

REVIEWS

Financial Management Issues for the Insurance Industry of the Nineties. Edited by BARBARA HADLEY, CHRIS BALLANTYNE and NICK JONES (Reactions Publishing Group and Citibank, 1992) £70.00

Twenty authors contributed to this reference work for international insurance management.

The introduction provides a guide to the structure of the book, which has six main sections: strategic financial planning, financial risk management, investment management, cash management, security and solvency and financial accounting.

The first section includes a management consultants' view of strategic financial planning.

Key points are highlighted by sentences in the margin such as: "Insurance remains a reactive industry, moulded by forces greater than itself, disquietingly out of touch with the issues most likely to shape its destiny" and "Some of the trends developing inside the bigger companies are positive. Factors which have held back these trends include reactionary indifference, managerial incompetence and short termism". The new breed of insurance managers will tend to agree with this. They will also agree with the following comment: "Few of today's insurance executives would claim that their IT programmes have delivered exactly what they had been seeking at the original estimated cost".

In the section on financial risk management there are chapters on foreign exchange and currency management and over the counter (OTC) derivatives.

It may be argued that a book of this nature would suffer because the problems described are often overtaken by events. The departure of sterling from the ERM in September 1992 is an example. However, the sharp changes in exchange rates since Black Wednesday make it even more important that international financial companies (including insurance companies) should focus attention on currency risks, and some of the problems of the early 1990s will certainly be with us until the end of the millennium.

The third section deals with the very large subject of investment management, and includes important statistics graphically illustrated. One, perhaps unexpected but interesting point which is made clear, is the much lower exposure to equities in the portfolios of insurance companies in the United States compared with those of the United Kingdom.

It is argued that in most countries insurance company investment income compensates for negative underwriting results. This has led to pressure to increase the portfolio of foreign investments. The authors urge insurance companies to aim at efficient diversification rather than increased exposure to equities at any cost. Methods of reducing the downside risks of equity investments are discussed, and a particular example given is the decision of Royal Insurance in late 1991 to buy put options to reduce its equity risk over the following year.

The investment management section concludes with an analysis of the interest and inflation rate sensitivity of insurance company shares, including an interesting set of 10-year 'balance sheets' of model non-life and life companies, and the effect of interest rate and inflation rate changes is examined using these models. The conclusion is drawn that the combination of tight monetary policy with falling inflation and bond yields is very favourable for insurance company shares, and the models are useful as an indication of interesting buying and selling opportunities for insurance company shares.

The cash management section draws attention to the importance of the selection of providers of cash management services for insurance companies and the relationships with the internal organisation. It is clear that most of Europe, and especially the new eastern Europe, is grossly underinsured and, in theory, the removal of restrictions should provide important opportunities for U.K. insurance companies, particularly as it has been shown that life assurance is cheaper in the U.K. than in its European competitors (by a factor of 10 times in one instance).

An important section of the book considers the management of catastrophe risks and attention is drawn to the fact that, in some cases, it is possible that large sums will have to be paid out prior to, and in anticipation of, reinsurance recoveries.

This is a suitable precursor to the section dealing with security and solvency. The numbers of insurance and reinsurance companies has reduced, and this tendency appears to be continuing. Hence the importance of a continuous reassessment of financial strength ratings. There is a link between this and the harmonisation of European insurance law, which has made very slow progress over the past 20 years. From a trans-European viewpoint, the effect of large claims following disasters such as recent storms has had the tendency of reducing the financial strength of many companies.

This leads to the final section which deals with financial accounting issues, including the need to make suitable provision for catastrophe reserves.

R. W. SCADDEN

Blueprint for Investment, An Approach for Serious Long-Term Investors. By RICHARD FITZHERBERT (Wrightbooks, 1993) \$20.00 A

This easily readable paperback, from an Australian based actuary, is aimed primarily at fund trustees (who may not, necessarily, be investment professionals) and at private investors who require guidance in the formulation of a long-term strategy.

