



The Newsletter of the Society of Actuaries

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MAY 1991

THE Actuary

Nonforfeiture benefits for long- term care insurance

by Stephen C. Goss

Inclusion of nonforfeiture benefits in long-term care insurance policies has been discussed for some time as a way to alleviate the loss experienced by a large portion of policyholders when their coverage lapses due to nonpayment of premiums. Nonpayment of premiums may occur because of decreased ability to pay, decreased need for maintaining the insurance coverage, and/or unhappiness with unscheduled increases in premiums after issue. A loss to the policyholder occurs at lapsation because virtually all long-term care (LTC) insurance policies are significantly prefunded. Level premiums result in a reserve buildup in early policy years when LTC use is relatively low (costs are less than premiums), followed by reductions in reserves in later years when LTC use rises (costs become higher than premiums).

Of course, lapsation in the absence of nonforfeiture benefits is not all bad. The reserves left behind by those who lapse subsidize future claim costs for those who keep their policies in force. As a result of this subsidy, premiums are lower. The more lapsation that occurs in the absence of nonforfeiture benefits, the lower premiums can be. But the fact remains that a loss is incurred by those who lapse. Common sense suggests that lapsation is most likely to occur among those who can least afford the loss, especially those who exhaust their financial resources in illness and approach the need for LTC services.

Continued on page 5 column 1

Change in the Standard Valuation Law to establish the Appointed Actuary

by Walter S. Rugland

The United States is soon to have Appointed Actuaries. These actuaries will be responsible by statute for preparing an opinion on a life insurance company's reserves.

Over the past decade, actuarial, regulatory, and industry groups have been working to achieve a simple objective: to provide a basis for integrity of the statutory balance sheet for life insurers with respect to policyowner liabilities. Key to this is the actuary's role.

This effort was initiated by a statement of the National Association of Insurance Commissioners (NAIC) Technical Advisory Committee when it recommended the adoption of 1980 amendments to the Standard Valuation Law (SVL). The committee stated that a new valuation law basis was needed to maintain the traditional conservatism of statutory reserves.

In December 1990, the NAIC adopted amendments to the SVL that do this. For most companies, Appointed Actuaries will be required to provide an opinion that addresses two questions:

- Do statutory statement entries comply with the law?
- Given an accepted level of conservatism and an ongoing business assumption, what level of assets is needed to support the reported statement liabilities?

Development track

The change in the law and the authorized accompanying model regulation had their roots in the report of the Special Advisory Committee on the Valuation Law (SAC/VL), chaired by John Tweedie, then Senior Vice President and Chief Actuary of Metropolitan Life.

Continued on page 2 column 2

In this issue:

Change in the Standard Valuation Law to establish the Appointed Actuary	
Walter S. Rugland	1
Nonforfeiture benefits for long-term care insurance	
Stephen C. Goss	1
Editorial: The valuation actuary takes on the insolvency dragon	
R. Stephen Radcliffe	4
Factuaries	6
Product, market, and distribution strategies	
Judy A. Faucett	7

Pension and health topics at Colorado Springs meeting	9
'Senior Associates' proposed as new SOA Section	
David A. Wiener	10
Book review: Book offers accounting background	
William A. Drew	11
On the lighter side	12
Letters to Editor	13
Actuercrossword. Actuercrostic	15,16

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Appointed Actuary cont'd

The objective of the SAC/VL, as dictated by its charge, was to develop a basis for a meaningful role for actuaries with the structure of the SVL and to suggest regulations that would implement it.

The SAC/VL worked within several restraints:

- Maintain all current bases of statutory accounting, including asset reporting, factor-based development of minimum reserves, and the Mandatory Security Valuation Reserve (MSVR).
- Do not ask actuaries to opine on surplus adequacy.
- Do not ask actuaries to opine about ongoing solvency.

These restraints came from understandings that were perceived to exist among actuaries, regulators, and industry management, the major stakeholders in SVL development activities.

The result

Until this most recent change in the SVL, the actuarial opinion for life insurers' annual statements has had no statutory basis; the instructions to the compilation of the annual statement required it. The actuarial opinion was initiated in 1975, and the work of the actuary is guided by Recommendation 7 of the Actuarial Standards of Practice, which was promulgated in the mid-1970s.

This change in the SVL creates a statutory base for the Appointed Actuary's opinion and authorizes a regulation to implement the concept. The regulation is intended to contain rules for appointment of the Appointed Actuary and guides to be followed in preparing the opinion.

Highlights of the proposed revision to the SVL

The major change in the SVL is the addition of a new Section 3, which develops the actuarial opinion concepts. Other changes are made to implement the provisions of this new section.

Section 3 is titled "Actuarial Analysis Opinion of Reserves and of Assets Supporting such Reserves." It becomes operative at the end of the first full calendar year following the year of enactment.

Subsection A statutorily establishes the Appointed Actuary's opinion and institutes a statutory

basis of confidentiality for the memorandum supporting the opinion. It establishes that:

- (1) Every life insurance company doing business in a state is required to annually submit the opinion of an Appointed Actuary. This opinion is to be whether the reserves are computed appropriately, are based on contractual provisions, are consistent with prior reported reserves, and comply with the laws of the state of filing.
- (2) The opinion is to be submitted with the annual statement for each year ending on or after the calendar year following the year of enactment.
- (3) The opinion must cover all business in force, including individual and group health insurance plans.
- (4) The opinion is to be based on standards of practice promulgated by the Actuarial Standards Board (ASB).
- (5) The individual state's commissioner may accept an opinion filed with another jurisdiction if the commissioner determines that such opinion reasonably meets the requirements applicable to a company based in that state.
- (6) The Appointed Actuary must be a member in good standing of the American Academy of Actuaries (AAA) and satisfy other conditions as established by regulations.
- (7) Except in cases of fraud or willful misconduct, the Appointed Actuary shall not be liable for damages to any person other than the insurance company and the commissioner with respect to the Appointed Actuary's opinion.
- (8) Regulators are authorized to establish and take disciplinary action against the Appointed Actuary and/or the company.
- (9) The Appointed Actuary is required to prepare a memorandum to support the opinion.
- (10) The SVL does not require automatic filing of the memorandum. If the insurance company, upon request of the commissioner, fails to provide a supporting memorandum or fails to meet the standards prescribed, the commissioner may engage a qualified actuary at the expense of the company to review the opinion and to prepare a supporting memorandum.
- (11) The memorandum supporting the opinion will be kept confidential and is not subject to subpoena, other

Table 1
Satisfaction Criteria for Company Asset Classes

Ratio Tests	Under \$20 Million	\$20 Million to \$100 Million	\$100 Million to \$500 Million (see note)
Capital and surplus to cash and invested assets	> .10	> .07	> .05
Annuity and deposit fund liabilities to all policy liabilities (excluding MSVR)	< .30	< .40	< .50
Noninvestment-grade bonds to capital and surplus	< .50	< .50	< .50

Note: Companies with assets between \$100 million and \$500 million are only eligible for exemption for two years subsequent to provision of an asset adequacy opinion. In other words, such opinion is required at least once every three years. Companies with assets exceeding \$500 million are never exempt.

than for defending an action seeking damages. However, the memorandum and accompanying material may be released by the commissioner with the written consent of the company. It also may be released to the American Academy of Actuaries when required for professional disciplinary proceedings, on the condition that the AAA preserves its confidentiality.

Once any portion of the confidential memorandum is cited before any governmental agency other than a state insurance department or is released by the company to the news media, all portions of that memorandum are no longer confidential.

Asset adequacy

Subsection B enacts the requirement for the Appointed Actuary to provide an asset adequacy opinion in addition to the opinion required in Subsection A. This asset adequacy opinion is a new dimension for actuaries with respect to the annual statement.

The wording of the opinion is included in the statute.

The reserves and related actuarial items held in support of the policies and contracts specified by the commissioner by regulation, when considered in light of the assets held by the company with respect to such reserves and related actuarial items, including but not limited to the investment earnings on such assets and the considerations anticipated to be received and retained under such policies and contracts, make adequate provision for the company's obligations under such policies and contracts, including but not

limited to the benefits under and expenses associated with such policies and contracts.

Some companies may be exempt from the requirement for this additional opinion.

The statute also authorizes the regulation to address a company's need for a transition period in complying with this new SVL provision if larger reserves are called for.

Subsection B(7) is expanded to recognize the reserve amount that may be additionally established to satisfy the asset adequacy opinion and to provide for release of that amount in subsequent years if it is no longer needed to satisfy the asset adequacy test at that time.

Subsection B(10) is added to bring reserves for health coverages under the provisions of the SVL. It is anticipated that the model NAIC regulation will provide the basis for health reserves.

