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REPRICING THE IN-FORCE BOOK OF BUSINESS

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- Actuarial Standards Board (ASB) requirements/considerations
- Data gathering
- Assumption setting
- Modeling considerations
- Coordination with financial areas
- Par versus interest-sensitive
- Communicating results to management

MR. ALBERT E. EASTON: I want to begin discussing repricing of traditional life insurance by making some general comments about pricing, not just repricing but all kinds of pricing. I believe very strongly that while the actuary plays an important role in pricing, pricing is a management's responsibility. The actuary must communicate with the other members of management on pricing.

So what might the actuary's role in pricing be? The actuary has the responsibility to develop models that predict profitability and the task of research, and using that research to develop assumptions which will be used in the pricing model. An important part of the actuary's research has to do with finding out what the market demands in pricing.

It's very important that the actuary develop innovative solutions to the problems and conflicts that arise between profitability and the market's pricing demands. For example, in the case of repricing it may be necessary to create a new dividend class or classes. The actuary has to keep the dividend scale, and through it, the pricing internally consistent. Prices don't have to be exactly the same for similar products, but it's essential that the actuary be able to explain why they are different. Following the contribution principle is a good way to ensure this internal consistency. If it's abandoned, and there may be some good reasons for deviating from strict adherence to the contribution principle, then the actuary should be very careful not to sacrifice internal consistency in abandoning the principle.

An actuary's role in pricing is to also educate the other members of management about what is being done and why it's being done. Education is a two-way street; I've learned a lot from other members of management when pricing and repricing.

Let's turn to some particular requirements of determining dividends for traditional life insurance products. One important requirement is to look at Actuarial Standard of Practice (ASP) Number 15. Although it's dated 1990, it's really a recodification of the Dividend Principles and Practices published by the American Academy of Actuaries in 1980. I have a sense that there has been a paradigm shift over the past several decades. When I look at the classical literature on dividends, for example Bob Jackson's paper from the 1950s, I find one point of view. Actuaries were striving for perfect equity and settling for less than perfect equity when it became apparent that,

for practical reasons, they could not or did not want to achieve perfect equity. That point of view has shifted over the years. Now, most actuaries would agree that perfect equity could have so many definitions that it's hard to say such a concept exists. Moreover, the dividend scale has other objectives to achieve besides equity. The important thing is to disclose any lack of equity and the reasons for it. This is the philosophy that ASP 15 seems to express to me.

There are some things that ASP 15 requires in repricing traditional life insurance products. First, you must have a written report with full disclosure of the methods, the policy and experience factors, and any adjustments that are made. ASP 15 requires the actuary to do some research to determine experience factors, but note that experience factors are not necessarily based just on experience. They can project trends. In repricing, the actuary normally will not have to do any work to determine the policy factors. They will have been developed in the original pricing of the product. An exception might be if new dividend classes are created. For example, distinguishing between two kinds of loan features on policies that are generally the same in other aspects. Note that while ASP 15 requires that the actuary generally follow the contribution principle, it does allow adjustments for practical reasons; for example, a dividend freeze with the expectation that even with a freeze, the scale will ultimately come back to the contribution principle.

Let's talk about some of the ways in which participating life insurance repricing might be a little different from repricing for an interest-sensitive life product. First, I've heard it said that par whole life is repriced retrospectively whereas interest-sensitive products are repriced prospectively. I don't think that's quite true. Since ASP 15 invites trending experience factors into at least the near future, experience factors are probably going to be almost as prospective for par whole life as they are for interest-sensitive life. As interest rates were headed up, many companies were somewhat prospective in basing interest rates on what the portfolio might achieve in a year or two. It seems to make sense to do the same with repricing now that interest rates are headed down. On the other hand, there may be some companies that have always based dividends strictly on a retrospective portfolio rate and I would agree that they should move with caution. If they are thinking of switching to trending rates now that rates are headed down, they could create an inequity.

A second difference that's sometimes suggested is that par life insurance dividends are "sticky down," that is they're harder to reduce than they are to increase. I think that may have been true in the past and I'll talk about some of the reasons for it later. I don't think it's true now. I think that management is probably just as willing in the present circumstances to reduce life insurance dividends as they are to reduce interest rates on interest-sensitive products.

