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Reflecting Risk in Pricing Survey

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IN SEPTEMBER 2010, THE SOCIETY OF ACTUARIES (SOA) PUBLISHED AN UPDATE TO THE 2005 REFLECTING RISK IN PRICING SURVEY. This survey is focused on how companies are trying to price for and understand the risks inherent in the products they sell. The survey focused on various product lines—life and annuity, health, and property and casualty (P&C) insurance—and showed results for various countries of location and business focus. There were 374 responses that completed some portion or all of the survey: 255 life, 53 health and 66 P&C companies. The survey report can be found at http://www.soa.org/research/research-projects/risk-management/research-reflecting-risk-pricing.aspx. The focus of this article is to highlight some of the results from the report. In general, direct writers and reinsurance companies will be lumped together except where noted. The full report breaks out reinsurers and direct writers separately.

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PROFIT MEASURE RANKING

The most common profit measures used by companies issuing life and annuity products was internal rate of return (IRR), which was closely followed by premium margin. Health writers indicated expected loss ratio as their leading choice of profit measure, while P&C writers favored return on equity (ROE). Although not necessarily the primary measure, most companies indicated use of premium margin in some way, making it the most popular profit measure in the survey. Outside of North America, embedded value/economic value added (EV/EVA) tends to be the more common profit measure.

The survey asked how risk is assessed under each measure. Assumption stress testing was the most commonly used measure for risk assessment. When using assumption stress testing, most companies used judgment to determine the parameters for testing. Companies that reported using assumption provisions for adverse deviation (PADs) to assess risk utilize recent experience to determine the PADs. Companies that use stochastic scenario analysis for assessing risk in their profit measure report favoring conditional tail expectation (CTE) to percentiles, especially for reinsurance companies.

COMFORT WITH INCUMBENT PROFIT MEASURE AND RISK ASSESSMENT PRACTICES

Over half of the companies in the survey indicated they feel their profit measure is not substantially different from their competitors. About 22 percent feel that it is different, and the rest are generally unsure if it is substantially different. Over 60 percent of responses were neutral in their assessment of their profit measure relative to other companies as offering an advantage or disadvantage. Of the companies that believed there was a difference, more assumed to be at a disadvantage than at an advantage.

The survey asked if companies had changed their profit measure in recent years. Over 70 percent of respondents indicated they had changed their primary profit measure in the last three years. Life, annuity and health companies that reported a change indicated they moved away from predominantly IRR and premium margin in favor of market-consistent embedded value (MCEV) and EV/EVA. P&C companies indicated a move away from expected loss ratio and combined ratio in favor of EV/EVA and risk-adjusted return on capital.

Almost half of the responses reported no change to risk assessment practices because of the recent economic environment. Larger insurers reported more changes relative to smaller insurers. Sixty-three percent of responses indicated they do employ an enterprise risk management (ERM) actuary or have ERM areas in their company, more so in larger companies than smaller companies. Fewer health companies reported having an ERM actuary or area than life/annuity or P&C.

OTHER AREAS OF INTEREST IN THE SURVEY

All of the P&C companies in the survey reported using a discount rate for their primary profit measure as less than 5 percent. Forty-two percent of health companies reporting using a discount rate between 3 percent and 7 percent. Life and annuity companies favored the 5 percent to 7 percent range more than the 3 percent to 5 percent range. The discount rate is determined by the earned rate for most life and annuity companies, but P&C, life reinsurers and P&C reinsurers use the risk-free rate as their discount rate.

The survey also asks how companies capture risk associated with:

- Asset default in pricing
- Interest rate changes
- Volatility of equity returns
- Adverse claims deviation/severity
- Short-term fluctuation/frequency
- Modeled customer and agent/broker behavior
- Expenses
- Operational risk
- Mix of business/distribution of policyholders
- Reinsurance.

It is important to note that the results provided herein come from a variety of insurance companies with unique areas of practice, product structures, target markets, distribution methods and regulatory environments. As such, these results should not be deemed directly applicable to any particular company or representative of the insurance industry as a whole. Results shown based on the demographic data include only those respondents who filled out that portion of the survey. These results may vary from aggregate results shown in the various lines of business—life and annuity, health and P&C. ■