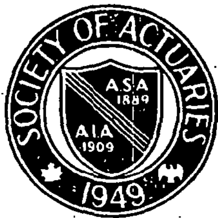

The Actuary

The Newsletter of the Society of Actuaries

VOLUME 12, No. 1 JANUARY, 1978

VLI—THE ANSWER TO A MARKETING DILEMMA?

Richard Johns (with consultation by Richard Stillinger), *"The Life Insurance Industry's Marketing Dilemma,"* pp. 40; Argus Research Corporation, New York, N.Y. 10005.

by Walter N. Miller

Remember the early days of variable life? To anyone who was involved with this product (and there were many, many such people in those days), it was really exciting. Our paper stimulated a massive outpouring, unmatched in recent memory, of truly high-level comment and discussion. No Society meeting seemed complete without a concurrent session and a workshop on some aspect of VLI. Other meetings and seminars proliferated. Hotshot representatives of (supposedly) hotshot brokerage firms set up lunches and other entertainments to get a leg up on handling the projected billion dollar separate accounts. Reporters called all the time, then wrote wildly inaccurate stories in which the only real truths were quotes from top insurance executives about what a revolution was in store for the industry as the fantastic new VLI product gathered momentum.

And now, only eight years later, now what? One (and only one) of our major competitors has VLI on the market. I get five letters a year (at most) from our agents asking when we might also. I answer them by saying we would like to have a good deal more indication of real interest on the part of agents and the public before we make the large commitments needed.

What happened?

A lucid, interesting recounting of VLI's history and outlook, replete with thought-provoking opinions of many insurance industry people as well as author Richard Johns and the Argus Re-

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Calling All Part 4 Authors

The Society of Actuaries is seeking an author for a new textbook in contingencies for Part 4 students. Although several very able persons have already expressed an interest in writing the book, the Society wishes to make this opportunity generally available to all qualified persons. A formal proposal will be required of each prospective author. Information and specifications may be obtained by calling or writing to: Warren R. Adams, Director of Education, Society of Actuaries, 208 South LaSalle Street, Chicago, Illinois 60604, Telephone (312) 236-3833.

21st INTERNATIONAL CONGRESS OF ACTUARIES

From June 19 to June 26, 1980, there will be an International Congress of Actuaries in Switzerland. The first three days, Thursday to Saturday, will be in Zurich with a special celebration on Saturday in honor of the 75th anniversary of the Association of Swiss Actuaries.

Sunday and Monday will be spent on excursions and travel from Zurich to Lausanne, where the Congress sessions will resume on Tuesday. The farewell party will take place in Lausanne on Thursday evening.

Reports will be requested from all national actuarial organizations represented at the Congress on the subject of "The Training of the Actuary." There

(*Continued on page 5*)

ON THEORIES ON GAAP CONVERSION

by Clayton A. Cardinal

To begin the discussion, consider this question: Does GAAP have the sustaining power to survive the current attacks against it? Some readers may have seen the March 15, 1977, issue of *Forbes*. The cover byline reads:

> **Accountants' Report**
>
> To the directors and stockholders:
>
> We have examined the Consolidated Balance Sheet of the company and consolidated subsidiaries as of December 31, 1976 and 1975. In our opinion, these financial statements present fairly the financial position of the companies, in conformity with generally accepted accounting principles consistently applied.
>
> On the other hand, there is a growing body of opinion that holds that our opinion is not worth a damn.

Such captions cause one to wonder why any company, except under legal compulsion, would want to convert to GAAP, at least not until after the *current* controversy on objectives of financial reporting is resolved.

Conversion to GAAP is an expensive undertaking which cannot be justified without some associated derivative and meaningful value to a company. The circulation drafts of the Financial Accounting Standards Board on objectives of financial statements have been described as advancing asset and liability accounting with present value measurement. If GAAP, as currently applied with its inherent revenue and expense matching principle, were to be abandoned in favor of asset and liability accounting, then any company which would now convert to GAAP might very well have to convert subsequently to

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The Actuary

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SOCIAL SECURITY VICTORY?

President Carter has signed into law significant changes in the Social Security system. Considering the possible alternatives the business community did well, as the joint committee accepted the costly proposals.