There are some differences, though. For practical reasons, it's almost impossible to change dividend scales more than once a year. Also, it's probably more necessary to follow the contribution principle for par life insurance repricing than it is for interest-sensitive repricing. For one thing, it's often the law. Also, if you use the contribution principle you can explain dividends in the context of several decades of actuarial literature. Another reason is that the contribution principle helps to avoid or at least to explain inconsistencies. In interest-sensitive repricing, the actuary usually can pay

REPRICING THE IN-FORCE BOOK OF BUSINESS

more attention to the market and less attention to what a policy contributed to surplus in the past.

In the past, managements have been reluctant to cut dividends for a number of reasons. First, there's always a tendency to want to weather the storm when a squeeze on profits seems to be temporary. Companies may keep the dividend scale at the same level hoping to make up in more profitable years any losses that may occur in a year or two of bad experience. There's always the feeling that the company reputation suffers if the dividend scale is cut and there certainly is a real fear that increasing lapses will result from a decrease in the dividend scale. By the way, I have not been able to find any experience on what kind of lapse rate people are getting on reappearing premium policies that are coming up now; originally premiums disappeared and now they have reappeared. If anyone has any we certainly would welcome the contribution.

Finally, I think managements may have been reluctant in 1990 and 1991 to reprice by cutting the dividend scale because of some experiences they had in the 1970s or 1980s. For example, in the 1970s and 1980s, we sometimes saw interest rates take a turn downward for a year or two and at times there were increasing pressure from income taxes or from lapses. Ultimately profits recovered and they wound up with a higher dividend scale than the one they had before. I don't think that there's any hope that those kinds of experiences are going to repeat themselves in 1992-93.

Here are some reasons why it seems necessary to cut the dividend scale for 1993-94. First, interest rates are low and they're going lower. I wrote this presentation a few weeks ago when it seemed definite that interest rates were going lower. Now, I'm not as sure. They may be leveling off, but they're sure not going way up for a while. It doesn't look like we're going to get back to the high interest rate situation that prevailed in the early- to mid-1980s any time soon.

The second reason for cutting the scale in 1992 is the deferred acquisition cost tax. It puts a strain on profits. There's no other way to make up for it. The biggest impact occurred in 1990-91, but many companies didn't immediately or fully adjust for it then.

Also, there are more reasons than ever to keep surplus high in 1992 and 1993. The company's rating with the various rating agencies is very important to most managements, and in 1993 we are going to have risk-based capital rules that will result in each company being measured against a definite standard.

Finally, most companies, particularly companies that sell traditional life insurance products, are going to be doing cash-flow testing including testing of assets for year-end 1992. This should give companies a better sense of what's ahead for the next few years and a better sense of what kind of surplus they need. In most cases, cash-flow testing will probably indicate that there are good and substantial reasons for cutting the dividend scale.

Once a decision has been made to cut dividends, there are a number of directions that that cut can take. Other than a full scale cut, the simplest one is a dividend freeze. It's been used for decades. MacLean and Marshall mention it in a book

published in 1937. Under a freeze, the dividend scale simply eliminates the increase by duration in dividends for as many years as it takes until dividends are at the desired level. There are some variations on this. For example, dividends can be frozen by having a 2% increase each year instead of the 5% or 6% increase that the last scale used to have. Another variation is to reduce dividends, but not to a level below the scale that was illustrated at issue. I'm sure there are other kinds of variations. There may even be ways to try to prevent premiums from reappearing on disappearing premium products. In a freeze or with any of these variations, it's important to be very careful to maintain internal consistency among products. It can be very difficult to explain variations which may have seemed like a good idea when the scale was originally set. The wrong kinds of inconsistencies can have unexpected results on the lapse rate and can cause a real gap of confidence between the actuary and the field force.

One problem with a freeze or any of the various kinds of modified freezes is that they simply don't generate as much additional profit as simply cutting the dividends to the required level. My review of the change in experience as it exists in 1992 suggests that in most cases actuaries will need to cut more than a freeze can generate. Of course, the simplest approach to cutting dividends is to simply cut them to the level suggested by your profit model.

The August issue of *Best's Review* published the dividend scales that 60 companies have paid on their 1982 whole life issues. I found this especially interesting, because 1982 was when the high interest rates peaked. While there have been some increases in interest rates in portfolios since then, there certainly are decreases now and more decreases expected. Of the 60 companies that *Best's Review* reported on, 37 had some kind of a scale increase between 1982-86; that is, they were paying more than they originally illustrated at some point in that period. This is evidence that most companies are basing interest dividends on a portfolio whose rate grew a little as interest rates began to flatten. In other words, most companies were at least partly retrospective in setting these dividend scales.