The early chapters are devoted to the history of speculative bubbles. As well as mentioning the 1929 and 1987 equity market crashes, the author touches on the Dutch tulip craze of the 1630s and the recent explosion of ostrich farming in Australia. The U.S. Savings & Loans debacle, Poseidon, and real estate booms in Florida and Surfers' Paradise are also cited. These examples are used to warn trustees to look out for signs of market overvaluation resulting from 'groupthink', when the fallacious premises of one set of practitioners are reinforced by others. The warning signs often have the same pattern: back-office staff working until midnight; outrageous claims by brokers; and very successful (margin trade) speculation by non-professionals. The author suggests a new ratio to detect signs of impending catastrophe, since the yield and P/E proved inadequate indicators in 1929 and 1987. Increased regulation often results when the bubble bursts, but this rarely has the desired effect.

The point is also made that successful long-term investment depends on finding undervalued assets, but it is very difficult for private investors to compete with professionals in this quest. Private investors will generally be restricted: to the purchase of large companies which are, temporarily, out of favour; to unusual investment pools; to investment trusts on large discounts—since this 'enables one to compete with professionals at their own game'. This last point is, perhaps, rather naive in view of the considerable energy that has been devoted to the study of trust discounts. FitzHerbert believes that one should, however, avoid investment companies with whizz-kids on the board or with renowned sportsmen (without previous investment experience) in senior positions. Historical performance, he believes, is irrelevant, so the investor should seek funds which have exhibited average returns.

Brokers' research is recommended for background information on companies, but the buy/sell recommendations should be ignored. Investors should have no illusion that the boards of trading companies regard shareholders' interests as paramount.

Following the Maxwell scandal, pension fund trustees are urged to commission an investment report (not merely a performance report) to satisfy themselves as to the suitability of the holdings. The author does not explain how this report should be read in the light of his contrarian approach and warnings against acceptance of the conventional wisdom.

The text is scathing about the efficient market hypothesis, but, perhaps surprisingly, an appendix is devoted to an analysis of variance to demonstrate that differences in the performance of fund managers are no greater than would be expected by chance, and that relative performance in successive periods are correlated negatively.

Much of the text is concerned with, and addressed to, the Australian market, although it does have fairly general application. Particularly timely are the warnings concerning enhanced scrip dividends, a recent phenomenon in the United Kingdom. Investors in the U.K. will be surprised by some of the author's contentions: the nominal returns from equities are hardly influenced by inflation; property funds should form a core holding; government bonds are 'safe' (as opposed to risky) investments.

This last point is used to illustrate the author's difference with academics who equate risk with volatility.

The book is, however, entertaining to read. There is a comprehensive index and bibliography geared to the 'Value Oriented Approach'. The advice to trustees and aspiring Warren Buffett's is valuable, but is unlikely to seem relevant to the majority of U.K. private investors, whose fortunes will probably depend more on the regular and efficient exploitation of available tax-breaks rather than waiting for the occasional grossly under-valued asset.

KEITH FELDMAN

The Scottish Ministers' Widows' Fund, 1743-1993. Edited by A. IAN DUNLOP (Saint Andrew Press, Edinburgh, 1992). £20.00

In 1743, the General Assembly of the Church of Scotland gave its assent to a scheme to provide pensions for widows of ministers. This work, some parts of which have been published earlier, is written by a group of enthusiastic actuaries, ministers and a solicitor, and published now to commemorate the occasion. The scheme was promoted by Robert Wallace, a notable pre-Malthusian demographer, Alexander Webster, a popular preacher of notoriously convivial habits of whom it was said it was hardly in the power of liquor to affect his understanding or his limbs, and George Wishart, minister of Tron.

The mathematical skills of Wallace, the impetus for action and collection of data by Webster and the interest taken by Colin Maclaurin, who checked the calculations, were sufficient to ensure that the technicalities of the scheme were a landmark advance over earlier unsound methods. In 1744, parliamentary approval was obtained, and the scheme commenced on a design that allowed the older members to exercise selection against the others, so the terms were revised in 1748. The uncanny accuracy of the projections made in 1748 of the size of the fund in future years is remarkable, when compared with the actual outcome and, indeed, in 1765 the amount was £58,347 as against the calculated projection of £58,348. In 1777, the number of widows receiving pensions was just 2 less than the 307 projected. Ready information on the ages of ministers, an almost stationary population, and a faith in Halley's mortality table of 1693 contributed to this.