Without getting into details, the following are the more important decisions:

1. The over-indexing of benefits provided under prior law was revised through a method designed to offset inflation and stabilize replacement ratios.
2. Parity was maintained for both the taxable wage base and the tax rate. The President's original plan proposed removal of all limits on the taxable wage base for employers while the Senate bill called for a much higher tax on employers than on employees.
3. Persons applying for dependents' and survivors' benefits in the future will have their benefits offset if they are also covered by any government pension not under OASDI.
4. The earnings test for retired persons was liberalized but not eliminated.
5. The disability payment offset when workmen's compensation is also received was continued; the Senate bill would have eliminated it.
6. The use of general revenues during periods of high unemployment or for standby loans was rejected.

Nonetheless, this apparent victory is damaging to the insurance industry and leads to further encroachment of the federal government on the insurance business. The taxable wage base applicable to employers and employees alike will rise above $40,000 in the next 10 years with the maximum tax increasing to more than $3,000 per annum for both. This rapid growth in Social Security taxes will lead to higher Social Security benefits which, acting through the design of integrated pension plans, will in turn leave a smaller proportion of the business to the private sector. The substantial level of benefits under the disability and survivorship provisions will also reduce the portion provided by the private insurance market.

When Social Security goes beyond the floor-of-protection level, it damages the private sector and becomes part of the welfare program. The removal of billions of dollars from the private sector damages business competitiveness through increased prices needed to offset these higher costs without productivity gains and by giving greater impetus to inflationary trends. While the private pension system accumulates funds for investment, Social Security acts as a transfer of income from workers to retirees, thus reducing capital formation.

Because the impact of the rise in the taxable wage base and of the increased tax rates is gradual but unrelenting, increased pressures to alleviate the burden will be brought to bear on the Congress. President Carter has already promised tax relief and various Congressmen will be proposing palliative legislation at the next session of Congress. Most commonly mentioned, and probably least objectionable, is the financing out of general revenues of the Medicare part of Social Security and perhaps the Disability part. The problems associated with the Social Security system, as well as with Railroad Retirement, Civil Service Retirement, Military Retirement, Unemployment Insurance, Workmen's Compensation, and local and state pension programs, will increasingly demand the attention of actuaries in the next few years. We should be prepared.

Frederic Seltzer

TO BE CONTINUED

Editor's Note: This article is submitted by the Committee on Health Insurance. Comments will be welcomed by the Committee and by the Editor.

Group Insurance Programs—Special Financing Arrangements

by Steve Carter

The increasing cost of providing medical benefits for employees is forcing many group insurance policyholders to examine their group insurance programs with an eye to possible cost savings. An obvious consideration is to reduce the level of benefits provided by increasing plan deductibles and coinsurance and this is what many smaller policyholders are doing. Requests for medical plans with a $200 or $300 deductible are becoming quite common. Indeed, from strictly a financial point of view, it seems reasonable to argue that if $100 deductible medical plans were appropriate in the late 1960's, then $200 deductible plans should be appropriate today.

For the larger policyholders, a reduction of employee benefits is not normally a practical alternative because of competition, negotiated benefits, etc. Such policyholders appear more interested in special financing arrangements which will reduce state premium taxes and/or allow them more use of reserve monies normally held by an insurance company. Since these arrangements affect the amount of investment income earned by the insurance company, a charge is often made in the retention formula for this loss of income.

Reductions in Reserves

A number of financing arrangements are being used by insurance companies to make reserve monies available to policyholders.

Deferred Premium Approach

One of the most common is a deferred premium approach under which the insurance company will agree to extend the grace period from the traditional 31-day period to either 60 or 90 days. This, in effect, gives the policyholder the use of the reserve funds held by the carrier.

(Continued on page 3)

To Be Continued

(*Continued from page 2*)

Retrospective Premium Approach

Another approach which may, in effect, reduce the amount of reserve monies held by the insurer is the retrospective premium arrangement (retro) which gives the insurer the right to bill an additional amount of premium at the end of the policy year if the plan is in a deficit position. The amount of the retro (for the amount of the margin for claim fluctuation that is usually included in group insurance rates) may be unlimited, or it may be equal to the difference between the rate increase the insurance company requested and that which the policyholder and/or consultant felt was appropriate.

