, this book is perfect for the novice spreadsheet-user, especially as it starts the reader down a path of developing

(continued on page 14)

good habits. Considering the state of many spreadsheets in active use, this book would come in handy even for the experienced user. I particularly found the sections on techniques to audit other people's spreadsheets highly useful, chock-full of techniques I had not known about. Even Ray Panko, long-time researcher on spreadsheet error at the University of Hawaii remarked, "I kept saying to myself, 'Wow, I didn't know you could do that.'" As a relatively short book (only 194 pages), it packs a wallop in information density.

A little nitty-gritty detail here: the book uses Excel for all its examples ...

A little nitty-gritty detail here: the book uses Excel for all its examples, testing versions 97, 2000, 2002(XP), and 2003,

detailing some of the distinctions between the different versions, but on the whole all the techniques can be used in all versions. I imagine most of the techniques detailed can also be used in the latest version of Excel, but the interface is different. In addition, O'Beirne has a Webpage for those who buy the book (the password is in the book itself) where he posts the sample spreadsheets; each section has a little exercise, whether conceptual or concrete, as a reality check against your knowledge. As well, he has loads of useful links for those who want to develop beyond the material in the book.

Like the guys on infomercials, I have to say: "but wait! There's more!"

In addition to the 47 key spreadsheet practices in the physical book itself, O'Beirne has posted updates and expansions of some of the items. He has 27 additional pages of enhancements and expansions on some of the book material, such as data validation. As the book was constrained to the ECDL syllabus, some topics are omitted, so at his Web site O'Beirne

provides 16 extra pages covering such topics as using VBA to automate Goal Seek or to check inputs.

For all this, this book is not just for the spreadsheet user, but also the policy setter. The book provides a good foundation for the person in charge of financial controls to start in developing their spreadsheet policies. Indeed, this sort of topic should be included in actuarial education, whether as part of continuing professional education, or perhaps as part of basic actuarial education. This topic would fit in well with FAP modules, particularly with regarding the control cycle for actuarial models, given that so much actuarial modeling occurs within spreadsheets. How about it, SOA? 