could lead to some pressure for revision from companies where calculations show a percentage cover of less than 100%.

An actuarial valuation for the purpose of providing an Actuarial Certificate A produces few additional problems to the discontinuance position other than that of considering, within the statement, the next 5 year period. This is normally achieved by comparing the funding rate being paid with the minimum required to support Guaranteed Minimum Pensions.

The purpose of the on-going actuarial valuation is to recommend a single funding rate; most clients prefer a single rate combined with a willingness to discuss rather than a range of alternatives which should be adopted for the scheme. The author recognizes that valuations are based on assumptions as to future experience and therefore that a range of different assumptions could be made. He argues that no one basis is correct and that it is perfectly proper for an actuary advising a number of clients to adopt different bases for different clients. What is important is that the actuary draws to his client's attention the effect that deviations in experience from his assumptions will have and the subjective likelihood of those deviations occurring. Actuaries are being asked more frequently than previously to provide some form of certificate concerning the adequacy of the funding of the pension scheme. The statements made are often woolly and, the greater the scrutiny to which they are subjected, the less they appear to say. The author questions whether or not it is appropriate to make such statements.

An on-going valuation of a pension scheme requires a valuation to be placed on the invested fund. The paper discusses the advantages and disadvantages of one particular method, that of assuming a notional portfolio where the fixed interest content exactly matches the fixed money liabilities of the scheme, and the remainder of the assets are assumed to be invested in U.K. equities. Portfolios hold an increasing proportion of property and overseas stocks and it is difficult to argue that it is correct to place a different value on these holdings, relative to their market value, than on a similar holding in U.K. equities. A lower value would imply that the actuary should speak out against them and, therefore, an assumption that they are U.K. equities is a conservative approach.

RIDER BENEFITS AND OPTIONS ON LIFE ASSURANCE CONTRACTS

BY M. R. T. NORTH, F.I.A. AND P. J. SAVILL, F.I.A.

(Synopsis of a paper presented to the Society on 2 April 1985)

THE addition of extra benefits and options to a basic life assurance contract has been a traditional feature of products in the U.K. market. However, the main

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emphasis of the industry has been on the savings aspect of life assurance, particularly in the unit linked sector.

Within the last decade, the unit linked companies have increasingly introduced protection elements into their product design, and following the removal of Life Assurance Premium Relief on 13 March 1984 the authors believe that the whole industry will need to pay much more attention to its unique feature—the offering of life assurance protection.

The paper examines the two broad categories of additions to a basic contract—additional benefits (or rider benefits) and options.

The most significant additional benefits are waiver of premium and the various forms of disability benefit. Also included are comments on accidental death benefit; unemployment waiver; medical expenses and hospitalization benefit. The paper considers aspects of pricing but concentrates on design of benefits as well as underwriting and claims control. These matters are more complex and difficult than in the area of ordinary life assurance risks.

On options, the paper considers the traditional conversion and renewal options available with term assurances, but goes into more detail on the newer type of guaranteed insurability options linked to the Retail Prices Index. Here, the design of the operation of the options is stressed as a means of controlling the claims costs.

The paper concludes by pointing out that care is needed in the construction of additional benefits and that it will be necessary to pay more attention to risk selection if a move towards protection develops. This is a reversal of earlier trends where the role of the underwriter has tended to diminish. It is stressed that any office introducing benefits or option arrangements of the type described must have clearly thought out underwriting and claims procedures before product launch.

SUMMARIES OF RESEARCH DISCUSSION PAPERS

(Copies of these papers may be borrowed from the Institute Library)

STEPS TOWARDS A COMPREHENSIVE STOCHASTIC INVESTMENT MODEL

By A. D. Wilkie, M.A., F.F.A., F.I.A.

(Paper No. 36 deposited in the library in December 1984)

This note is an Appendix to the paper "A Stochastic Investment Model for Actuarial Use" by the same author, which was submitted to the Faculty on 19 November 1984.