Letter of Credit

Some insurance carriers will accept a letter of credit which is obtained by a policyholder from a mutually acceptable bank in lieu of health insurance reserves. The letter of credit would be executed so as to give the carrier the right to draw funds from the bank up to the maximum amount stipulated in the letter itself without any qualifications being placed on the carrier's right to do so. Normally there would be a side agreement or understanding with the policyholder outlining the conditions under which the insurer would call any funds under the letter of credit. Typically, a letter of credit is for a one-year period and the carrier must take steps to be sure it receives a new letter of credit each year. Subject to State Insurance Department approval, the letter of credit could be considered as premiums in course of collection on the insurance company's books.

Waiver of Group Life Disability Provision

Another area where reserves can be reduced involves the waiver of premium provision in the group life insurance plan. With respect to future claims, the policyholder can be allowed to carry disabled employees as active employees by paying premiums for them. Under this type of arrangement, the insurance company must delete the waiver of premium provision from the contract, certificates, and booklets to protect itself against the possibility of having to assume the liability for the disabled employees in the event of termination of the contract.

Elimination of Extended Maternity Benefits

A decrease in claim reserves may be accomplished in some states by eliminating extended maternity benefits which are normally provided upon cancellation of the policy. Upon termination, the new carrier would agree to pick up such claims.

Flexible Funding

A relatively new financial arrangement which has been used with larger groups is Flexible Funding of Employee Group Life Insurance. Under this approach premium payments for each month are the sum of claim charges during the prior month plus a retention charge. These premiums would not exceed the amount which would have been paid under a conventionally insured basis. Although it is still necessary to fund the usual claim reserves, this arrangement may improve the policyholder's cash flow situation.

State Premium Tax Savings

There are some arrangements which, in addition to improving the employer's cash flow situation, will provide substantial state premium tax savings. The most popular of these are Minimum Premium Plans and Administrative Services Only (ASO) Plans.

Minimum Premium Plan

A Minimum Premium Plan is a plan under which virtually all of the health care benefits are paid directly from the group policyholder's funds so that these benefits become uninsured benefits and are normally exempt from state premium taxes. However, the insurance company continues to stand behind the entire plan, including the uninsured portion, and it guarantees that benefits for losses incurred while the plan is in effect will be paid if the group policyholder fails for any reason to pay the benefits or terminates the plan. Since the insurer is responsible for this liability, reserves are required for incurred but unreported and unpaid claims.

A Minimum Premium Plan often includes a "stop loss" provision with the stop loss limit typically being equal in amount to what the conventionally insured premium would have been. That is, once the policyholder's total outlay for health care benefits during a policy year reaches this level, the carrier would assume liability for any further claims in excess of this limit. These excess claims would enter into the experience rating process and any deficits would be carried forward into subsequent policy years.

Administrative Services Only

An Administrative Services Only (ASO) Plan is one which requires the policyholder to assume full liability for payment of all health-care claims on a self-insured basis. There is no contract of insurance with respect to the benefits placed under this arrangement, and the insurance company would act solely in the capacity as Administrator of the plan.

Under an ASO arrangement, the self-insured benefit payments would usually become exempt from state premium taxes, thus eliminating that element of cost. In addition, since there is no contract of insurance and the insurance carrier has no liability for payment of benefits, reserves for incurred but unreported and unpaid claims would not be required.

In connection with ASO plans, it is quite common to be requested to provide a separate aggregate stop loss contract of 125% or 130% of expected level. This contract is usually totally pooled.

Since both Minimum Premium Plans and ASO Plans involve self-insurance, they are not normally used for life and AD&D coverages because of unfavorable federal income tax consequences to the beneficiaries. Sometimes weekly accident and sickness benefits are not included because of uncertainty as to the need for withholding income tax from the self-insured benefit payments and because of reporting requirements.

Split Funding

One major group insurance company has introduced a hybrid Minimum Premium Plan called Split Funding. Under this approach, the policyholder agrees to be financially responsible for any run-out claims after termination of the contract, but the carrier guarantees to the insureds that if the policyholder does not pay the run-out claims then the car-

(*Continued on page 5*)

Actuarial Meetings

Jan. 12, Baltimore Actuaries Club
Jan. 17, Chicago Actuarial Club
Jan. 18, Seattle Actuarial Club
Feb. 9, Baltimore Actuaries Club
Feb. 15, Seattle Actuarial Club
Feb. 21, Chicago Actuarial Club

HEALTH INSURANCE SPECIALTY MEETING REQUEST FOR PAPERS

by Robert E. Hunstad

You are invited to write a paper for publication in the *Transactions*. Papers on health insurance are specifically sought to enhance the program for a 1979 special topic meeting of the Society of Actuaries.