The actuarial opinion and memorandum regulation

The NAIC has exposed a model regulation to accompany the change in the SVL that authorizes a regulation to provide significant details as to how SVL Section 3 will be handled.

In this regulation, two articles (VI and X) are of particular interest. Article VI discusses Required Opinions. As outlined in the SVL, all companies must provide the opinion required by Section 3a of the SVL. In addition, unless exempted, all companies must provide the asset adequacy opinion required by Section 3b of the SVL.

There are both subjective and quantitative tests to be eligible for

exemption, and all must be satisfied. The subjective tests, described negatively, are:

- (1) The commissioner must not have indicated an asset adequacy opinion was to be submitted. If there is such indication, it must be submitted.
- (2) The company must not have been on the NAIC examiner team "priority one" list either of the prior two years.
- (3) The company must not have been on the NAIC examiner team "priority two" list both of the last two years; i.e., once in two years does not disqualify exemption eligibility.

The quantitative tests are summarized in Table 1. The actual factors are still subject to discussion during the exposure period for the proposed regulation.

Article X provides other considerations of the asset adequacy opinion:

- (1) Aggregation is discussed; it is permitted, methods are identified, and disclosure in the opinion is required.
- (2) Assets can be used for only one set of liabilities in adequacy testing and only at statement value.
- (3) MSVR assets may be used to the extent that the identified assets used in the asset adequacy test create the actual MSVR assets. This assumes the MSVR is a reserve, and as a result, it is a part of the Appointed Actuary's opinion.
- (4) Interest scenarios that must be considered are listed; they are similar to those of New York's Regulation 126.
- (5) Adequate documentation beyond the memorandum is required. The test is whether or not there is an adequate work process trail that another actuary could follow.

Comments on these developments

The Appointed Actuary's guidance will be provided by the ASB. As such, standards will be continually reviewed and revised within the procedures governing the ASB. Regulating actuaries and the ASB have begun discussions to ensure mutually supportable roles in this area.

The work documentation in the memorandum should be of sufficient scope to provide necessary data and understanding to a company's management. Management is intended to be the prime beneficiary of the Appointed Actuary's work. The memorandum is

Continued on page 6 column 3

Editorial

The valuation actuary takes on the insolvency dragon

by R. Stephen Radcliffe

After nearly a decade of hard work, we are on the verge of integrating the valuation actuary concept into the Standard Valuation Law. Walt Rugland's article in this issue describes the current status of the valuation actuary in more detail. Many individuals in our profession should be congratulated for their contributions to this effort. The final result is about all we hoped it would be. It represents a good balance between adding strength to the valuation process and protecting the valuation actuary from unreasonable personal liability.

Well, what do you think? Will the general level of reserves and liabilities in the United States increase as a result of this effort? Will it decrease? Or will it stay at about the same level? My guess is that the general level of reserves won't change much.

Some pressure for the reserve levels to rise will occur if valuation actuaries are conservative about the increased risk in our industry. However, market pressure for the reserves to go down will develop because the appetites for capital have increased dramatically.

In addition, the rating agencies wield a lot of power these days. They concentrate on the level of capitalization in making their rating. This will add to the pressure to increase capital.

As I have said in previous editorials, the power of the marketplace is much greater than the power of professionalism. The poor, old lonely actuary will be no match for the efforts to increase capital at the expense of reserves. However, I think the great majority of reserves are already at their minimum level, which should blunt the efforts to decrease the reserve levels to much below where they are now.

So why should valuation actuaries go to all this trouble if it has little effect on the total level of reserves? It really doesn't matter whether the valuation actuary has much influence on the total level of reserves. These changes in the Standard Valuation Law are an important step in the evolution of the valuation

process. We have moved the process to a more professional level. I hope — and I believe — that the profession is up to the task. I submit that this new valuation actuary concept will significantly advance our understanding of risk, and that this is an important issue for our profession.

Some may be overly optimistic about the prospects for valuation actuaries to take care of the potential solvency problems of the industry once and for all. The valuation actuary can take one small step in solving the problem but cannot be the final solution. We must avoid the Maginot Line mentality that would say that the valuation actuary, once in place, can seriously deter the threat of insolvency.

What we really have in this country is not a reserve problem but a pricing problem. Setting the level of reserves affects only the timing of insolvency. Setting prices determines solvency.

Delving deeper into the problem indicates that the pricing problem is a manifestation of the failed strategies of the 1980s. It would be ironic if the valuation actuary causes the level of reserves to increase at a time when companies are trying to reform their strategies. Softening the reserve requirements would be more appropriate during this time of reformation. This would give companies time to rearrange their affairs in order to survive.

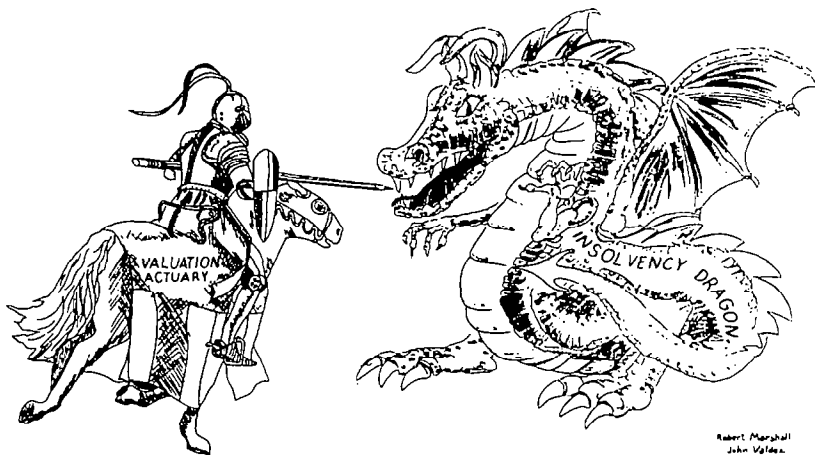
Of course, there may be some who think that companies that made the mistakes should pay for those

mistakes. Strengthening reserve requirements surely would hasten the demise of weak companies. But then we all would fail a little bit. The press and the guarantee funds would see to that. No doubt some companies will fail with or without the valuation actuary's opinion. Let's not make this an issue of survival or failure. Instead, let's make this an issue of understanding risk.

While the valuation actuaries' efforts have been focused on the C-3 risk during the 1980s, the other risks have been sneaking up behind their backs. The American Council of Life Insurance has shown that, for an overwhelming majority of insolvencies, the C-4 risk was the major cause of the failure. As we enter the 1990s, the C-1 risk is looming just around the corner as problems with mortgages, real estate, and junk bonds work their way through our economy. Finally, the C-2 risk is the one we really will need to focus on as we approach the mid-1990s. My gosh! Have we been working on the wrong risk?

My warning is that the formal introduction of the valuation actuary concept is not an end or a solution. It is only a beginning. It is a necessary, but not a sufficient, condition to address any solvency problems that might exist in our industry.

I am sure many valuation actuaries will believe that it is not fair to dump this mess in their laps. It is really not their fault. They can do little to clean up the mess after the prices have been set.



Robert Marshall
John Valdez

Valuation actuaries — have hope! Maybe after the one zillionth scenario test, the managers of our industry may understand and capture the essence of risk. Once the risk is understood, we can manage it, price for it, and thrive on it.

LTC Insurance cont'd

Up to this point, nonforfeiture benefits have generally been excluded from LTC insurance. This kept premiums low and, along with the absence of guaranteed (noncancellable) premiums, insulated insurers from loss if their uncertain projections of LTC claim costs turn out to be too low. Affordable premiums and solvent insurance companies are essential to successful marketing of LTC insurance. But a balance must be struck between achieving these goals and the goal of minimizing the loss for those who lapse their coverage prematurely if LTC insurance is to become more popular and viable in the future.

Four ways to avoid policyholder loss at lapsation

Three basic types of nonforfeiture benefits have generally been considered for LTC insurance: extended term insurance (ETI), reduced paid-up insurance (RPU), and a lump-sum cash or surrender value. ETI is generally rejected because the limited duration for which full coverage can be extended fails to cover the insured at more advanced ages where LTC use is most likely. Surrender values are generally rejected because of the high cost associated with the near certainty that the policy will be surrendered just before death.

RPU generally has been seen as the best of these three options because it avoids both the limited time of coverage associated with ETI and the additional cost of the effective death benefit associated with a lump-sum surrender value. RPU, however, suffers because the portion of the original insurance coverage amount that can be provided may be so small that the insurance payment will, in many cases, fail to reduce out-of-pocket expenses enough to avoid rapid impoverishment after LTC service is required. In addition, RPU does not offer the flexibility of a "cash" option for those policyholders for whom LTC insurance has become an unaffordable luxury.