There were actually only three companies that made any increases after 1986. Not much happened in 1987-89, but beginning in 1990 a number of dividend scale reductions began to appear. I counted 34 in all out of these 60 companies. Obviously some companies increased the scale and then wound up reducing it again between 1990-92. There were only four decreases anywhere before 1990. Of the 60 companies, exactly 15 are paying a 1992 dividend below the scale that was originally illustrated at issue. I suspect that next year when *Best's Review* does another study like this on 1983 issues, the result will show more of a downward direction.

Incidentally, it's interesting to see the experience with terminal dividends on 1982 issues. Only nine of the 60 companies illustrated any terminal dividends within the first 10 years. But of these nine, only five paid terminal dividends as illustrated. One paid less than illustrated and three of the companies have completely eliminated terminal dividends between 1982 and 1992. I suspect that terminal dividends will become less common in the 1990s. One reason for their continued existence was a competitive pricing methodology that was common in the 1970s. You would determine what was called a net cost by simply adding up the premiums, deducting all the

REPRICING THE IN-FORCE BOOK OF BUSINESS

dividends, including the terminal dividend, and then the cash value. By the 1980s that kind of net cost was gone, but there was still a net cost method, namely interest-adjusted net cost at 5%. That 5% was enough below the interest rates being earned that there still was some leverage in illustrating a terminal dividend. I don't think that kind of pricing competition is common anymore and to whatever extent 5% interest-adjusted costs are still compared, there's not nearly as much gap between 5% and the interest rate actually being earned on insurance company portfolios.

The theory behind terminal dividends was that risk-based surplus would be accumulated and released to the owner when it was no longer needed. The new theory is that while risk-based surplus still has to be accumulated, it can be released for other new business at the time the old business terminates, and the owner in turn should receive more annual dividend.

There's one more thing I want to cover and it can best be illustrated by looking at an example of how you might go about setting a dividend scale or what a dividend scale might look like. Here's an example of some of the practical problems that can arise. Table 1 shows a somewhat complicated, but unfortunately typical situation. The illustrated dividends on new business are fairly simple. They were arrived at in the usual way by balancing marketing and profit objectives. The actual dividends on existing business were set five years ago in the same way and followed for the first three years. I intended that these be exactly the same form. The company hasn't changed what it's issuing in any way.

TABLE 1
Dividend Values
Same Form, Age, etc. Different Issue Years

| Duration | 1987 Issue (Actual) | 1992 Issue (Illustrated) |
|----------|------------------------|-----------------------------|
| 1 | 1.93 | 1.14 |
| 2 | 2.83 | 1.58 |
| 3 | 3.17 | 1.93 |
| 4 | 3.17 | 2.18 |
| 5 | 2.04 | 2.44 |
| 10 | 3.53 | 4.17 |

In the fourth year it was clear that the issue assumptions couldn't be met, so a freeze was put in. The situation worsened to the point that the fifth and later year dividends had to be cut, partly to make up for the strain that the freeze created. Now, dividends on existing products are below the dividends being illustrated on new business in years 5-10, and let's assume they come together at duration 15 or so. I don't think there's any equitable objection to a lower scale on existing business, but I do think there can be a practical problem. The actuary has to be very careful not to create situations where replacements are justified. In this case, they're probably not justified, but the company has to watch that very closely, because too high a lapse rate can prevent there ever being a pay-back of the strain that paying a high dividend in a third and fourth duration has created.

RECORD, VOLUME 18

MS. DONNA R. CLAIRE: A number of issues Al Easton brought up apply equally well to universal life (UL) insurance. I am going to concentrate on the ones that apply more to interest-sensitive life insurance.

As Al has mentioned, Actuarial Standard of Practice Number 15 is the guidebook for repricing traditional life insurance. Actuarial Standard of Practice Number 1 plays the same role for universal life insurance.

These actuarial standards of practice are not cookbooks, but they do define a number of items for the actuary to consider. ASP No. 1 applies to both individual and group UL contracts. This also is a trend in regulation -- the line between group and individual has become quite blurred, so regulations being written, such as the proposed revisions of the standard nonforfeiture laws, will apply to group insurance as well as individual policies.

ASP No. 1 applies to all charges which may vary at the discretion of the company. It also states that "sound actuarial principles" must be followed. This term is defined in the regulation, and it may sound like mom and apple pie. A difference between Mom and Actuarial Standards of Practice, is however, that Mom is probably not going to be brought up in any lawsuits in which the actuaries may be defendants -- Actuarial Standards of Practice may be. Therefore, it is important to comply with the Actuarial Standards of Practice.