Past specialty meetings, co-sponsored by the Program Committee and the Committee on Continuing Education and Research, have provided educational opportunities for our members. Another purpose of the Society's continuing education effort is to encourage the development of actuarial literature. This special call, made by the Committee on Health and Group, is to encourage your individual contribution to our literature.

The final program for the 1979 special meeting on health insurance will be determined, in large part, by the subjects covered in papers submitted in response to this call. Topics are limited to health insurance, but could cover any s ecific subject within that general category.

Procedures for submitting papers are outlined on pages 13 and 14 of the *Year Book*. To assure that papers are available for the meeting, deadlines have been established. Potential authors are asked to submit an outline of their proposed paper to the Executive Director by July 1, 1978. Information received by this date will be used in the initial program planning. Completed papers must be submitted no later than September 15. 1978, to permit adequate time for review, editing, printing and distribution prior to the meeting. Submission of manuscripts and outlines in advance of these deadlines would help the review process of the Committee on Papers.

Additional information may be obtained from Stephen T. Carter, Chairman, Committee on Health and Group. □

JOINT LIFE ANNUITY FORMULATIONS

by Samuel H. Cox

An appendix to Harold Cherry's article, "The 1971 Individual Mortality Table" (*TXA XXIII*, 1972, p. 475), contains a FORTRAN program which produces annual payment, joint life immediate annuity rates. The program has been modified by the author to compute other types of two life annuities including those designated "qualified joint and survivor annuities" in the Employee Retirement Income Security Act of 1974. The modified program is also capable of determining rates based on modes of payment other than annual. Copies of the modified program are available from the author.

The major modifications allow for frequency of payment other than annual, computation of single life in addition to joint rates and for other than straight joint life annuity forms. In allowing for frequency of payment other than annual, the problems reported in *The Actuary* by Hermann Edelstein (January 1977) and Dave Becker, Imen Bojrab and Lee Buchele (April 1977) were avoided by using the type of approximation suggested by John A. Mereu (also in *The Actuary*, April 1977). Mr. Mereu suggested using the uniform distribution of deaths (UDD) hypothesis for evaluating $\ddot{a}^{(m)}_{x:\overline{n}|}$; applied to immediate and continuous annuities this gives, respectively,

$$a^{(m)}_{x:\overline{n}|} = \frac{id}{i^{(m)}d^{(m)}}\, a_{x:\overline{n}|} + \frac{d^{(m)}-d}{i^{(m)}d^{(m)}}\,(1-{}_nE_x)$$

and

$$\bar{a}_{x:\overline{n}|} = \frac{id}{\delta^2}\, a_{x:\overline{n}|} + \frac{\delta-d}{\delta^2}\,(1-{}_nE_x).$$

This approximation amounts to assuming that ${}_{k+t}p_x$ is a linear function of t $(0 \le t \le 1)$ for integral values of k and x. The algorithm uses the same method to approximate $a^{(m)}_{xy:\overline{n}|}$. That is, ${}_{k+t}p_{xy}$ is assumed to be a linear function of t. This results in the following approximations:

$$a^{(m)}_{xy:\overline{n}|} = \frac{id}{i^{(m)}d^{(m)}}\, a_{xy:\overline{n}|} + \frac{d^{(m)}-d}{i^{(m)}d^{(m)}}\,(1-{}_nE_{xy})$$

$$\bar{a}_{xy:\overline{n}|} = \frac{id}{\delta^2}\, a_{xy:\overline{n}|} + \frac{\delta-d}{\delta^2}\,(1-{}_nE_{xy})$$

If the interest only functions are evaluated with $i = 0$, then the more common approximation result:

$$a^{(m)}_{xy:\overline{n}|} = a_{xy:\overline{n}|} + \frac{m-1}{2m}\,(1-{}_nE_{xy})$$

$$\bar{a}_{xy:\overline{n}|} = a_{xy:\overline{n}|} + 1/2\,(1-{}_nE_{xy})$$

(Continued on page 5)

Joint Life Annuity Formulations

(*Continued from page 4*)