A fourth option should be considered: cash value paid as a life annuity, which eliminates the additional cost associated with antiselection by those near death under the lump-sum surrender value option. This option also offers the flexibility to trade LTC insurance protection for additional income. In many cases, income and assets will have been reduced over time to the point where the insured has little or nothing left to protect from exhaustion by an extended LTC episode. The small life annuity, however, can help in covering necessary daily living expenses.

While the life-annuity cash value option in its pure form would not directly offer continued LTC insurance coverage, the life annuity could be used to purchase, in part or in whole, a new policy for those who continue to be insurable. For those who are no longer insurable and can afford to do so, retention of the original policy would be well advised. This option is inferior to RPU only for policyholders who are no longer insurable and can no longer afford the full premium of the original policy but desire some continued LTC insurance coverage.

A choice between a life-annuity cash value and an RPU benefit at the time of lapsation would satisfy all needs but would increase the cost of the nonforfeiture benefit somewhat above the cost for either the life annuity or the RPU benefit alone. Uninsurable lapses would tend to select the RPU while insurable lapses would tend to select the life annuity.

How to avoid insurance company loss from nonforfeiture benefits

If the assumptions used for the original premium are realized and the nonforfeiture benefit was set equal in value to the current reserve (accumulated premiums less incurred expenses to date, including loads) at each policy duration, then the insurer will be disadvantaged by offering nonforfeiture benefits only to the extent that increased premiums result in fewer policies issued. Moreover, the financial status of the insurer will be largely unaffected by the level of lapse rates experienced.

However, if actual LTC utilization rates substantially exceed those projected and guaranteed nonforfeiture benefits are set equal in value to projected reserves, then lapsation will result in substantial losses by the insurer even (or especially) when premiums are raised on a class basis.

This problem is compounded if RPU or ETI nonforfeiture benefits are offered instead of the life-annuity cash value. Worse-than-expected LTC experience will result in both lower-than-expected current reserves and higher-than-expected value for the specified RPU or ETI benefit. On the other hand, worse-than-expected LTC claim costs are likely to imply lower-than-expected value for the life-annuity cash value, thus likely reducing the insurer's loss.

To minimize these losses, the insurer might tend to alter the guaranteed nonforfeiture benefits at the same time a necessary premium increase is imposed. Worse, the insurer might wish to offer a nonforfeiture benefit that is not guaranteed beyond an amount equal in value to the actual accumulated reserve at the time of surrender.

A better approach would be to specify a schedule of nonforfeiture benefits in the original policy that would be equal in value to something less than the full amount of the projected current reserve for each policy year. The contract would state that the specified nonforfeiture benefits could be revised in the future in conjunction with any necessary increase in the premium on a class basis, but would guarantee that the original specified nonforfeiture benefit would be offered for 30 days after the premium increase notification. If, for example, the original nonforfeiture benefit had been set at 80% of the value of the projected reserve, but current estimates of reserves were now equal to current estimates of nonforfeiture values, the company would need to raise premiums and could afford to offer the original nonforfeiture benefit during the 30-day grace period.

Conclusion

The best nonforfeiture benefit for LTC insurance may be a cash value paid in the form of a life annuity. An RPU benefit or a choice at the time of lapsation between the life annuity and RPU benefits would involve either less flexibility or higher cost, respectively, than the straight life-annuity cash value approach. (An eventual IRS ruling on the tax status of LTC insurance with and without such benefits will be a critical factor.)

Nonforfeiture benefits might best be specified at levels equal to roughly

Continued on page 9 column 3

FACTUARIES

by Deborah Poppel

This is another in a series of profiles of members of the Society's Board of Governors.



Name: Christopher D. Chapman.

Current hometown: Winnipeg, Manitoba.

Current employer and function: Great West Life Assurance Co., Senior Vice President, Retirement & Investment Services.

Marital status: Married to Mary.

Children's names and ages: Greg, 28; Paul, 27; Kathleen, 25; Robert, 22.

Birthday: November 28, 1938.

Birthplace: Winnipeg.

My first job was: A vegetable cook at Minaki Lodge.

I'd give anything to meet: Pete Seeger.

The number of exams I flunked: None.

The book I recommend most often: *The Lessons of History* by Will and Ariel Durant.

The movie I'd most like to own the tape of: *The Name of the Rose*.

Nobody would believe it if they saw me: In a bar after midnight.

The TV show(s) I stay home to watch: Not a one!

When I'm feeling sorry for myself, I: Try to play the piano.

My fantasy is: To sail around the world.

The silliest thing I've ever done: Investing in tax shelters.

If I could do it over I'd: Take another six-month trip around the world.

My proudest actuarial moment: Becoming President of the Canadian Institute of Actuaries.

I'm passionate about: My wife.

My favorite way to spend a Sunday: Go sailing or cross-country skiing.

Appointed Actuary cont'd

not automatically filed with the regulator but is confidential in the company and available for regulator review.

Reserves cover reasonable deviations, not catastrophes. The Appointed Actuary is not providing a solvency opinion or doing a surplus adequacy test.

MSVR assets are taken into the calculation on the basis on which they are established. To the extent they are used, they are reserves.

These changes in the SVL provide a significantly different role for actuaries in valuation. The Appointed Actuary is responsible by statute for the reserves. The responsibility includes asset consideration and an asset adequacy opinion.

The statutory status of the Appointed Actuary is clear, including appointment, qualification, and work product. ASB standards provide the professional base for the Appointed Actuary's work.

The proposed model regulation could be approved in either June or December 1991. Instructions to the annual statement blank will be changing during 1991. The earliest date for required application of the new provisions of the valuation process will be December 31, 1992, annual statements.

Copies of the NAIC amendments to the SVL and the proposed model regulation have been widely distributed. Additional copies may be obtained from the NAIC by contacting Jean Olsen, NAIC, 120 W. 12th Street, Suite 1100, Kansas City, MO 64105, 816-842-3600.

Walter S. Rugland, Consulting Actuary with Milliman & Robertson Inc., is Chairperson of the Joint Committee on the Valuation Actuary.

June Board meeting open to members

Interested SOA members are welcome to attend the next Board of Governors meeting to be held June 5 in Colorado Springs. Also, members are reminded that minutes of Board meetings are available upon request. For more information on the meeting and the minutes, call the Society office, 708-706-3500.

Product, market, and distribution strategies

by Judy A. Faucett

We've seen a lot of press lately about the deteriorating state of the life insurance industry – the impact of junk bonds and real estate on solvency, the unprofitability of new business, declining surplus ratios, and restructuring/reorganization to improve efficiency.

An obvious inference is that the strategies of the 1980s were either not completely successful or that we didn't fully understand their implications. This article provides an overview of some of these strategies, the emerging management issues, and possible revisions of marketing strategies for the 1990s.

During the 1980s, many companies followed three popular strategies: market pricing, innovator/quick copier, and agent as customer.

Market pricing

Pricing to market implies that price or value is the critical decision factor.

Therefore, competition determines how the product will look in terms of the relationship of premium, cash value, and death benefits. This makes the actuary's job either very easy or highly creative. All the actuary has to do is solve for the assumptions that will deliver that competitive product to market and still meet the carrier's profit objectives.

Once the required pricing environment is known, the carrier can adjust its practices to produce that environment. Some of the factors that can be adjusted include:

- Investments
- Mortality
- Persistency
- Home office expenses
- Distribution costs
- Profit standards

Investments and expenses were two factors that were frequently adjusted. If the product required a higher earned rate on investments, the carrier could either invest in riskier assets or invest out to longer durations. Unfortunately, pricing was not always adjusted to reflect these risks, and the carrier could always temporarily accept a smaller spread. In some companies, the investment and actuarial staffs never talked to

each other, so no one knew whether spreads were being met or not.

The biggest leap of faith was typically expenses. Many companies had an expense gap; that is, the priced-for expenses did not cover current expense levels. The gaps I heard about were as small as 5% and as large as 67%. These gaps were expected to close in the near term, usually three to five years, due to expense reduction programs or an expected increase in the number of units over which to spread expenses.