In terms of redetermination policy, ASP No. 1 relates to solvency, marketing, and profit objectives. It states that the nonguaranteed elements can be changed for a number of reasons; the changes between the experience originally priced for and the actual experience is the most common reason. However, according to the guideline, if the company's position is only to change factors when experience is less favorable to the insured, this can be done, which can bring up questions of equity. Another alternative stated in ASP No. 1 is to change these factors in order to maintain the competitive position in the marketplace. This certainly gives a great deal of latitude when rates are being reset.

However, an actuary cannot arbitrarily make up a set of new nonguaranteed elements and be done with it. There are a number of factors which an actuary must consider. These include the incidence and level of premium payments, mortality rates, investment income rates, termination rates, reinsurance rates, and tax rates. In addition to considering all these items, the actuary must consider any other applicable guidelines, such as ASP No. 7 and No. 14 as to when to do cash-flow testing, and the ASP on data quality. It is also important to have written documentation in the form of an actuarial report when any redetermination of nonguaranteed elements are done. I can assure you that although you may not have these ASPs committed to memory, there are a number of regulators that do, so it is important to follow the letter of the regulations.

Using the list from ASP No. 1, I would like to make some comments about each of the items to be considered by the actuary. The first factor is the level of premium payments. Most universal life policies do not require additional premiums. There are a number of policies that are not paying the level of premiums originally anticipated when the product was priced. This may not mean that additional margins are

REPRICING THE IN-FORCE BOOK OF BUSINESS

required; if the product was bullet-proofed, the lower commissions and other payments may offset the lower premiums being received. On the other hand, there are some companies where the "dump-in" premiums are higher than expected. My general point of view is always to be suspicious when the numbers come out much different than originally anticipated. One of the most common reasons for this happening is that the agents have found where the policy may be too rich – perhaps a different, favorable structure for dump-in premiums – and have exploited it.

The repricing I have seen very recently for UL insurance has not shown major differences over the original repricing, except where the original pricing assumed major improvements over then current scales. Consideration of AIDs has already been priced in. There are a few companies that have increased their cost-of-insurance charges. However, this may be, in part, a strategic restructuring of the sources of profit rather than merely a reaction to worsening mortality.

It has been interesting watching the repricing interest rates in relation to Treasury rates. The rates credited have been decreasing, but not as quickly as Treasury rates. Some of this may be due to how interest rates for renewals are priced. Some companies credit renewal rates based on actual earnings rates, and those rates have not decreased as quickly as the market rates decrease. Some companies want other insurance companies to lower their rates first. Also, credited rates are floored by the minimum guaranteed interest rates. Some companies are currently crediting very close to these minimum guarantees. Although rising interest rates may be bad for the economy, such rates provide a bit more margin to work with.

Termination rates are generally higher than original pricing. Depending on the original method of pricing, this may not have a negative impact on profits, since in many insurance companies the market value of assets exceeds the book value, so gains can be taken on assets sold to pay for these terminations.

Reinsurance rates can have an impact on the redetermination of nonguaranteed elements. Reinsurance rates can be higher when repricing than when originally priced. Some of this may be due to the new reinsurance regulations; it is an area the repricing actuary should consider carefully when repricing a product.

There is not that much new to say about tax rates. Most companies have priced in deferred acquisition cost (DAC) taxes by now. A review of premium taxes is in order when repricing to make sure sales in each premium tax category conforms with pricing.

At redetermination an actuary must consider expense rates. If the original pricing was done recently, there should be no major changes. However, this is one area where the original pricing may have been a bit optimistic – according to original pricing, all those cost saving measures should be realized within a couple of years, but there always seems to be something to keep expenses up.

Regulations play an important role in repricing universal life insurance. It is true that pricing actuaries have theoretically been doing cash-flow testing where they have felt it was necessary, at least since the standard on cash-flow testing was published in 1990. However, there are some actuaries who may not have felt cash-flow testing

was necessary when either pricing or repricing their product. The valuation actuary may not feel the same way. In 1992, there are a number of actuaries starting to do rather extensive cash-flow testing. The profitability of certain universal life products may not appear to be as good as originally priced under certain interest rate scenarios. There has to be clear communication between the pricing and valuation people and management in order to minimize any chance of misunderstandings. My feeling is that there may be more repricing of universal life insurance after the results of asset adequacy testing are shown.