Mr. Edelstein and Mr. Becker, et al, report that approximations of this latter type lead to anomalies like

$$\ddot{a}^{(12)}_{x:\overline{n|}} > \ddot{a}^{(12)}_{\overline{n|}}$$

and

$$\ddot{a}^{(m)}_{x} > \ddot{a}^{(m)}_{\overline{x:\overline{n|}}}$$

at high interest rates and low issue ages. The first "inequality" is equivalent to the second because $\ddot{a}^{(m)}_{\overline{x:\overline{n|}}}$ is identical to $\ddot{a}^{(m)}_{x} + \ddot{a}^{(m)}_{\overline{n|}} - \ddot{a}^{(m)}_{x:\overline{n|}}$.

After substituting this expression in the second inequality and rearranging terms, one obtains the first. As Mr. Becker, et al, conjecture, the anomalies occur when p_x is close to one and i is high. Mr. Mereu proves this, at least for the case of continuous payments. The case of payments m times per year is similar. For example, the common approximation will lead to the absurdity $a^{(m)}_{\overline{xy}:\overline{1|}} > a^{(m)}_{\overline{1|}}$ exactly when

$$p_{\overline{xy}} > 2m(1+i)\left(d/i^{(m)} - (m-1)/2m\right)/(m+1).$$

(*Continued on page 6*)

LETTERS

Theory of Interest

Sir:

Your readers might find the following problem entertaining:

Prove using the theory of interest techniques the following inequality:

For n an interger $e^n < \dfrac{(n+1)^{n+1}}{n!}$

The solution is to show that if the force of interest at time t is $\delta_t = 1/1+x$ then the present value of an *n* year continuously increasing annuity paid continuously is $n - \ln(n+1)$ and the present value of an *n* year annuity paid continuously where payments in the t'th year total $\$\,t$ is $\ln\left[\dfrac{(n+1)^n}{n!}\right]$

And since the former is less than the latter, the solution follows.

Ralph Garfield

(*Continued on page 7*)

To Be Continued

(*Continued from page 3*)

rier will. The insurance certificates must be changed to incorporate this type of wording. No reserves are required of the policyholder by the insurance carrier. It remains to be seen as to how popular this approach will become.

The Future

The demand by policyholders for some type of special financing arrangement is continuing, and we may well expect that in a few years a substantial portion of group medical business will be on this basis.

Group insurance has become a large and complex industry with a myriad of new and sometimes complicated financial terms. Undoubtedly in the future many more financial arrangements will emerge. □

International Congress

(*Continued from page 1*)

are five general subjects on which papers by individuals are requested:

(1) Generalized models of insurance business (Life and/or Non-Life), (2) Testing hypotheses by statistical investigations (Life and/or Non-Life), (3) Statistical bases and experience under Disability, Sickness and Accident insurance, (4) Estimating the value of insurance companies and insurance portfolios, (5) Interrelationships between demographic and economic development and social security (including occupational and private insurance).

Detailed descriptions of the above topics will be sent out to members of the International Actuarial Association early in 1978.

Papers may be submitted any time up until January 31, 1979, to the appropriate National Correspondent, Lawrence Coward in Canada and John Wooddy in the United States. If the paper is to be submitted after September 30, 1978, (but by January 31, 1979), the author or authors should notify the appropriate National Correspondent of the title of the paper prior to September 30, 1978. Papers may be submitted in English, French, German, Spanish or Italian.

Attendance at the Congress will be limited to 1,000 members from outside Switzerland. □

About VLI

(*Continued from page 1*)

search Corporation, can be found in "The Life Insurance Industry's Marketing Dilemma." Most probably, only the forewarned would guess that a report so titled would be about VLI. This is another of TLIIMD's strengths, for it offers an interesting viewpoint as to how VLI may fit in context, from the standpoint of not only the industry but also the public.

The dilemma, as stated in the first chapter of the report, is that there are serious doubts as to the future of permanent life insurance in general and non-par permanent life insurance in particular, while the industry continues to lose its share of the savings dollar. At the same time, agents' earnings have flattened out and now barely keep pace with inflation. And policyowners continue to have problems of underinsurance and keeping the coverage they have current with inflation. I would agree that this is a rational summary of today's situation; the real question is whether (as this report suggests) VLI does indeed offer a solution to the industry and policyowners alike.