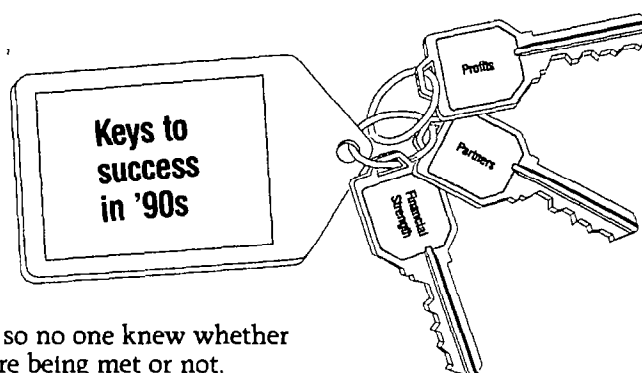
Companies were in a Catch-22 situation. Pricing to actual expense meant the product would be uncompetitive, resulting in few, if any, sales. If there was no new business to replace terminating old business, unit expenses would increase. And if the company didn't get the required new business volumes, the profit standards weren't being met.

Looking back on this strategy, one has to question whether the market was sane. Based on our experience with universal life credited rates in the mid-1980s, the answer is "not always."

Clearly, market pricing requires that the company understand all the risks it has assumed and the investment of surplus required so it can manage the business going forward. Management must understand what it takes to get from the current environment to the one that has been priced. And management must have a plan for getting there over a reasonable period of time. Management must measure results to the plan on an ongoing basis and be prepared to take remedial steps if those results are lagging behind the plan.

Innovator/quick copier

Being a creator of new product designs or features, or a fast copier of companies that do, implies that uniqueness of design is the key market differentiator. Or as one producer once told me, "When you can't dazzle them



with brilliance, obfuscate." That is, when you cannot win head-on with standard product structures, add bells and whistles to make it difficult to compare products.

During the 1980s, we saw many unique product structures. And with the advent of the personal computer, the agent had the ability to create through the illustration process some amazing applications of these products.

I remember reading a *Best's* universal life analysis during the late 1980s. It noted that although the external environment had not changed, the long-term values for the best companies had increased 20%. That was due to the introduction of persistency bonuses – a creative solution to both a competitive issue and deteriorating persistency experience. However, problems could arise if the product was lapse supported. If the high early lapses didn't occur, neither did the profits. In a few cases, the gains on early surrenders were a source of the bonuses to persisters. If the lapses don't occur, how will the carrier manage the block of business? And does a product that requires 98% to lapse to deliver illustrated values to the remaining 2% add value to the buyer? We have seen marketing material produced by companies that liken the supportability of persistency bonuses to the financials of a lottery (i.e., tontine funding).

Companies have been in a grueling product cycle. After all, product designs can't be patented. Any edge is unique for only a few months. It was a constant scramble to anticipate the next shift in product design and its impact on product performance. We shortened the product cycle to maximize our ability to respond to the market. That meant we had to

Continued on page 8 column 1

Strategies cont'd

focus on the activities to bring out the product and defer the administrative changes until after introduction.

Administrative systems could not handle easily many of the new designs or enhancements. Systems were held together with Scotch tape and baling wire with the electronic data processing people hoping for a system to appear on the horizon that really could deal easily with all these products. Some companies now have three- to five-year backlogs of changes and upgrades to be able to properly administer and manage all the past new products.

Agent as customer

During the 1980s, we saw continued erosion of the captive agency system. Life insurance has to be sold, and the agency system has been, and continues to be, the most successful distribution method. Some companies focused on the agent as the primary customer because the agent has ultimate control over which carriers and products are recommended to the ultimate buyer. Access to the distribution channel gives a company a distinct advantage in the marketplace. So how do you get one?

- Grow your own
- Attract by products
- Attract by compensation

Companies that developed career or captive agency systems found themselves in competition for their own agents. Noncareer agency companies sometimes had better products and paid more compensation. Companies found that substantial producers had better quality business in terms of both mortality and persistency. So experienced producers were more sought after than trainees or average performers, particularly given the cost of recruiting, training, and developing a new agent. Some companies gave up on agent development because it was too costly. The personal computer made it easy for an agent to affiliate with several companies and the phrase, "captive agent," quickly became an oxymoron.

Compensation packages were restructured to provide more rewards for larger volumes of production or better quality business to both attract and retain these producers. Companies tried to move agent expense support from a fixed- to variable-cost structure.

Companies sought to develop new distributor relationships. As a

result, companies were faced with the coexistence of multiple distribution systems, particularly career agent and noncareer systems. Managing multiple systems was not always easy, particularly if they operated in similar markets.

So where were we as an industry as the 1980s drew to a close? The perception that new products were less profitable than much older traditional business certainly existed. And those old blocks had significantly eroded due to the replacement activities in the mid-1980s. Statistics indicate that for 25 large companies, surplus eroded 10% over 10 years, despite the fact that the level of risk assumed had increased. Also, return on surplus (net operating gain divided by mean surplus) had decreased by one-third.

Surplus measures (15 large mutuals, 10 large stocks)

	Ratio of Surplus to Assets	Return on Surplus
1979	4.38%	16.86%
1984	4.08	14.54
1989	4.00	11.20

Source: Conning & Company

Considering this, it seems appropriate to consider some changes to our strategies. Over the next decade, we can expect that companies will get back to basics and focus on core businesses.

Companies will need to watch expenses carefully, shifting as much as possible from fixed to variable expense. We're seeing a lot of activity in the area of competitive benchmarking, monitoring expense ratios relative to pricing, and monitoring financial results by product.

To continue or reestablish a strong surplus position, sound pricing with reasonable profit margins is essential. We'll see consolidation of operations and selling off lines of business that are inconsistent with core business or are unprofitable. At a recent industry conference, most companies talked about cutting product lines — no one was expanding. We'll see mergers between companies or acquisitions to improve efficiency of operation or to complement existing operations.

A company must have a focused product/marketing strategy. Most companies aren't able to be efficient if they try to be all things to all people. Focus allows the company to

understand a market and what is important to both agents and buyers in this market.

The ideal is to focus on a market that fits the company's strengths. This requires the company to be brutally honest in assessing what it does well and what it can't do. By analyzing the skill set of the operation and understanding the market and how it is accessed through the distributors, the company can develop the right package of product support materials, service, and compensation to maximize penetration and effectiveness in a given market.

Three key success factors for the 1990s are:

- Financial strength
- Profitability
- Partnership

Clients, both agents and ultimate buyers, are looking for financially strong insurers. They are recognizing that it's better to go with a high-quality insurer with a demonstrated track record than to pick up 100 basis points in rate of return from the hot product company of the week. Higher surplus ratios, high quality investment portfolios, and high ratings from the various rating bureaus are important indicators of that strength.

Another key contributor to success and to financial strength is profitability. We have to manage in-force business to deliver on promises to buyers and still achieve some profits. New business must be priced to adequately reward the carrier for the risks assumed.

Third, we must recognize that the pie is only so big. Financial rewards and benefits must be fairly shared among the company, the agent, and the buyer. Insurance is a long-term partnership. If one party is given short shrift, the arrangement will terminate early because the buyer believes he or she can get better value elsewhere, the agent wants another commission, or the company has become insolvent.

Our industry works best if buyers receive fair value for their premiums, agents receive fair compensation for their services, and companies receive fair profits for the risks assumed and are there to provide benefits as needed.

Judy Faucett, Chairperson of the SOA Task Force for Research on Life Insurance Sales Illustrations, is Partner at Coopers and Lybrand.

Pension and health topics at Colorado Springs meeting

The foothills of the magnificent Rocky Mountains are the setting for the third of the Society of Actuaries' 1991 spring meetings. Held June 3-5 at the famous Broadmoor Hotel in Colorado Springs, the meeting's 90 sessions offer a variety of pension and health topics. Choices range from "Audience Dialogue with the IRS" to "Managing a Small Consulting Firm."

Colorado's former governor, Richard D. Lamm, opens the meeting on Monday, June 3, with his address, "Brave New World of Healthcare." Monday's luncheon speaker, Dr. Hendrie Davis Weisinger, will help participants with "Getting the Critical Edge," which deals with the ability to take criticism and use it to one's own advantage.

A grand resort hotel built in 1918, the Broadmoor offers dining and recreation opportunities for participants and their families. Eight restaurants, three 18-hole golf courses, sixteen tennis courts, three swimming pools, horseback riding, bicycling, hiking, and indoor ice skating are available. An exciting spouse tour program also has been arranged.

For more information, call the SOA Meetings Department, 708-706-3540.



Headquarters for the Colorado Springs meeting is the famous Broadmoor Hotel, one of the premier resorts in the world.

Health seminar also held in Colorado

The SOA Health Section will present a healthcare symposium in a new format June 5 at the Broadmoor, Colorado Springs. Called "Healthcare Financing: Issues for Insurers," it will consist of three papers presented by distinguished faculty from three universities.

