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Health Insurance Reserves Controversy

by William M. Buchanan

It was with considerable interest that I read Deborah A. Poppel's interview with Paul Barnhart (*The Actuary*, March 1988) concerning the controversy over health insurance reserves. The general impression left by the article was that the real issues had not been appreciated by those who oppose the "Benefit Ratio Reserve" approach and that clarification and understanding are all that is needed to bring consensus that the proposed method is the best solution.

Paul describes three controversial elements of the proposed method. The controversy really arises with respect to the total concept, rather than the individual elements of the method. A confusion of reserve adequacy with policyholder equity is at the root of the controversy.

Reserves, regardless of the underlying coverage, should be that amount which, together with anticipated future premiums, is sufficient to meet future guaranteed benefits. A reserve by definition must look to future obligations. As all actuarial students learn, through algebraic manipulation a reserve calculation can be made that looks backward (retrospective) to accumulated premiums, less costs, which exactly equals the prospective reserve. Paul has demonstrated these manipulations with respect to health reserves in his paper, which will be forthcoming shortly. To the actuary trained in life insurance, this symmetry makes wonderful sense and is quite appealing.

Continued on page 3 column 2

Worth Reading: "The Flock & the Sheep" by Redington

by Kenneth W. Stewart

Frank M. Redington, FIA, is best known to North American actuaries for his seminal 1952 paper "Review of the Principles of Life-Office Valuations" (*JIA* 78, 286). It introduced many of us to the concept of immunization, and to directly considering the relationship between assets and liabilities in valuation.

Two weeks before his 75th birthday in 1981, Redington presented to the Institute of Actuaries a unique set of papers, "The Flock & the Sheep & Other Essays," which subsequently were honored by formal discussion in the Institute, at the Institute of Actuaries of Australia, and at the Faculty of Actuaries in Scotland, i.e., throughout all the major actuarial bodies of the English-speaking world outside North America.

The paper is the author's gift to his profession and the insurance industry toward the end of his long and illustrious career. (He died in 1984.) It commenced as a series of reminiscences documenting some of the radical changes that occurred during his years of practice, using 1945 as a watershed between the old years of relative calm and the new era of turbulence and change.

As the author warmed to his subject, he found himself writing a series of interconnected essays on problems of surplus and bonus [dividend] distribution. The paper proceeds in four parts:

1. "Actuarial Climates of the Twentieth Century" is a rich and insightful survey of trends in portfolio yields and bonus levels over the long cycles in which portfolio yields were generally rising or falling. It details with a balance of gentle amusement and concern how actuaries of the time became "caught in the web of expectation which [they] had aroused," and were grudging to change bonus levels even when it was clear that they were *no longer affordable*.

Had the Second World War not intervened and made rather draconian measures [a large reduction in the rate

Continued on page 2 column 2

In this issue:

Worth Reading: "The Flock & the Sheep" by Redington
Kenneth W. Stewart — 1
Health Insurance Reserves Controversy
William M. Buchanan — 1
Examination Grading Process
Curtis E. Huntington — 4
Research Projects Under Review
Irwin T. Vanderhoof — 5
Spotlight on the Sections
Diane Wallace — 7
New Committee on Management Development
William C. Cutlip — 8
Jack Moorhead's *Our Yesterdays* on Schedule
Dwight K. Bartlett, III — 8
Book Review
Marjorie B. Butcher — 8
What Do You Think About *The Actuary*
Linda B. Emory — 9
Letters to Editor — 9
Actucrossword, Actucrostic — 11,12

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"Flock & Sheep" cont'd.

of bonus] more palatable, "the outcome [insolvency or even more serious later reductions] would probably have taught us a valuable lesson."

2. Aptly titled "Premium Rates/ Quixotry," the second section reflects on the irony that nonprofit [nonparticipating] premiums generally have tracked current conditions, at least in the long run, with a tendency, as the author writes, "to cluster round the current accepted opinion," while "...In contrast, with-profit [participating] rates have tended to be static, not through inertia but from a quixotic belief that it was not fair to change the conditions of entry into an open fund with common bonuses."