Another regulation those repricing universal life insurance must follow is the proposed update to Actuarial Guideline IV (fondly known in the industry as Guideline XXX). A change has been made to this regulation to include term UL. This change is known as Guideline EEE. This means that the reserve requirements for term insurance may also apply to universal life insurance, which may change expected profitability under certain circumstances.

MR. SELIG EHRlich: The "first family" of products I am going to discuss are those that fall under the umbrella of single-premium immediate annuities and structured settlements. The benefits are set at issue and there's nothing you can do about them. However, if you define repricing the way I like to think of it, which is managing bottom line profitability whether it involves actions on the asset or liability side of the balance sheet, there are some decisions that are within the actuary's control, namely the reinvestment of cash flows as they come due.

The problem that many companies face is that the reinvestment decision comes sooner than anybody intended or desired. For example, suppose your original pricing assumptions called for an investment return of 10% for the first 15 years, and then when your initial asset rolled over, you used an ultimate reinvestment rate of 7%. Back in the 1980s when the structured settlement business was really taking off, 10% might have been a rate that you'd get on a nice long-term bond that had good, but not perfect, call protection. If we look at an ultimate renewal assumption of 7% we would say that it is high for an ultimate long-term rate. But the fact is in the time period it was used there was a Republican administration. Suppose that the statutory valuation rate for that issue year was 9% and that you are now the actuary faced with a reinvestment decision not at time 16, but instead at time 5. Now, if rates at that point are 12% or 10%, you don't have much of a problem, but that's kind of a null set because if that's where rates are, you're not likely to have been prepaid. What we're worried about is rates going down to 6% or 8%. The actuary sitting on the funds is faced with an unenviable decision. If he puts them out at 8% or 6%, he's basically locking in losses relative to pricing. The alternative is to sit on the money and hope for things to get better and vote. So this is, I believe, a repricing decision that is going on today and there aren't any solid answers.

Two asides. The first is that this whole discussion presumes that there is somebody whose job it is to look at this; who had the data that showed this problem and was actually making the reinvestment call. I don't know that that's "the rule," given that these products are thought to have been priced and now it's the finance area's problem or maybe the valuation actuary's problem. Second, there is a valuation consideration in that Guideline 9B does state that if you have a significant reinvestment of your assets after issue, as we're postulating here, that the issue year is

REPRICING THE IN-FORCE BOOK OF BUSINESS

restated to the year in which the assets are reinvested and you may need to revise the valuation rate. This is not a cash flow or asset sufficiency issue; rather it deals with formula minimum reserves.

The additional drivers that apply to this product family are mortality and expenses. As far as mortality goes, you really do want to see where you stand in your tabular versus actual or actual to expected. To do so, you need credible mortality statistics or a reliance on the studies that are done by the Society. Getting credible data is especially difficult for substandard annuities like rated structured settlements. Ironically, it's those contracts for which you are using substandard mortality. There are valuation guidelines that require you to measure how you're doing versus expected in order to justify continued use of your substandard mortality rates. Last, there are expenses, which I'll deal with later.

The second product family that I want to talk about are flexible-premium deferred-combination annuities. By combination I mean those that offer both general and separate account options. For these products the key profitability drivers -- not necessarily all of them -- would be the distribution of the business, contract size, interest spreads, and expenses.

One key distribution of business consideration is the general versus separate account split. A company's preference as to whether money is invested in the general versus separate account is driven by their own capital position as well as policy design issues. As far as capital position goes, that's obviously a driver, because depending on whether the money finds its way into the general versus separate account, it triggers vastly different required capital, assigned capital, risk surplus demands -- whatever you want to call it -- on the carrier.

Policy design also is an influencing factor because of the different margins that can be earned in the general versus separate account. I've met a lot of people and worked with a lot of people in companies who are absolutely terrified of general account annuity products who would love nothing better than to have 100% of deposits go into the separate account. Some don't even offer a general account. Those that do, do so only out of a feeling that they have to offer it. I've also worked with an equal number of actuaries and companies who are enamored with general account products, because they strongly believe that the profit potential of money invested in the general account is much greater than money invested in the separate account.

Influencing the flow of funds between the general and separate account can be a fine line. If your preference is toward the separate account, it doesn't hurt to be able to demonstrate a superior investment track record, but the word has to get out.

Some people believe that separate accounts can constrain you into certain margins that are not flexible. It's true that the spreads for existing accounts are inflexible, but there is the possibility of adding different options that have more attractive margins.