Dr. Uwe Reinhardt, Professor of Political Economy at Princeton University, will present "Recent Trends in

Cost and Utilization"; Dr. William Hsiao, Professor of Economics and Health Policy at Harvard University, "Rates and Payments"; and Dr. Gerald Anderson, Director of the Center for Hospital Finance and Management at Johns Hopkins University, "Health Status Adjustments as the Response to Adverse Selection."

The Association for Health Services Research in Washington, D.C., is cosponsor of this symposium. For more information, call the SOA Seminar Department at 708-706-3545.

1991 Seminar Calendar

Life & Annuity	May 14-15	New York
Financial Reporting	May 21-22	Waldorf = Astoria
		Minneapolis
		Marriott City Center
Options: Practical Applications for Insurance Companies	May 15	New York
		Waldorf = Astoria
Healthcare Financing: Issues for Insurers	June 5	Colorado Springs
		The Broadmoor
Critical Issues in Underwriting	November 4-5	Amelia Island, Fla.
		Amelia Island Plantation
Symposium for the Valuation Actuary	Early November (exact date to be determined)	Tampa, Fla.

For more information regarding seminars, call 708-706-3545.

LTC insurance cont'd

80% of projected reserve accumulations. This would permit a 30-day grace period during which the original specified nonforfeiture benefit would still be offered after any notification of premium increase based on unfavorable experience. Moreover, regulation requiring such a grace period along with nonforfeiture benefits equal in value to at least 80% of expected accumulated reserves would reduce the insurers risk from offering nonforfeiture benefits and might reduce the size, if not the frequency, of experience-based premium increases.

Stephen C. Goss consults in the area of long-term care and presented these remarks to the National Association of Insurance Commissioners Long-Term Care Task Force on March 13.

'Senior Associates' proposed as new SOA Section

by David A. Wiener

Society membership is accelerating each year. The pool of actuarial expertise in the American marketplace is increasing along with it. This vast pool consists of FSAs, ASAs, and others who have accumulated actuarial experience and acquired actuarial degrees. At a time when the demand for actuarial capabilities and knowledge is so high (and probably will increase), it is vital to start to give more recognition to the totality of the actuarial manpower resource currently available.

Dynamic changes (such as the Actuarial Standards Board, Future Education Methods, Flexible Education System, new research projects, continuing education concepts) abound in the actuarial field. We must be open-minded and forward-looking to best meet the approaching challenges.

That is why I believe it is timely to present a discussion of what I'll call "Senior Associates." (I don't like the name "Long-term Associates" since it connotes a sense of stagnation; nor do I like the term "Career Associates" since it doesn't convey any sense of experience. Even brand-new Associates could technically call themselves "Career Associates.") For our discussion, Senior Associates will refer to Associates who have clearly made their profession the actuarial field but have decided not to pursue their Fellowship. We may roughly define them as follows: ASAs with either (a) seven years of experience after attaining their memberships, or with (b) fifteen years of actuarial experience (including years prior to Society membership).

What is the value of a Senior Associate to a company? Senior Associates generally have to prove themselves more through the mastery of their work than FSAs, who more often prove themselves through the mastery of exams. In the case of a company with a limited budget, it might have a choice between an FSA with less experience or an ASA with many more years of experience. If the need for management expertise and/or actu-

arial experience is paramount, the ASA might prove more fitting and cost-efficient than the FSA. (Of course, other circumstances may warrant choosing the FSA.)

I'd like to propose the idea of a Senior Associate Section of the Society. This Section would serve to identify and emphasize Senior Associates' needs and strengths and to represent their interests within the corporate and professional sphere.

Here are some proposed objectives of this Section:

- To make state governments and regulating bodies more aware of the vast knowledge and experience of Senior Associates. States drafting new legislation often automatically and blindly incorporate FSA requirements in cases where a Senior Associate would suffice as well.
- To increase the Senior Associate's image in the world of corporate management, so management will consider a Senior Associate as a viable alternative when an actuary is needed.
- To address the question discussed by Jeff Furnish, I.I. Kent, and George Harrison in the July/August 1990 *Actuary* about whether Associates should have voting rights.
- To encourage Associates to serve on Society committees.

A side result of such a Section might be that some FSAs, as well as ASAs, rely less on their laurels and more on their talents.

Is the Society serving its long-term Associates?

Recently, a questionnaire was sent to 1,600 "long-term" Associates of the Society (those who became Associates 10 or more years ago). The response formed the basis of an in-depth discussion at the March Executive Committee on whether the Society was serving the needs of these members as well as it could. Further discussion will be held at the June 5 Board of Governors' meeting in Colorado Springs.

Daphne Bartlett

Granted, the Fellowship examination process plays an important role in the profession. Let's consider some possible reasons why an actuary would halt in his or her exam path at the Associateship level:

- Some actuaries, due to company pressures and/or personal responsibilities, simply stop taking the exams when they become Associates or soon afterward. In particular, Associates who start in the exam process "late" in their careers are already older (and perhaps have more personal obligations) and have had enough of exam days. Only recently has the profession gained widespread recognition. Colleges used to be unfamiliar with the actuarial profession and failed to direct its graduates toward that career path.
- Some actuaries may not feel challenged by Fellowship exams and choose instead to become well-rounded insurance executives by applying themselves fully to the job or by means such as independent further education. I refer you to David A. Smith's letter discussing this problem in the January 1988 *Actuary*.
- Some students were simply overwhelmed by the vast material covered in each exam (especially prior to FES).
- Some people are just miserable test takers.

Although Fellows deserve enormous recognition for their efforts and determination in reaching their much coveted goal, they often find fault with those who didn't "prove" themselves in the same rigorous fashion. Nevertheless, as an Associate gains experience, his or her value to the profession can very well approach and exceed that of an ordinary Fellow, especially in his or her field of expertise. Additionally, actuarial experience intrinsically adds to a general overview of the field and to unstructured problem solving that even exams can't develop. (Witness the recent Society decision to introduce Fellowship

Admission Courses into the Fellowship requirements.)

For example, think about the Enrolled Actuary. The Internal Revenue Service was instrumental in persuading the American Academy of Actuaries to recognize the Enrolled Actuary. The IRS recognized the value of the Enrolled Actuary to the industry, and said that's what counts!

It is time for Senior Associates to unite to ensure that there is someone looking out for them. And there are a lot of us out there! I am asking for feedback from the Society membership in general and from other "Senior Associates" in particular. If warranted, the next step would be a formal petition to the Society's Board of Governors.

The recent Society survey to elicit general comments from ASAs is a positive step forward. Bravo to them (and Daphne D. Bartlett in particular) for their stand.

David A. Wiener is Associate Actuary and Second Vice President, Presidential Life Insurance Company.

New resources from SOA library

The following is a partial list of additions to the SOA library. Members may borrow library books by contacting the library, 708-706-3538 or 708-706-3575.

AIDS

Fifth International Conference on AIDS, The Scientific and Social Change, Montreal, Quebec, Canada, June 4-9, 1989

Abstracts, Vol. 1, 2 and 3, Final Program and Abstracts, June 20-24, 1990, Sixth International Conference on AIDS, San Francisco, Calif., USA

AIDS 89 Summary: A Practical Synopsis of the V International Conference, June 4-9, 1989, Montreal, Philadelphia Sciences Group, 1990

Circulating

Broverman, Samuel A., ASA, Ph.D., *Mathematics of Investment & Finance*, (Preliminary Edition), ACTEX, 1990 (uncataloged)

Cissell, Robert and Helen, David C. Flaspohler, *Mathematics of Finance*, Eighth Edition, Houghton Mifflin Company, Boston, 1990 (HF5691.C5)

The Complete Internal Revenue Code, The Research Institute of America, Inc., July 1990 Edition (HJ3251.R4 1990)

Employee Benefit Plans Under ERISA Federal Regulations, 1990 Edition, Prentice Hall Information Services, 1990 (KF3512.A329E47)

Feller, William, *An Introduction to Probability Theory and Its Applications*, Vol. 1, Wiley & Sons, 1968 (QA273.F371)

Measuring & Funding Corporate Liabilities For Retiree Health Benefits, Employee Benefit Research Institute, Education and Research Fund, 1988 (HG9396.M4)

Mill, John Stuart, *Utilitarianism, Liberty, and Representative Government*, E.P. Dutton and Co. Inc., New York, 1947 (uncataloged – Fundamentals)

Miller, Robert B., *Intermediate Business Statistics: Analysis of Variance, Regression, and Time Series*, Holt, Rinehart & Winston, 1977 (HA29.M567 1977)

Walsh, John E., *Handbook of Nonparametric Statistics, II: Results for Two and Several Sample Problems, Symmetry and Extremes*, D Van Nostrand Company, Inc., 1965 (QA278.8.W34.V2)

Wilks, S.S., *Mathematical Statistics*, Wiley, 1962 (QA276.W5)

Futurism

Future Survey Annual, 1988, ed. Michael Marien, World Future Society, Bethesda, Md., 1988

Future Survey Annual, 1988-89, ed. Michael Marien, World Future Society, Bethesda, Md., 1989

Future Survey Annual, 1990, ed. Michael Marien, World Future Society, Bethesda, Md., 1990

Reference

1989 Insurance Periodicals Index, Vol. 1 and 2

Wilkie, Robert C., Esq., *Pension Reform Handbook, 1987 Edition*, Prentice Hall, Paramus, N.J., 1987

Syllabus shelf

Tullis, Mark A., Philip K. Polkinghorn, *Valuation of Life Insurance Liabilities*, ACTEX, 1990 (HG8951.T85 1990)

Book review

Book offers accounting background

by William A. Drew

Life Insurance Accounting, Edward P. Brunner and Paul E. Heacock, co-chairmen of Editorial Committee. Published by Insurance Accounting and Systems Association, P.O. Box 8857, Durham, NC 27707, (919-489-0991), 551 pages, \$56.45.