With this thesis established, the next two chapters of TLIIMD concisely and (for the most part) accurately summarize the regulatory scene, past, present, and future outlook. My one reservation is that the SEC's final rules are characterized as "a qualified victory" for the mutual fund industry. This is akin to saying Muhammed Ali's bloody Manila knockout of Joe Frazier was "a qualified victory" for Ali because his opponent remained alive. It is also interesting to see Mr. Johns state that "most knowledgeable observers" believe the eventual outcome of VLI tax treatment at the company level is an approach under which there would be "virtual tax neutrality between variable and fixed policies." I would agree (thus making me a knowledgeable observer) but legislation is almost certainly involved if this goal is to be truly reached. It is with sadness that I note a history like this can (properly, in context) describe what happened without ever mentioning the people who made it happen. Thus, there is no mention at all of Charlie Sternhell and John Fraser, and only an inconsequential reference later in the report to Harry Walker.

The next chapter describes Equitable's VLI product, markets and experience up to the mid-1977 date when the report was published. The material describing the product itself and how it works is generally clear. The only portion where the reader may run into trouble because of tangled language is the section describing the mechanics of how the death benefit changes. This section is quoted verbatim from the prospectus.

There are two interesting observations in this chapter: (a) that, with gross investment returns of 8% or less (as illus-

(*Continued on page 7*)

Joint Life Annuity Formulations

(*Continued from page 5*)

For monthly payments and i = .05, for example, we can expect distorted values of joint and last survivor annuities with 12 payments certain if the issue ages x and y are such that $p_{\overline{xy}} = p_x + p_y - p_{xy}$ exceeds 0.999628. This occurs in the 1971 Individual Annuity Mortality table for ages as high as x = y = 65. Moreover, the right hand side of the inequality is a decreasing function of i; so we can expect more distortions at higher values of i. Mr. Mereu indicates that these anomalies can be avoided by using the uniform distribution of deaths assumption. This is easy to prove. Starting with the approximation

$$a^{(m)}_{xy:\overline{n}|} = \frac{i\,d}{i^{(m)}d^{(m)}}\, a_{xy:\overline{n}|} + \frac{d^{(m)}-d}{i^{(m)}d^{(m)}}\,(1-{}_nE_{xy})$$

and successively using

$$a_{xy:\overline{n}|} = a_{xy:\overline{n-1}|} + {}_nE_{xy} \le a_{\overline{n-1}|} + {}_nE_{xy}$$

and

$${}_np_{xy} \le 1$$

we obtain

$$a^{(m)}_{xy:\overline{n}|} \le \frac{i\,d}{i^{(m)}d^{(m)}}\,(a_{\overline{n-1}|} + {}_nE_{xy}) + \frac{d^{(m)}-d}{i^{(m)}d^{(m)}}\,(1-{}_nE_{xy})$$

$$a^{(m)}_{xy:\overline{n}|} \le \frac{d - dv^{n-1} + d^{(m)} - d}{i^{(m)}d^{(m)}} - \frac{d^{(m)} - d - id}{i^{(m)}d^{(m)}}\, v^n\, {}_np_{xy}$$

$$a^{(m)}_{xy:\overline{n}|} \le \frac{1}{i^{(m)}d^{(m)}}\,(d^{(m)} - iv^n + (i - d^{(m)})v^n\, {}_np_{xy})$$

$$a^{(m)}_{xy:\overline{n}|} \le \frac{1}{i^{(m)}d^{(m)}}\,(d^{(m)} - v^n d^{(m)}) = a^{(m)}_{\overline{n}|}$$

Therefore, like Mr. Mereu's suggestion, the linearity of $k + t\,p_{xy}$ produces values which never lead to the anomalies reported earlier in *The Actuary*. □

About VLI

(Continued from page 6)

trated in the prospectus), it takes many years for the death benefit to catch up with that under a fixed policy bought for the same premium, and (b) the same (40% first year, somewhat spread) commission scale Equitable uses for VLI is also used for an important range of their fixed products. As stated later on, few other companies may have the advantage of having their agents already accustomed to this pattern. This chapter also includes a discussion of Equitable's pricing assumptions and surplus objectives for their VLI product.