The quixotry arises in that "the resistance to reducing premiums has been stronger than to increasing them," partly out of a desire for large and increasing rates of bonus, and partly because shareholders, under the British system for mixed companies, are entitled to a share of the profits distributed.

While this section may appear heavily weighted in the idiosyncrasies of British practice, it is worth persevering through for the insights that the careful reader can draw and apply closer to home. Consider, for example, the author's comments on the inappropriateness or misuse of bonus illustrations and disclaimers on them.

3. We come now to the heart of the paper. "The Flock & the Sheep" is an allegorical tale of two brothers, both actuaries. In their companies, David has always paid higher bonuses than Paul, although the experience of their companies has been similar, and they maintain the same level of free surplus.

As it turns out, David applies what we would term a temporary surplus philosophy, returning a portion of free surplus to departing policyholders, while Paul always has considered surplus as "an amorphous collective whole attached to the fund and not to the individual." David's termination bonuses lean more in the direction of individual equity, while Paul's emphasis on the collective fund is seen as having deferred too much of the ultimate bonuses into the future, to the deprivation of current policyholders.

After discussion with their father, a retired actuary, the family agrees that he and the older son Paul have been wrong because "We take care of the flock but we forget the sheep." [*Reviewer's Note: In a spirit of charity and in recognition of his age and grea reputation, we surely can forgive the author's failure to employ inclusive language in referring to actuarial persons.*]

The author goes on from this allegory to talk about the fundamental question of what constitutes equitable treatment of policyholders. Its pastoral charm aside, the paper speaks directly or indirectly to many of the searing questions of modern North American practice:

- Are the large surpluses of some mutual companies really necessary?
- How do we maintain reasonable equity between generations of policyholders?
- How should surplus be managed?
- What is the basis upon which demutualization should be considered, or soundly founded?

4. In "The Reverse Yield Gap / Observations," the final section, Redington speaks to the impact of the reverse yield gap [lower current income/higher long term return] of equities versus fixed-income assets, with the resulta effect of deferring a large portion of income forward to be enjoyed, if ever, by future generations of policyholders.

The North American reader will be aware that the resulting problems of intergenerational equity have been mitigated in part by the Canadian statutory practice of deferring and amortizing realized and unrealized gains and losses on equities and real estate.

Redington's paper concludes with a series of pungent observations. Rather than spoil your anticipation by revealing all of them, let me cite just a few:

> ...I think that our primary aim should be to produce the right amount of surplus and our secondary aim to distribute that surplus fairly.
>
> Actuarial science evolved in a world dominated by the rate of interest; evolution will be very different in a world dominated by the rate of dividend...

and, in words directed toward the future,

Continued on page 3 column 1

"Flock & Sheep" cont'd.

Perhaps the best thing that could happen would be what we are all wanting and striving for; that we should gradually come to grips with inflation.

Your enjoyment of Redington's paper will be enlivened by edited comments from its three formal discussions at the Institute, the Australian Institute and the Faculty. Carefully selected and edited, each adds something of value; collectively they provide further development of Redington's original questions and valuable additional documentation of actuarial thought processes applied to bonus [dividend] distribution.

Redington's 1981 paper is a signal gift to his profession, both in the U.K. and around the world. In my experience, it has few equals in terms of its gentle wit and wisdom, and the seasoned cadence of carefully measured and collected thought. It is both timely and timeless, a valuable testament to a rich period of actuarial history, and clearly applicable to many of the most pressing problems of modern practice.

Redington's paper and the edited discussions are printed in *A Ramble Through the Actuarial Countryside: The Collected Papers, Essays and Speeches of Frank Mitchell Redington (FIA)*, Institute of Actuaries Students' Society, 1986. The book is available for loan from the SOA library.