Continuing with the distribution of business driver, another key issue is the market segments to which you sell. Not all markets or age segments return identical profitability. And I would submit that any modeling showing nearly identical profitability between IRAs, tax-sheltered annuities, Keoghs, etc., across all ages, is probably

the result of some sophisticated allocation of net investment income and expenses and not an accurate reflection of reality. Thus, the distribution by market has to be carefully modeled. Distribution by age is also key with different premium sizes, but also because policy provisions perform differently depending on the age of the buyer. For example, surrender charge scales often are waived upon the attainment of age 59.5. That can take a notional surrender charge scale that may be 10 or 12 years and shorten it considerably for purchasers in their mid-1950s.

Also, deferred annuitants will eventually want their money back, an obvious fact that must have been missed by those companies that are capping their long-term withdrawal assumption at 10%.

On variations of profitability by segment, there are things that you can do at the design stage to mitigate the amount of variability by market: grade your commission scales by age; declare different credited rates by market in order to reflect the different anticipated margins, etc.

For flexible premium annuities, premium persistency is often critical to achieving the scale required. For any deferred annuity product, scale is important so that the dollars of the interest margin sufficiently cover your expenses. Here policy design incentives directed to the policyholder can perhaps influence policy size; for example, waive administration fees if the policy gets to be of a certain size or band interest credited rates. These incentives do not have to be directed at the policyholder only; they can be directed at the distribution site as well. Commission scales might pay higher rates if the policyholder pays more premium than they had in previous years. How the contracts get to be a certain size also can influence profitability (i.e., whether the money comes in as a lump sum such as a rollover from another carrier, as opposed to an annual recurring premium pattern). Commission scales often vary correspondingly.

The interest spread is a key driver. Interest spreads in this product family are impacted by changing economic conditions on planned and actual results for the portfolio rate contracts that exist in this marketplace.

Suppose rates had been level for a while, where companies have been able to earn 9%, credit 7.5%, and make their margin. And because rates have stayed level for a while, you haven't had huge differences between portfolio-rate and investment-year method companies. Given this situation, the portfolio-rate company is likely to have built its plan reflecting an assumed earning rate of 9% and credited rate of 7.5%. Suppose you go into the year and all of a sudden rates plummet in January right before IRA season. Portfolio rate companies have the opportunity to attract a greater amount of deposits by crediting higher rates than the new money companies. They also can widen their margins in the process. Does this mean that the in-force manager is a hero and doing a great job? I don't think so. If the converse were true, he wouldn't be doing a lousy job. This example illustrates the importance of having communication between in-force management and finance so that this potential variance, making extra money or less money, is understood. The key challenge for this product is managing through an entire cycle.

REPRICING THE IN-FORCE BOOK OF BUSINESS

Another product family is single-premium deferred annuities. Managing in-force profitability clearly requires some key data. Determine how lapse rates vary by duration and perhaps age, and relate these statistics specifically to how your renewal rates and new money rates have been stacking up against the competition. There is no shortage of dynamic lapse formulas out there, thanks to Regulation 126 and cash-flow testing. But there is a definite shortage of credible lapse statistics to validate the results that those lapse assumptions produce. I've seen formulas that led to assumptions of 30% or 40% or 50% lapses when rates are 2% or 3% off the market. Developing the data to validate and/or refute this assumption will be absolutely key to managing the growing in-force books of SPDA products.

Interest margins are a challenge to measure. Your data split has to be on a basis that's consistent with how your company sets your renewal rates. Knowing what your overall portfolio rate is, if you're an investment-year method (IYM) or bucket company, it isn't going to get you to the end of your job in terms of setting a grid of renewal rates for each issue year bucket. By the same token, not all IYM companies actually do their buckets in the same fashion. Collect your statistics on a basis that's going to help you make your ultimate decision. Depending on the company's pricing approach, make a decision as to whether or not these spreads are going to be measured with or without capital gains and how the new interest maintenance reserve (IMR) and asset valuation reserve (AVR) considerations are going to be built into that calculation.

Review actual spreads versus what I'll call smoothed spreads. Suppose your company invests in three different types of asset categories. Plain vanilla bonds are designed to give a level coupon which will be booked through net investment income. Hold to maturity, in this case five years, and just repay at maturity. In addition, you put a sizable amount of your money or some amount of your money into real estate, which your real estate area tells you will provide you with net investment income of around 5%. Ultimately, when it's sold, a capital gain will be realized such that the overall return will beat the 8% bond, but you're going to have to wait for it. Finally, a junk bond fund has much greater volatility, where depending on the structure of that investment, the return can either come through as net investment income or capital gains or both, which is the accounting issue that was mentioned in one of the earlier panels. I don't know of any investment area that will actually predict a -1% in any given year, but I just wanted to throw some volatility in there.