The next chapter, "Some Inside Views," chronicles the results of an intensive series of interviews on the outlook for VLI which Mr. Johns conducted with a wide range of industry people, including many actuaries. With only a few exceptions, the atmosphere presented here is gloomy indeed: regulatory problems, commission restrictions, unfavorable common stock performance and outlook, the high cost of developing the product, etc. Either this is a realistic assessment, or Mr. Johns has uncovered a great number of people with little foresight. We shall see.

In the final chapter, "An Outside View," Mr. Johns and Argus present their rather optimistic thoughts as to the future of VLI. The most interesting section deals with VLI's appeal to buyers. It is keyed to a number of tables comparing results under VLI with those under alternative products, assuming gross investment yields of 9½% and 13%. The former figure reflects the 9.3% result obtained by Fisher and Lorie in their well publicized study of common stock performance over the period 1926-65. The 13% is the Argus outlook for the future, assuming that inflation continues at about a 5% annual rate and that (as they contend) the market will adjust to inflation over the long term. These assumptions, S&P price/earnings ratios and dividend payout figures, some more assumptions, and some analysis are then stirred into the pot and 13% comes out. I leave it to others to judge where this falls on the scale that runs between brilliant economic analysis on one end and the satisfying sound of a well-thrown hatpin hitting its intended target on the other.

All of the tables include figures for Equitable's policy and a hypothetical non-par VLI policy of the New York Life design. Proponents of the Equitable design may be unhappy that while the tables document that design's practical disadvantage from the standpoint of death benefits (e.g., lower than those under the New York Life design for 37 or 38 years at issue age 30, under the assumptions used here), its cash value advantage is mentioned but never illustrated. In any event, the tables show both VLI policies outperforming (a) a "major mutual company's" par fixed benefit policy using the paid-up addition dividend option and (b) a non-par fixed policy with premium differences invested in a no-load mutual fund.

The report cautions that under conditions which produce 9½% or 13% stock market performance, the participating fixed policy's dividends could well turn out to be higher than currently illustrated. I would add that the par policy chosen seems to be a relatively high premium one, and that anyhow, in this kind of analysis, it will be roundly outperformed by the type of par policy many companies seem to be developing now— one with lower premiums, low cash value buildup and high dividends translating into very large amounts of paid-up additions on the 3½% or 4% reserve bases used for these policies.

In the final tables, the Equitable policy (at all durations) and the New York Life design policy (at later durations) run aground from a death benefit standpoint vs. a buy term and invest the difference in a no-load mutual fund scheme. A sophisticated and commendable approach is used to evaluate the after-tax results under the fund, but a "low cost" par term policy, most probably more expensive than many non-par term policies, is used. It is pointed out that the low tax bracket assumption (30%) favors the term/fund approach. I wish the report showed cash values as well as death benefits; there, figures might well have made VLI look better.

In any event, Mr. Johns and Argus conclude that VLI can appeal to the public, to agents and to companies as a solution to the aforementioned dilemma. There is, of course, the old story about the company that developed from innovative scientific principles the perfect, most nutritious dog food, only to lose a bundle after building new production facilities when it discovered that the dogs didn't like it. Maybe our analytical efforts should start from the (discouraging) figures as to trends in individual investor participation in the stock market. But let's also remember that it's easy to be bearish about products that will cost us a lot if we develop them and they don't sell. Our managements won't give us too many chances to do that sort of thing, so why should we take chances in the first place? For example, many of the arguments I have heard against the adjustable life concept are similar in nature to those against VLI. If we end up turning down all these options, we will surely be in bad shape 10 or 20 years from now.

So, really, you should read "The Life Insurance Industry's Marketing Dilemma." Proceed as quickly as you can to borrow a copy from a friend of yours who has it. Be sure to do this before you buy it yourself. It costs $95. □

Letters

(Continued from page 5)

Par *vs.* Non-Par

Sir:

A few actuaries are advocating that stock companies — in light of the inflationary interest rates being experienced currently — should adjust premiums and/or benefits in order to maintain equity among their various classes of policyholders.

It is significant that these advocates refer to the current inflationary interest rates, but fail to refer simultaneously to the current inflationary *expense* rates; possibly because the latter, as compared with the former, convey a negative connotation. We didn't need the economists to remind us — we've learned this the hard way — that inflation means increases in *both* interest rates and expense rates; that accelerated rates of inflation mean *both* accelerated interest rates and accelerated expense rates. They go hand-in-hand.