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TSA Papers Accepted

The following papers have been accepted for publication in *TSA* Volume 40:

"A Generalized Profits Released Model for the Measurement of Return on Investment for Life Insurance," by David N. Becker.

"Algorithms for Cash-Flow Matching," by Rama Kocherlakota, Dr. E.S. Rosenbloom and Elias S.W. Shiu, Ph.D.

In Memoriam

Edmund Berkeley FSA 1941
Robert J. Kirton ASA 1950
Edward J. Seligman ASA 1969
William S. York FSA 1941

Reserves Controversy cont'd.

However, in health insurance, other factors arise, such as inflation, changes in medical practice, and the ability (or restriction) of the company to change premium rates. The accumulated total of premiums over claims has nothing to do with future liabilities. Only in that rare (or probably even nonexistent) case where the experience (net premium) is the planned percentage of the gross premium is the retrospective reserve fund accumulation equal the prospective reserve for health insurance. The significance of the reserve is that, together with anticipated future premiums, it will be sufficient to meet future claims. We would certainly agree that this requires judgment on the part of the actuary. We would, however, recommend an objective tabular standard as a starting place. As long as appropriate tests (judgments) are made which satisfy the actuary that the calculated reserve, together with future anticipated premium, is adequate to meet future claims, no greater reserve or no less a reserve is appropriate. This is essentially a gross premium valuation test.

The premium which may be taken into account in considering adequacy of reserves should recognize the limitations which may be imposed upon future rate increases by state regulation. This seems to be where some confusion about "reserves" arises. If loss ratios are low, future rate increases will be more difficult (impossible) to get and, hence, some element of rate adjustment liability may arise. This is separate and apart from the solvency "reserve" element, which considers future claims and future expected premiums in its determination. This is a key element of the "Benefit Ratio Reserve" controversy. Should the reserve liability include an element of rate regulatory mechanism? Basically, use of a prospective tabular approach, buttressed by gross premium valuation considerations, is the test of adequacy of the reserve. That is, the total margins in future premiums can be taken down to zero (no future profits) before any additional reserve is called for. It is not necessary that the same ratio of net to gross premiums be maintained, but it is necessary that the expected net premium and expenses not exceed the gross premium.

Thus, the "Benefit Ratio Reserve" method involves an equity element of rate regulation, which would best be separately considered and dealt with apart from the solvency test of reserves. Experience may create an additional liability in some jurisdictions and under some circumstances. The whole subject of rate regulation needs to be considered. Of special concern is the practice of initial underpricing to "buy" business, as well as the concern about companies being unable to recover losses on business with high termination rates. But these are other questions. The reserving standard should deal with contractual claim liabilities now and in the future on existing in-force business.

The third controversial element which Paul mentions is the acquisition cost. The existing method of allowing a two-year preliminary reserve gives some relief for these initial expenses without the inverse relationship of the higher the acquisition cost, the lower the net liability you must post. Thus, two companies with the same policy and the same past and expected future experience may post quite different initial reserves. That is, the high-cost company (or high-commission company) can post a lower net liability than its competitor, who is actually operating at a lower cost and who has exactly the same expected future liabilities. Again, the element of equity seems to be confused with the purpose of solvency, for which reserves are intended. Introduction of a GAAP concept of unamortized acquisition costs is a rather radical and unique departure from current methods.

In the long run, the development of the valuation actuary concept and the emergence of guidance on standards of practices will go a long way toward assuring solvency more than a model bill, which may not be very universally accepted in view of the fact that it is controversial. In the meantime, the health insurance market has become a target of politicians. Continued withdrawal of carriers from the market for individual comprehensive medical care coverage seems to be a likely future scenario under current circumstances. Making "Benefit Ratio Reserves" the mandatory standard for reserves could well intensify this trend and hasten movement by the Federal Government into this field of insurance. Should this happen, then reserve standards become a moot point.

Continued on page 4 column 1