## SUMMARIES OF RESEARCH DISCUSSION PAPERS

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#### A LIMITED EXPERIMENT ON V<sub>2</sub>

### BY S. BENJAMIN

(Paper No. 31 deposited in the Library in July 1983)

THE note indicates (i) that a  $V_2$  net premium reserve can be immunized by a (redeemable) gilt whereas an ordinary net premium reserve cannot, and (ii) that a  $V_2$  reserve is relatively insensitive to *i*, the rate of interest for future new money.

# ALTERNATIVES TO THE NET PREMIUM VALUATION

#### By C. D. Daykin

(Paper No. 32 deposited in the Library in July 1983)

FOLLOWING proposals for a statutory minimum standard of valuation for long-term insurance liabilities involving a net premium approach, associated with market values for the corresponding assets, a paper presented to the Institute in January 1975 by Bews *et al.* (J.I.A., **102**, 61) suggested some modifications of the straightforward net premium method, which would take into account directly the yield which had already been secured on assets backing the accumulated reserves. Their paper drew attention to some of the weaknesses of the modified net premium methods, which have become referred to as  $V_2$  and  $V_3$  split interest methods, but no further work appears to have been published on the practical problems of using these approaches.

The present paper looks again at the  $V_2$  and  $V_3$  modifications to the net premium method of valuation, in the context of Part VI of the Insurance Companies Regulations 1981, which appears to lay down a minimum standard of valuation in terms of a net premium valuation at a single rate of interest may be determined having regard to the yields already secured, as well as to a conservative assumed yield on future investments.

The conclusion is drawn that the  $V_2$  and  $V_3$  methods may produce reserves significantly weaker than was apparently intended by the regulations and that severe limitation of future premiums valued is essential if reserves of a strength of