I have taken the position consistently that — in the computation of premium

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Theories of GAAP Conversion

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some other accounting system in the near future. Prudence would dictate that a decision to convert should be delayed if at all possible until a decisive position is taken by the Standards Board on objectives of financial statements. As evidenced by the potency of the controversy itself on financial statement objectives, can we really know in many parts what it is to which we want to convert? If we cannot, then we can have only theories of conversion. Eventually, we hope, the Financial Accounting Standards Board, if it wants to survive, will tell us what the objectives of financial statements are. When it does this, and does it correctly, we will no longer need conversion theories.

An important reason why GAAP is criticized today is that many of its principles are inconsistent with economic principles. Economic principles are *the* principles upon which companies are managed. Companies are not managed on GAAP principles. As a consequence of this inconsistency, the financial statements reported currently in compliance with GAAP do not fairly present in many important ways the financial performances of companies. The statements therefore do not completely meet the needs of general investors and creditors for making economic decisions on the companies. Consider some examples:

(1) GAAP forces recognition of loss but defers profit recognition.

(2) So-called "goodwill" is written down when in many instances *its value* is increasing.

(3) Because GAAP in many parts does not reflect economic considerations, so-called purchase accounting also conflicts with economic principles.

(4) GAAP deferred taxes are determined without recognition of the value of money. Moreover, no attempt is made under the Phase 1 tax to match taxes to revenue for life insurance companies.

(5) GAAP would have us believe that general investors and creditors have different objectives in "contracting" with mutual companies than they have in "contracting" with stock companies, and therefore that the objectives for GAAP financial statements for mutual companies are different from the objectives for GAAP financial statements for stock companies.

(6) How would you like to put your life savings in a bank one day, and returning the next day, to be advised that your account decreased 20%? In effect that is exactly what GAAP does in defining deferrable acquisition costs by application of the so-called "related-to-and-directly-varying-with" rule.

(7) Every businessman knows intuitively, if not pragmatically, that some events are *cyclical* in nature, and therefore must be provided for in his product pricing. He also knows that if his accounting establishes no reserves for such cyclical events he will have roller coaster earnings. In this regard, when the Financial Accounting Standards Board prohibited so-called contingency reserve accounting, GAAP was again weakened. As an aside, according to the Foundation for the Study of Cycles there exists a statistically demonstrable 9-year mortality cycle. Therefore, should not mortality contingency reserve funds be permitted?

(8) In auditing life insurance companies, an important concern of auditors is the very critical long-term interest rates used in calculating reserves. Auditors, like politicians and like actuaries, do not seemingly give a second thought to the destructive consequences of economic recessions on assets, and thus the need to consider such in their valuation. Certainly, there's a moral in this somewhere.

With these examples you can understand why there exist different theories of conversion to GAAP. For what is conversion to GAAP anyway, other than restatement of statutory earnings? And when agreement among intelligent people cannot be reached on each step of the conversion process, is it any wonder that different theories exist?

What does all this mean for the company intending to convert to GAAP in the near future? It means that GAAP earnings do not just happen. GAAP earnings result from a large number of decisions, many of them compromises, by *the many people* necessarily involved in implementing GAAP in any company. These decisions (although they did not for many companies already converted to GAAP) must reflect the understanding by the Board of Directors of the financial entity which it directs, expressed either explicitly or through its chief spokesman, for example, the chairman, or the chief executive officer, but certainly not the actuary or the accountant. Financial statements should reflect the financial management decisions, and their consequences, which a Board of Directors and a company make. This is what is important to general investors and creditors.

With this in mind, the decisions to be made in implementing GAAP, or, if you prefer the theories to be adopted to the extent permitted by the various audit guides, should reflect that explicit understanding of the Board of Directors. In practical terms, this understanding translates to either advancing or deferring the recognition of earnings by deliberately determining the systems and assumptions used in converting to GAAP. □

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Letters

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rates, dividend scales, policy reserves, nonforfeiture benefits, etc. — companies should give consideration to *both* factors, as well as to possible changes in mortality (and lapse) rates. Such treatment would diminish, if not wipe out, the need for adjustments today — with respect either to the nonpar companies' premium rates and/or benefits, or the par companies' controversial "investment-year" method of apportioning dividends. There exists a definite parallelism here between the two systems of operation.

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