Life Insurance Accounting is an update of a similar book published in 1977. Twenty-eight authors worked under the direction of an eight-man editorial committee appointed by the president of the Insurance Accounting and Systems Association (IASA). Fifty-one others contributed by reading and reviewing.

Quoting from the preface, "Users of this book will include actuaries, attorneys, CPAs and others in public accounting firms, experienced life insurance accountants and other staff personnel of life insurers, tax specialists, pension consultants, Chartered Life Underwriters and other students of life insurance. Priority has been given to the practical over the theoretical. Intent was that this work not be replete with esoteric terms nor be a technical treatise of use only to insurance accountants."

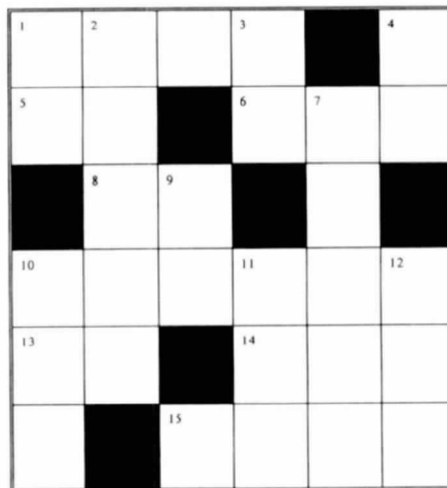
Accounting aspects aside, the book provides a wealth of background information on a variety of topics. The work is comprised of 23 chapters spread unevenly over nine major divisions: the evolution of insurance accounting; assets; liabilities, capital, and surplus; operations; generally accepted accounting principles (GAAP); planning; reports and consolidations; immunization; and Canadian contrasts.

A full review of the book will appear in Vol. 42 of the *Transactions*. William A. Drew is a retired Fellow.



Actunumber crossword

Submitted by Michel Desmarais



I've got your number

Submitted by John H. Cook

In the following number series, fill in the number to replace the question mark: 10, 11, 12, 13, 14, 15, 20, 22, 24, ?, 100, 121, 10,000. (Solution in June issue.)

ACROSS

1. Square of a prime number.
5. Half the highest common factor of 10 DOWN and 11 DOWN.
6. Cube of a square.
8. Square root of 1 ACROSS.
10. A symmetrical square (same left to right as right to left).

13. Larger by 1 than 9 DOWN.
14. Five times as large as 8 ACROSS.
15. Square of a number larger by 1 than 13 ACROSS.

DOWN

1. Smaller by 8 than the smallest integer which when divided by 2,3,4,5 and 6 has remainders of 1,2,3,4, and 5.
2. Number whose digit sum is 29.
3. Prime number.
4. Prime factor of 11 DOWN.
7. Quadrupled product of one-tenth 15 ACROSS and 13 ACROSS.
9. Twice 4 DOWN.
10. 11 DOWN reversed.
11. Square root of 10 ACROSS.
12. Multiple of the highest prime factor of 13 ACROSS.

(Solution in June issue.)

A look at March FACs



The 156 FSA candidates at Fellowship Admissions Courses in March had good reason to celebrate their accomplishment at the "graduation" banquet. Robin Leckie (far right), faculty member, mingles with new FSAs at the Oak Brook, Ill., reception.



Denis Boucher's "Bored of Education" T-shirt shows how glad he is that exam days are over.



President Daphne Bartlett (left) spoke at both FACs and presented FSA certificates. Esther Milnes, chairperson of the E&E Committee, spoke at the Oak Brook FAC.

Faculty member Mike Mateja (center) hears what McLean, Va., students thought of their FAC experience.



Dear Editor:

Discussion continues on traditional symbol

In the January *Actuary*, Kenneth Heck laments the passing of a "traditional symbol," c_x . I qualified as an FSA before Jordan was published and have not had much occasion to refer to that text. Heck's letter was the first time I encountered c_x . As far as I am concerned, the traditional symbol is $A_{x:\overline{1}|}$.

J. Bruce MacDonald

Spring probability problem brings flood of answers

Editor's note: By April 15, we had received 32 letters about the March 1991 probability puzzle in "On the Lighter Side." We were impressed by the thoughtfulness that went into the replies and wish that space allowed us to print all of them, along with the mathematical explanations that came with many. Of the 32 replies, 24 agreed that the contestant increased his chances of winning to 2/3 by switching doors; 3 disagreed; and 5 said "It depends." We'll give you an update in the June Actuary.

Following are excerpts from a sampling of representative letters. In addition, we heard from Jeff Bash, Don Blue, Stephen Brink, Robert Chipkin, Marc Cohn, Ray Cole, John Cook, Frank David, Robert Hall, Jan Harrington, Rolf Hendel, Duane Kidwell, Charles Larimer, W. E. Lewis, David McIntosh, Malcolm Reynolds, Tom O'Sullivan, Gabriela Sanchis, Steve Steinig, Chris Street, John and Sandra Wade, Abraham Weishaus, and Marc Whinston.

I agree with James Broffitt's answer to the probability problem. The problem posed is similar to the "Theory of Restricted Choice," a bridge player's strategy for deciding whether to finesse for one of two contiguous cards when the player to your right has played the other of those two cards.

Warren P. Suggs

The answer depends on one's perception of the host's motives. If the host had intended to open the door regardless of the correctness of the initial choice, then the contestant should make the switch. If, however, the host's motive is to deny the contestant

a prize, his giving the opportunity to switch implies that the original choice was correct, and a switch should not be made.

Doug Doll

The answer to the question is like so many others — it depends. If the host always shows us that we have won when we choose correctly the first time and in this case we see an empty door, we know that we have chosen wrong and we should correct ourselves. If he always shows us an empty door even when we have chosen correctly, we cannot improve our position knowing that an unselected door is empty. If the host sometimes shows us an empty door when we are correct and sometimes he doesn't, then it is in our best interest to change our choice because chances are 2 to 1 that the prize is behind the other door.

Roy Murphy

I first came across the probability problem in an April 1991 *Bostonia* article, "Probability Blindness," which provides a thought-provoking discussion on the "illusion" of risk. I highly recommend it.

I tested this problem on several experienced actuaries at the recent Enrolled Actuaries meeting. Most were uncertain of the correct answer, but some argued strenuously that the prize is equally likely to be behind either door.

When I presented this problem to about 100 actuaries attending my session on forecasting, about 50% of the group responded that it didn't make any difference whether the contestant switched or not. About 30% believed the contestant should not switch, and only about 20% chose the correct answer — that the contestant should switch. My impression was that many who gave the right answer were not absolutely certain why it was correct.

I have created a simulation model of the exact process that shows, without any doubt, that choosing the other door would be correct 67% of the time. I would be happy to send interested readers a spreadsheet simulation model of the problem if they send a note to my *Yearbook* address.

Richard Q. Wendt

Bravo to Broffitt! Certainly those that had the courage to disagree with the world's smartest person (Marilyn vos Savant) will now display the fortitude

to admit to their mistake. I believe the fallacy committed by the dissenters is the overlooking of knowledge that will be gained during the contest at the time the host opens a losing door, with the prior knowledge that the host always reveals only a losing door.

Kevin B. Borie

Broffitt and vos Savant are correct. The game is structured so that the host knows the location of the prize. He is instructed to open a door with no prize. His action is independent of whether the contestant had originally selected the winning door. I think many people mistakenly assume the host is randomly selecting one of the other two doors to open. If this were the case, then obviously the original and other unopened door would have equal probability of producing the prize.