For the plan, your finance area is likely to build their plan based on the best estimate for actual returns to hit the profit and loss in every single calendar year. It'll be based on some weighted average of expected annual results. Pricing people, on the other hand, are much more likely to say, "Well, what's our expected return over the horizon of these investments?" Develop some weighted average of that, and deduct the spread accordingly, so they will have a different set of numbers. What that causes is a variance in each and every year between the returns that are likely to be built into the renewal rate setting process versus the returns that are going to hit your profits and losses. I don't know of any company that approaches the consumer saying, "We're going to invest in these type of instruments and whatever the annual return is on them is what you get, so expect the volatility." The marketplace expectation is that rates will be smooth, barring shifts in the interest environment.

This variance illustrates to me the need to have coordination with the finance area. I've seen so many situations where, in a given year, the actuary will say he absolutely made his spread because he's ignoring the annual actual and taking the long-term view. When finance looks at the profit and loss, the question is, "Well, I don't know how you made your spread. You didn't earn any more than 4% overall and you credited 6%. Tell me how you did it." They're talking different languages. What is needed is an understanding on both sides as to what finance requires, what pricing requires, the variances that will pop, and an understanding ahead of time as to the tolerance for those variances. This is, in my opinion, the most key in-force management issue for someone running an SPDA block.

No discussion of interest spreads would be complete without some mention of the constraints that are present in setting renewal credited rates. There may be regulatory filings that you've made as to the margins that you intend to deduct. There are Actuarial Standards Board requirements which Donna has discussed. There are also competitive concerns. Competitive concerns raise the issue of not only market rationality, trying to make some money in light of what's going on in the marketplace, but also your own company's need to continue to sell new business.

As policy duration lengthens on contracts that have been sold, there also is a limitation on the investment flexibility enjoyed at the outset with the protection of the surrender charge. As that protection disappears, perhaps shorten your maturity horizon. Maybe give up some illiquidity, meaning, a need to build some. Therefore, it becomes important in pricing to consider whether or not the spread targeted will really be achievable year in and year out or whether, as the duration of the contract increases, there will be a shrinking of the available spread.

Expenses. Your best chance on the expense issue is to start off with original pricing assumptions that reflect your company's actual structure that hopefully are competitive in the marketplace. Now I'm going to ask you to take a second giant leap of faith. The plan that's built is actually a product of taking those costs multiplied by the number of units expected and not the result of a chief financial officer saying, "We're going to cut expenses 25% across the board regardless of what your plan is for sales volume." So let's say you've surmounted those first two hurdles. Look at how your expense margins are doing – and that could be in the first month or the first quarter depending on your company's reporting system – and lo and behold, you have an expense variance (e.g., sales did not come in as high as expected and your fixed costs are starting to bite).

There are three options in repricing. Again, since we're in Washington and the election is just a week away, we'll call them the Republican option, the Democratic option, and the Independent option. If Ross Perot had not reentered the race, we would have had only two options; this is a flexible presentation. The Republican option says, "Expense charges are too high already. We will not raise expense charges; we're just going to have to slash costs and/or services." The Democratic option says: "Expenses are higher, we have to raise our expense charges." The third option is the Independent's option and that option says, "You actuaries are brilliant. You must have developed plans on how to deal with this at sometime. Let's find them and just do it."

REPRICING THE IN-FORCE BOOK OF BUSINESS

The last comment on expenses is that if you are in the variable product business one item to try to get a handle on are your compliance costs in terms of prospectus mailings, keeping them updated, etc. In many companies that cost is not adequately reflected.

Now some final points. The first point concerns interest volatility. Interest rates will not stay level. Due to this volatility it's likely that your targeted spreads will come under pressure at some point during the product's life cycle. This is where modeling considerations come into play. In order to help choose the path of what you should do as rates rise (i.e., whether you should chase them up in your renewal rate setting), use modeling as it can be extremely helpful in quantifying the trade-off between shrinking your margin in order to retain the business versus the profits you would lose if you don't chase and some of the business walks. For this to be useful, even with 100 or 1,000 stochastic scenarios, I strongly believe that you have to develop credible data to support your lapse assumption; crucial to making the right decision.

The bottom line is that given original pricing (the likelihood or the near certainty that margins will come under stress), additional margins need to be built in. In addition, it provides strong quantitative arguments for saving for a rainy day which means make margins in the environments that you can, because there are going to be some environments in which you'll have to give them up.