The authors claim, with justification, that the project was the first actuarially sound pension fund in the world and that the published 1748 report *Calculations with the Principles and Data on which they were Instituted* was the first actuarial report. There were four classes of benefit, with corresponding contributions that were independent of age. From 1744, all new ministers and professors became compulsory entrants at the first opportunity, so the effect of selection was minimised. Up to 1779, the initial investments supporting the fund were compulsory loans of £30 to contributors at 4% p.a. interest, the loans being repayable on death. The funding method is not one we would regard as satisfactory today. Capital was set aside to build up the fund to a maximum, after which the future benefits and expenses were paid from interest and current contributions. Nevertheless, it is noteworthy that the other institution which used similar principles, the Presbyterian Ministers' Fund (now renamed Covenant Life) founded in 1759 in the U.S.A., also survives, and remains to this day a force in the life assurance market of that country. W. T. Thomson, a Scottish actuary and a founder of the Institute of Actuaries, improved the funding method at the valuation of 1861.

The fund survived the Disruption of the Church of Scotland in 1843 and other tribulations, but modern social security provisions have made it outmoded. Sadly, it is proposed to wind up the fund in 1994 and to divide its assets between the Church of Scotland Pension Fund and the smaller one of the Free Church of Scotland. The efforts of the Reverend A. I. Dunlop and his team are a lasting record and reference source for the fund's history, and the book is a fitting tribute to 250 years of good work.

On page 19, it is said that only the Amicable survived the South Sea Bubble of 1720. Lord Onslow's Bubble (The Royal Exchange Assurance) and Lord Chetwynd's Bubble (The London Assurance) survived too. On page 21, note 17, the date should be 1748, as correctly given in note 14. Maclaurin's letter of 3 June 1743 "clearly . . . intended for publication,"—page 54—was published with a short introduction by Wallace in *Scheme for providing an Annuity to Ministers Widows*, 1743. I have found no evidence to uphold the suggestion that the letter may have been requested to support Wishart and

Wallace lobbying for legislation in London—see page 36. On page 77, the date of publication of *An Account of the Rise and Nature of the Fund*, should be 1759 and not 1779. On the dust jacket, the publishers' blurb is inappropriate and the authors disclaim any responsibility! These are trivial points and do not detract from the worth of the book.

TREVOR SIBBETT

An Introduction to Probability and Stochastic Processes. By MARC A. BERGER (Springer-Verlag, 1992) £28.00

In his preface the author states that this book is designed to support a one-semester course in stochastic processes, using a non-measure theoretic approach. It would be a mistake, though, to deduce from this that the book offers a simple introduction to the subject. The material covered in only six, fairly short chapters, extends well beyond most standard undergraduate courses in stochastic processes.

The first two chapters cover the fundamentals of probability and introduce some important distributions. The third chapter covers limit laws and some large deviation theory. The next three chapters cover Markov chains in what the author states is a 'compressed and compact' treatment, and indeed a lot of ground is covered in a relatively small number of pages.

The final chapter applies ergodic theory (in discrete time only) to fractal geometry, with some attractive examples.

The theory covered in this book is quite sophisticated, although many of the examples and exercises are not equivalently deep. For example, the large deviation theory developed in the third chapter is not actually necessary to solve the large deviation problems given. With the exception of the final chapter, almost all the exercises are collected from other textbooks, which may explain the slight divergence in the level of examples and theory. The problem this causes is that, without appropriate examples, it may not be easy to see the motivation for the more difficult theory, while the simpler exercises may appear more inaccessible than they need to. Answers to the exercises are given, with an occasional line or two of explanation.

The book, in covering a lot of ground, compresses the material in two ways. The first is that there is not very much in the way of explanation of results—which is why this book would be more useful supporting a taught course than as a means of self-instruction—and the second is that a reasonable background knowledge of functional analysis is assumed, which reduces the length of many of the proofs, but also severely reduces their accessibility to potential readers without this background.

M. R. HARDY