CORRESPONDENCE

(*To the Editors of the* Journal of the Institute of Actuaries)

DEAR SIRS,

I read with interest the article 'A solvency standard for Life Assurance Business' by R. S. Skerman published in *J.I.A.* **92** and I hope some comment will be permitted.

Firstly, I am surprised that Mr Skerman regards it as inappropriate to bring future new business into the picture ((1) on p. 76). Any office which is a going concern will receive new business, and the impact which such business can have on solvency may be very large, not only with regard to the basis underlying the premiums charged but also with regard to the costs of procurement. This leads to the suggestion of two additional requirements:

(a) A statement of the premium basis or, at least, tables of the resultant premiums.
(b) An explanation as to how it is proposed to finance the costs of new business in the immediate future.

I think something of the sort must be necessary to meet solvency test (c) on p. 76.

Moreover, whilst Mr Skerman proposes to take no account of future liabilities which must arise, he feels that the future bonuses of with-profits policyholders should be reserved for in some way ((3) on p. 77). These bonuses constitute liabilities which need never arise at all. I find this a little paradoxical. Later, on p. 83, he recommends this approach on the grounds that it 'ensures good conduct'. It seems to me that the function of the authorities is to be reasonably sure that an office will meet its contractual liabilities. Otherwise someone will have to be left with the vexed question of what 'good conduct' is under the prevailing circumstances.

Secondly, I note Mr Skerman confesses to having been influenced by developments in the United Kingdom and consequently it is perhaps inevitable that he should recommend the net premium method of valuation. The main justification for this approach lies in the first two complete paragraphs on p. 79, but it should be noted that the statements made therein are only valid on the assumption that the valuation basis is the same as the premium basis, an identity only achieved by accident in view of (5) on p. 81. There is nothing original in saying that the net premium method pays no regard to the premiums actually receivable (save in the identity referred to) and, indeed, Mr Skerman makes the point himself. The net premium method can be, and is, very useful for certain investigations but surely any *solvency* test must refer in the first instance to the actual amounts to be paid in and out of the fund. It is just this point which leads to the difficulties Mr Skerman has to face, namely zillmerization, renewal expenses and the rate of interest used in valuing liabilities. With the use of the gross premium method these difficulties vanish. Zillmerization does not arise, the rate of renewal expenses can be allowed for directly, and the valuation rate of interest is simply the current earned rate measured against the market value of the assets and taking account of the taxation system as appropriate.

Mr Skerman objects to the gross premium method on the grounds that, for with-profits business, the reserve on a policy must be negative for perhaps a considerable period after inception and this is certainly a problem where bonus loadings are high. The solution is, however, clear. It is to reduce the proportion of premium valued in these classes until the bonus loading is excluded, always remembering that these loadings as they fall into surplus, year by year, constitute the final defence of the office against insolvency.

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Solvency may now be examined directly. Where the liabilities do not exceed the market values of the assets or, if desired, are less than market value by a statutory percentage, this would meet the initial test. If it were desired to go further and examine the effects of any mis-matching, it would simply be necessary to recalculate the value of assets and liabilities at rates of interest (say) 1% above and below the original rate and reapply the test.

Yours faithfully,
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31 *August* 1966

The above letter was shown to Mr Skerman who commented as follows:

The scope of my paper was limited to describing the principles to be adopted in a valuation to be used as a solvency standard, and my comment that future new business should be ignored was in relation to the income and outgo to be taken into account in such a valuation.

I explained in the paragraphs on pp. 78 and 79 regarding Principle 1 that I considered that a solvency standard for practical use should, for with-profit business, normally be stronger than a gross premium valuation designed to ensure fulfilment of contractual liabilities. Mr Gilbert in the penultimate paragraph of his letter appears to accept that this should be so. His suggestion of reducing the proportion of the premium valued under the gross premium method so as to exclude the bonus loading would produce broadly similar results in practice to a net premium valuation, but whereas the net premium method produces these results automatically, the gross premium method would involve identifying the bonus loadings included in the with-profit premiums in force. There is no generally accepted method of identifying these loadings for a portfolio of business written over a period of years during which the experience as to mortality, interest and expenses has varied.

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