The second point deals with regulatory changes, for example, tax. It didn't come up in any debates, but the deferred acquisition cost (DAC) tax was implemented in the last couple of years. That wasn't in anyone's original pricing and there will no doubt be other surprises that will have to be addressed as best as possible. Another item under the tax umbrella was a brief proposal that was floated to tax inside buildup. I think that sent a shudder through some companies. In addition we have the AVR versus Mandatory Securities Valuation Reserve (MSVR), where if you didn't already reflect some of the risk and capital gain attributes of real estate and mortgages, you're going to have to do it now.

The third, and last, point concerns expense reallocations. The example that I talked about earlier concerning expenses was one where costs that were within the in-force manager's purview, his own fixed expense of running his operation, couldn't be absorbed. But, what if the expense variance was purely the result of getting hit with a reallocation, i.e., now you're paying more for the chief financial officer who's telling you you're not making plan, which is kind of ironic.

My recommendation in that situation is that the best use of your time is to find the source of the variance, quantify it, and don't lose sleep over it, because you're not going to win that battle.

MR. BRIAN R. LAU: We have an in-force block of annuities where the people can extend the maturity date five years and some of them have extended the maturity well into their 1990s. So not every summary plan description (SPD) person wants their money back.

MR. WILLIAM C. KOENIG: My comment has to do with Mr. Easton's assertion that the paradigm has shifted with respect to the role of equity in dividend determination

RECORD, VOLUME 18

for traditional participating business and that equity has become in some way a secondary constraint. I believe this is still a controversial view, and an unfortunate one, in my opinion. I would submit that equity is still the primary goal of dividend determination in many companies, and that it is properly the primary constraint for all mutual companies.

If in fact the actuarial profession does move in the direction of viewing dividends as just another pricing mechanism, and they are cynically calculated as that amount which maximizes company profits without destroying policyholder expectations, then I fear that an important, perhaps crucial element of management discipline will have been lost.

I would agree that perfect equity is an ideal unattainable by fallible humans, even actuaries. I do not agree that this makes equity a less worthy goal, and I never understood the Academy guidelines to deemphasize the importance of equity in any way.

MR. EASTON: Equity continues to be crucial in dividend determination.

MR. NATHAN F. JONES: I believe what the origin of termination dividends was then described by Mr. Easton.

The second thing which relates to this theme is that New York still has a maximum termination dividend that we will allow to be illustrated.

Third, I'm concerned about the really old business. It is a common belief that those old years of issue have been much underpaid over the years. As the years go by, they're much more underpaid.

Very few companies, I think, maintain retrospective asset shares and a lot of them don't really want to know how the results would come out. If anyone does, the funds that they derive from them are essentially of no value unless they also look over all the old expense allocations, another thing that nobody wants to do. Now, if anyone based dividends on this they would be amazed how much money they would come up with especially after compounding.

And a particular example of this problem is in the old closed blocks of debit business. Of course, the debit business is no longer issued in New York -- except for three small companies. But the Metropolitan, the Prudential, the John Hancock, and probably Colonial, have big blocks of in-force business on that basis. I suspect it has been used as a wonderful source of funds to expand the business in other directions for those companies over the years.

Some day, I hope somebody's going to try to give those policyholders their rights and, Bill, I would certainly say "rights."

MS. CLAIRE: Mr. Jones makes a few good points in terms of equity for the very old business. The fact that he is working for an insurance department raises another point that actuaries should be aware of. They have to keep in mind when repricing, especially old blocks of business, that there are regulators. One of the regulators' jobs

REPRICING THE IN-FORCE BOOK OF BUSINESS

is to look out for the little guys, and a lot of those little guys are in their 90s. Many of them may have died without telling anyone about the money, but there are also a lot of older people out there who are relying on this money, especially for funeral-type expenses. And the regulators are concerned about it. For example, that's one of the reasons why the State of Washington passed the regulation limiting the amount that you could charge older people for the funeral business.

FROM THE FLOOR: Prudential issued monthly debit ordinary up until December 1991 and that wasn't just for funerals.

MR. GRAEME F. SCHIFFER: Donna said it was very important to examine your reinsurance class when repricing an in-force block. Reinsurance rates have gone down in the last five years, at least in my experience. But it still makes her point very valid, not because the rates are going up, but because you might get a very pleasant surprise if you take another look at them.

MS. CLAIRE: Agreed. Again, it depends on what type of reinsurance. I've been more aware of the ones who had trouble and panicked.

