ARE ACTUARIAL OPINIONS WORTH THE EFFORT?

MS. DONNA R. CLAIRE: Is Regulation 126 work worth the effort? I'm in an area called Asset/Liability Management. This is a brand new area in our company, and other large companies are setting up similar areas. A few years ago, there were very few people doing the asset/liability monitoring job. One thing Regulation 126 has done is to focus attention on assets versus liabilities and in some cases has caused money, people and other resources to be freed up to monitor and manage the asset/ liability process. This is an important job, so any help Regulation 126 has brought to this process has made the regulation useful.

I will admit, however, that the calculations needed for Regulation 126 are a lot of work, and for those already involved in getting out financial statements, the regulation puts another burden on an already busy schedule at the beginning of the year. But looking back on it, the information we obtained from the testing is definitely worthwhile.

The testing also adds to your credibility with the people in the investment department when you want them to restructure the asset portfolio. To show in black and white, as a result of the Regulation 126 testing, that, if an investment portfolio is not restructured,

additional reserve liabilities would have to be set up, can have an influence on the investment process.

Changes in Regulation 126

When Regulation 126 was first written in 1985, it was recognized that many things we were covering hadn't been addressed by a number of companies and, as experience merged, additional changes would be needed to Regulation 126. The first major revisions to Regulation 126 have already occurred. Industry advisory groups were set up to suggest draft wording for the Regulation 126 rewrites. These were passed on to the Insurance Department, which made some changes, and as a result, the new version of Regulation 126 was released in August 1988.

One of the changes is that pre-1982 pensions and individual annuity business must be covered by the opinions by 1989. Roughly translated, this means that all annuity-type business has to be included in the testing by year-end 1989. In many cases, bringing in the pre-1982 business probably helps reserve sufficiency, considering the old business probably had additional reserve margins. However, since many companies, which currently segment, did not segment in 1982, in effect, those companies would have to partition the entire general account in order to come up with the underlying assets for this business.

The next change is that single premium life (SPL) must be covered in the opinion by 1989. It is optional to cover SPL before then. The only type of SPL that must be covered is the interest-sensitive type issued later than 1982 (or after the dynamic valuation law).

The rewrite of Regulation 126 states that the projection period for deferred annuities and for SPL insurance is ten years or less unless the actuary can justify a longer period, and then intermediate results must be shown. This was changed because the Insurance Department was concerned when companies ran out the business for a long period and were left with little of the beginning assets or the liabilities at the end of the test. Therefore, the Department would like to see that the business is self-sufficient within at least a ten-year period.

The rewrite states more specifically that a dynamic lapse formula should be used where applicable, for example, with deferred annuities. There was major concern that people are not relating the lapse formulas with the interest rate environment.

The relationship between defaulting assets and the mandatory securities valuation reserve (MSVR) is specifically mentioned in the rewrite of Regulation 126 regarding testing for defaulting assets. One approved method is to take out 75 percent of the

MSVR charges because, in effect, the method is allowing you to take the interest credited on the MSVR assets.

Other methods may be used if they have the prior approval of the Insurance Department. In addition, a charge equivalent to the MSVR must be taken out for mortgages and real estate. Another thing added in the rewrite is that the common reference point, when aggregating various lines of business, should be the valuation date. The discount rates used to come up with the present value should reflect the interest rates within each scenario.

Structured settlements caused a lot of controversy. Members of the Insurance Department were uncomfortable with structured- settlement valuation on interest rates, which could be as high as 13.25 percent forever. Therefore, a method of using graded interest rates is proposed in the rewrite of Regulation 126. For those of you in the structured-settlement business, I would recommend you read this section in the regulation carefully and try out what the changes will mean in terms of the reserve level your company must hold on this business before the end of the year.

Another thing added to Regulation 126 is a possibility of a rolling issue-year method (IYM). Several possibilities are given: (1) to determine the appropriate rate at the end of every year based on IYM assets; (2) to grade the interest rates using, for

example, 90 percent of the first-year earned rates, 10 percent of the second-year earned rates, etc. This section was deliberately left open so that those who can come up with a reasonable IYM can present it to the Department, and possibly to the industry, to give us ideas as to how better define a rolling-issue year.

The law passed in 1987 eliminated Macaulay duration as a requirement for determining the level of penalty reserves. The penalty reserves are the lesser of the two in the original regulation, which means the greater of 115 percent of the otherwise minimum reserves or 100 percent of reserves using lower interest rates and no surrender charges.

Another thing added to Regulation 126 was that sensitivity analysis should be done with any critical assumptions, and the results of this testing should be disclosed to the Department.

Reinsurance was a difficult topic to handle. The rewrite of Regulation 126 doesn't change reinsurance that much but clarifies that cash-flow analysis should be done based on the terms of the reinsurance contract. It also requires that, if letters of credit are used, this should be specifically stated in the actuarial opinion and memorandum (AOM).

Another topic that has been clarified in the rewrite is reliance. The actuary should have a letter on file from anyone they relied on.

An issue has come up as to what should be done if someone is holding the penalty reserves. Therefore, under the rewrite of Regulation 126, it is stated that, if additional reserves are being held because there is not an acceptable AOM, reserve calculations backing these additional reserves should be sent to the Superintendent.