Donald B. Onnen

Marilyn vos Savant is wrong. The key phrase is "the host, who knows where the prize is." No additional information is provided by opening a losing door. Randomly opening a door would be different.

In Martin Gardner's book, *Mathematical Puzzles and Diversions* #2, he cites an analogous problem: If I offer you a prize for drawing the ace of spades from a standard deck, your probability of winning is 1/52. If, after you draw, I look at the remaining 51 cards and turn over 50 that are not the ace of spades, your probability does not change. If I turn over 50 cards randomly, your probability does change.

L. Timothy Giles

Essentially, the controversy revolves around the problem of counting the possibilities. Vos Savant's calculation does not reflect all the possible outcomes and therefore produces an incorrect result.

Thomas C. Barham

As with many real-world problems, the disagreement generated by this problem is due to ambiguous definitions and assumptions, not the logic used in drawing a conclusion. Actuaries are particularly susceptible to this type of situation due to their familiarity with the "hard" world of well-defined numbers instead of the "soft" world of communication. Two

Continued on page 14 column 1

Dear Editor cont'd

pricing actuaries may reach different profitability results if one assumes that the investment department's quoted yield of 10% is a semi-annual rate net of defaults and expenses versus a gross annual effective yield. Unfortunately these actuaries may spend more time discrediting each others' viewpoints than reconciling differences or clarifying data. Actuaries will be more successful in expanding their sphere of influence if they can learn to communicate with precision and clarity.

Greg P. Henke

Intensive seminar questioned

William S. Wright wrote a long and well-reasoned letter (February 1991 *Actuary*) concerning our examination system and the intensive statistics seminar as a particular example. The response from Bob Campbell can be summarized as: "The Board approved of this and the E&E Committee monitored it, so keep your cards and letters coming." He was gracious enough not to say that the seminar would continue no matter what.

In a letter (not published), I too questioned the seminar. I simply pointed out that an 86% pass rate was much greater than usual on our exams. Also, it seemed strange to me that several people qualified as ASAs with the credits from the course, even though few people qualify as ASAs after writing Part II, unless it has been a particular stumbling block. The response to my letter was a copy of Campbell's reply to Wright.

The membership is credited with stating clearly that the Society must continue to control the examination process and hence maintain our standards. Why don't our elected representatives, their appointed committee members, and the Society staff listen to and follow the directions of those of us who are the Society?

We have the capacity to continue the examinations (Esther Milnes, February 1991 *Actuary*), and we want to do so. Let us put to rest these attempts to subvert the jewel of the actuarial profession—our universally acknowledged standards.

Frederick J. Thompson

Pension actuaries' reputations may be at risk

Americans entrust much of their financial savings to five principal

funds: savings and loans, commercial banks, the Social Security Trust Fund, life insurance companies, and pension funds. They hold responsible those who, entrusted with these funds, cause them or permit them to fail.

The unfolding S&L debacle has seen managers, regulators, and hired experts brought to task, with many being publicly discredited, some being fined, and a few facing jail sentences.

Enough commercial banks have had problems to jeopardize the Federal Deposit Insurance Corporation; it now seeks a loan of \$10 billion to tide it over difficult times. Again, managers, regulators, auditors, and others are facing public inquiry.

Actuaries have a special responsibility for calculating the adequacy of the Social Security Trust Fund. But after all, it is Congress, not the actuarial profession, that has spent the contributions that should have been saved and has substituted government IOU's for them.

Life insurance companies have been a tower of responsibility and strength for generations, and our profession can claim a substantial part of the credit. Indeed, recent near and actual failures have mostly been due to others, for example investment managers. Even so, pressure is mounting to overhaul the entire state regulatory system because of the perceived problems, and we may not be completely immune from criticism.

However, it is pension funds that seem now to present the greatest potential threat to our profession's reputation. Pension funding methods and funding assumptions are the domain of our profession; if because of internal inconsistency or any other clear inappropriateness they lead to fund failure, our profession's reputation will properly be at risk. True, it is the Financial Accounting Standards Board that requires that certain pension calculations assume that no one will ever have a salary increase, but we tolerate that situation. Indeed, it was an actuarial calculation by the Pension Benefit Guaranty Corporation (PBGC) that called public attention to 50 large corporations whose combined pension fund shortfall comes to \$14 billion. Presumably each fund has had annual actuarial certification. Should it become necessary at some future date for the PBGC to seek taxpayer funds to stay solvent, our profession will be prominent among those questioned.

Perhaps we should be preparing a defense of our past performance. Perhaps we should be doing more to make sure that there never is reason to have it questioned in the first place.

George L. Hogeman

Gordon Beatty an example to follow

The March issue of *The Actuary* included a short notice on the passing of J. Gordon Beatty. It was appropriate that the issue also included an article on mentoring.

Gordon Beatty was truly a giant in our profession. He was the last surviving President of a predecessor organization to the Society of Actuaries and one of the best known of our elder statesmen. He was well known for his professional integrity and honesty and his interest in the careers and problems of actuaries with whom he came in contact.

I was certainly not the only one who considered him an actuary we could respect above all others, an example to follow, and a mentor.

Robin Leckie

Early-release copies of TSA papers

The following papers have been accepted for publication in Volume XLIII of the *Transactions*. Members who would like to obtain an early-release copy of a TSA paper, before it is published in a preprint, may do so by sending \$5 for each paper to the Books & Publications Department at the Society office.

"Select and Ultimate Models in Multiple Decrement Theory,"
S. David Promislow

"Statistical Tests of the Use of the Lognormal Distribution as a Basis for Interest Rate Changes," David N. Becker

In memoriam

Earl F. Bucknell FSA 1931

J. Clifford S. Hymans ASA 1975.

AIA, FIA

John E. Kessler ASA 1950

Laurent Letarte ASA 1988

Peter H. Pudney ASA 1953

George Ryrie FSA 1931

Frederick P. Sloat FSA 1933

ACTUCROSSWORD

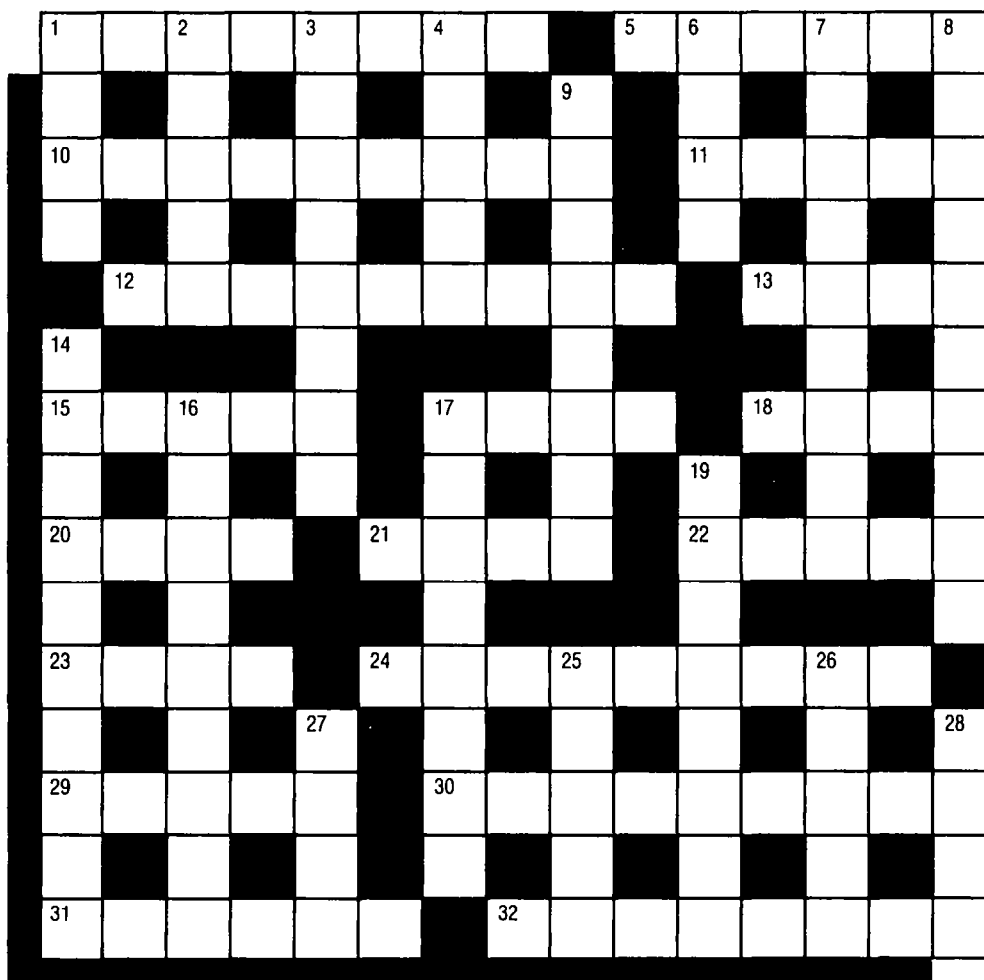
by R. Graham Deas

Across

1. Transitory feast (8)
5. This Greek upset IL Duce (6)
10. Dark suit for place of entertainment? (5,4)
11. Four in dowry raised by sportsman (5)
12. Find location in Canada - no O.A.S. task (9)
13. This is down on the spot (4)
15. Neatness to command (5)
17. Plant of lentil extraction (4)
18. Burn produced by such a rough treatment (4)
20. From sheep a vellum to cover smoothly (4)
21. Plume less vessel gives one a pain (4)
22. Bird, North America, of reddish hue (5)
23. North American railway? Crudely, not one (4)
24. In deduction they switch one between decimal denominations (9)
29. Sea sound puts me in a state (5)
30. Fully occupied with elaborate document (9)
31. Peril lurks in the garden (6)
32. No recent material development (8)

Down

1. Animal of foreign river state (4)
2. Sign of confusion between G.I. and his uncle (5)
3. Edge but not in dress (8)
4. Brilliant manipulation of a cleat (5)
6. Language of old city of the French (4)
7. Biblical monster more indefinite than alive (9)
8. European party without any standing (5,5)
9. This obese lot have had it (8)
14. Irate outcome of crazy dances (7,3)
16. Out of the way pastime? (9)
17. Briefly incorporated admirer in ease and luxury (2,6)
19. Cotton Blossom example of stage-craft (4,4)
25. Flag with no joy about lines (5)
26. Amorphous transformation makes siren be wicked again (5)
27. Safe exclamation for whose sake? (4)
28. Flower love in this cape (4)

**April Solutions**

IN THE DOGHOUSE
R U L O A T S A
R T R E N T O N A S P I C
E O M W G H E R
G O R G E E R I C B R N O
U N A N O A S
N O B S T E R G R O U N D S
A O L R T T
R E M A R K S A N N I O C H
V B Y L P E E
E L S A T E A R S C R U B
R H S I I T I O
R I T A I G O R D E R A
S N A H R N E R R
N I G H T I N G E R E D

R P F A R C H I V E S
M E N A C E N H N L
D L D T H I C K S E T
L E T A L O N E P E G
Y T R P M A R G I N
D E L A W A R E U A
D B N O N E S U C H
L K U K T
A R T E R I A L R L
E L L T E R M I N A L
S T U D I O I E P U
O R W M I N G L I N G
R V T A B A G A E I O
C C T T G A N N E T
T H R O T T L E E G R

ACTUCROSTIC

A. If; in the event that. (3 wds)

1 234 75 101 30 133 121 190 58 160

B. No ifs, ands, or buts. (Contains all 5 vowels)

2 230 188 213 35 147 18 106 92 179
53 167 73 124

C. The only ice that keeps a girl warm.

54 132 16 149 175 98 197

D. Repetition; duplication.

83 193 59 222 32 140 100 11 114

E. International agreement.

143 176 105 21 205 70

F. Slums; skid row.

214 109 236 27 131
8 192 90 173 51 150 68

G. Play a new piece on the piano without practice. (hyph)

3 178 29 145 111 61 210 42 161

H. Where you go to see the Y play a home game. (2 wds)

17 115 36 79 165 136 60 96 212

I. Repeatedly; time after time. (3 wds)

7 84 25 151 46 196 177
224 108 129 65

J. Plainly; simply; openly.

107 67 209 185 159 86 43

K. If you are not fired with _____, you will be fired with _____.

13 110 233 163 72 155 87 137 41 207

L. A fallen angel ranking next to Satan. (Milton)

117 64 164 14 88 168 219 189 201

M. Hebrew prophet in Judah. (740-701 BC)

47 199 123 85 142 19

N. It stabilizes one kind of compass; rotator.

156 194 170 49 237 82 182 217 20

O. Be defeated or destroyed. (3 wds)

94 186 162 57 138 104 119

P. (2 wds) exchange.

120 215 144 77 28 50

Q. Ardently; with zest.

220 80 180 202 157 33 55

R. Man of action; big time operator. (hyph)

99 184 52 169 5 228 38

S. Imagined ill-health.

141 15 216 37 174 102 113 154
69 231 91 195

T. Hearten; confirm; pacify.

126 66 171 148 225 200

U. Candid; open; forthright. (hyph)

24 146 89 166 4 125 206
63 221 44 187 103

V. Eloquent; well-spoken; loud and clear.

235 34 181 112 62 198 10 208 130 76

W. The fisherman's boy sterilized the pearls found in his catch.

26 218 227 183 139 56

X. The Y find out if they kick off by the (4 wds)

116 128 135 45 71 223 172
23 6 232 93

Y. An NFL football team.

127 95 158 204 40

Z. Crucially; in the nick of time.

9 48 152 81 229 31 97 191 122 211

	1	A	2	B	3	G	4	U		5	R	6	X	7	I	8	F		9	Z	10	V	11	D	12	O	13	K	14	L	15	S		16	C	17	H		18	B	19	M						
20	N			21	E	22	R	23	X	24	U	25	I	26	W	27	F	28	P	29	G	30	A	31	Z	32	D	33	Q		34	V	35	B	36	H	37	S	38	R	39	O	40	Y				
41	K	42	G	43	J			44	U			45	X	46	I	47	M	48	Z			49	N	50	P			51	F	52	R	53	B	54	C	55	Q			56	W	57	O	58	A	59	D	
60	H	61	G	62	V	63	U	64	L	65	I	66	T			67	J	68	F	69	S			70	E	71	X	72	K	73	B	74	R			75	A	76	V	77	P			78	O	79	H	
80	Q	81	Z			82	N	83	D	84	I	85	M	86	J	87	K	88	L	89	U	90	F	91	S	92	B	93	X			94	O	95	Y	96	H	97	Z	98	C			99	R	100	D	
101	A	102	S			103	U	104	O	105	E			106	B	107	J	108	I	109	F	110	K	111	G	112	V	113	S	114	D			115	H	116	X			117	L	118	R	119	O	120	P	
		121	A	122	Z	123	M	124	B			125	U	126	T	127	Y	128	X	129	I	130	V	131	F			132	C	133	A	134	R	135	X	136	H	137	K	138	D	139	W			140	D	
141	S	142	M	143	E			144	P	145	G	146	U			147	B	148	T	149	C	150	F	151	I	152	Z	153	R	154	S	155	K			156	N	157	Q	158	Y	159	J	160	A	161	G	
		162	O	163	K	164	L	165	H	166	U			167	B	168	L	169	R	170	N	171	T				172	X	173	F	174	S	175	C	176	E	177	I	178	G	179	B	180	Q			181	V
182	N			183	W	184	R	185	J	186	O	187	U			188	B	189	L	190	A	191	Z	192	F	193	D	194	N			195	S	196	I	197	C			198	V	199	M	200	T			
201	L	202	O	203	R	204	Y			205	E	206	U			207	K	208	V	209	J	210	G			211	Z	212	H	213	B			214	F	215	P	216	S	217	N	218	W			219	L	
220	Q	221	U	222	D			223	X	224	I	225	T			226	O	227	W	228	R			229	Z	230	B			231	S	232	X	233	K	234	A	235	V	236	F	237	N					

100% ACTUCROSSWORD SOLVERS - February: W Allison, S Alpert, D Apps, D Baillie, K Baker*, D Baldwin*, J Beaton, T Boehmer, R Carson, F Clarke, S Colpitts, L Cralle, S Desiato & R Spalding, A DiNoto & G Mosher, Mrs C Edwards, M Eisner, T Etter, C & D Friedrich, C Galloway, E Goldstick, P Gollance, J Grantier (Sept), M Grover*, P Hepokoski, R Hohertz, V Hosler, HTI Hogs, O Karsten, B & J Koch, J Kissel*, D Leapman, W Luther, M Lykins, P Marks, P & J May, G & D Mazartis, G D McDonald, F McManus J Rumboldt & A Stein, J Mereu, H Migotti, R A Miller, B Mowrey, R Neill, B Packer, J Schwartz, G Sherritt, J Singer, M Steinhart, H Tate, Mrs J S Thompson, M Vandesteeg & A White, C Walls, D Weil, M Whitby, A Whiton, D S Williams, A Witts, H & F Zaret, and Anonymous from Hartford CT.

* January solutions.