Relationships between Interest Rates, Credited Rates and Lapses

A major issue is lapses for deferred annuities. They should definitely be dynamic, but the industry advisory group couldn't come up with a single formula that would work in all cases. Therefore, we gave an example in the rewrite of Regulation 126 as to what a formula could look like for deferred annuities. It is a base rate, such as 5 percent, plus a constant times the difference between a market rate minus a credited rate raised to a power. In addition, if you'd like, you could take some credit for surrender charges. An example would be as follows: if you are 2 percent out of the market (crediting 2 percent less than your competitors) and had a base rate of 5 percent, the formula would be:

$$5 + 2 \times (10 - 8)^2 - .5 \times (4),$$

which would mean 11 percent lapse in this case. Other things you might want to take into account with your lapse assumptions are the market you are in, whether your

product is being sold by agents or brokers, and how your surrender charges wear off after a period of years.

For an interest-credited strategy, the one that you're currently using is the most logical: the one that's in force at December 31. This means that if you start with the December 31 assets and use your credited strategy, you come up with the rate that you are crediting on December 31. In addition, this is one area you may want to do some sensitivity analysis if there are several potential crediting strategies that your company may use. There is a question as to what interest rates should be used; these interest rates are the ones off of which the credited rates and the lapse rates work. The easiest answer is to follow New York scenarios that are in the regulation. I know a number of people feel that these are a little too simplistic and prefer stochastic analysis. I have nothing against the stochastic analysis as long as you do enough trials to make the results representative. There is no magic to the seven New York scenarios. You can test more than seven scenarios. In fact, some companies have tested forty or more scenarios and showed the results to the Department.

The Future Annual Interest Rate Guarantees and Future Premiums

The interest-rate guarantees that you have in your contract should certainly be considered in testing. For example, some SPL designs have a minimum rate of 6 percent. This is the minimum that can be used for crediting, even if "market" interest

rates are at 4 percent under certain interest scenarios. This may become an important concern when testing SPL policies if your company has chosen a guaranteed rate of 6 percent in order to show compliance with the IRS definition of insurance.

Future considerations should certainly be considered for such products such as open-window guaranteed interest contracts. In addition, you may want to consider future considerations on contracts that do not provide any interest guarantees for future considerations, such as flexible-premium annuities.

In determining the treatment of future annual interest guarantees and future premiums, you must take into account the market versus interest-crediting scenarios that you are testing.

Appropriateness of a Substance and Sensitivity Analysis

The main judge as to what is appropriate in testing is a qualified actuary. It is inappropriate to assume major changes in assets or interest-crediting strategies unless these are already being worked on.

Sensitivity analysis should be done on any critical assumptions. For example, for open-window guaranteed interest contracts, you may want to test sensitivity of reserve

adequacy to the level of any additional considerations that can come in and can be affected by your interest guarantees versus the market rates.

The second area for sensitivity analysis would be lapses for deferred annuities; how much the changes in lapses would affect reserve adequacy. It may be that your surrender charges may limit the effect on reserves even if you predict reserves at more than double current assumptions.

The third area for sensitivity testing would be the return for certain types of assets such as real estate. These assets can have quite volatile returns, depending on the market. If sensitivity analysis shows that reserves may be inadequate if the assumption on these were changed slightly, it may be prudent to increase the reserves held.

Reliances

When you are relying on someone else, such as a chief investment officer, you should get a written statement from those you are relying on and keep it with your AOM. In addition to the chief investment officer, you may be relying on an administrative person for your in-force listing. You should also have a letter from that person with your filing.

Even if you do have written statements from other people, it is the actuary's responsibility to ask about assumptions that may look unusual. If, for example, the in-

force business dropped by one-third, you may want to question the in-force listing. If you are told assets all earn 20 percent in all environments, you should look further into the asset assumptions.

SPL

SPL insurance must be covered by 1989. The minimum reserves with opinions will be somewhat more liberal than currently. The regulation will allow a split interest rate with an annuity Type-C interest rate used for a number of years, then long-term life insurance interest rates used after that. If a company chooses not to file an AOM, the minimum reserve standards will increase to 110 percent of the greater of the death benefit reserve and greatest present value of the guaranteed accumulation funds at the long-term life insurance interest rates.

Definition of an SPL product is not overly precise. What it states is that, if you declare rates higher than the long-term life insurance rates at some period, the product is SPL. However, for those contracts, which allow (but do not require) additional premiums to be made, the additional premiums will not disallow the contract from being considered an SPL product.

The suggested projection period used for the SPL in Regulation 126 is ten years. This is because many of these contracts are issued to older people and backed by short-term

assets, and the Insurance Department would like adequacy of reserves to be shown by the time the majority of assets or liabilities have matured.

SPL can be tested similarly to a deferred-annuity product. However, there are additional twists that must be considered. Among them are (1) the effect of mortality charges on lapses, (2) how the underwriting was done and its effect on the actual mortality that will be experienced, and (3) the effect of policy loans, especially wash loans, where the policyholder can take out his money without suffering any loss.

Conclusion

All these changes in Regulation 126 are in the draft that has been released. I would recommend that everyone read the draft before it becomes effective in order to determine the effect on their own company. My guess is that in the future universal life may also be covered by the law as Regulation 126 and the valuation actuary's role expands.