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SOA Annual Meeting Summary— **Product Development Focus**

by Paula Hodges

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I look forward to attending the SOA Annual meeting each year as a great opportunity to reconnect with fellow actuaries. In addition to the networking opportunities, the Product Development Section sponsored a number of sessions at this year's Chicago meeting. In this space, I'll capture some of the highlights of the sessions. If you're interested in more detail, I encourage you to view the presentation materials online at http://www.soa.org/professional-development/archive/2011-chicago-annual-mtg.aspx. I've included the session numbers for all the Product Development sessions for easy reference on that site. For even more detail, recordings of many of the presentations are available for a fee. You can order them from the SOA through this site: http://www.soa.org/professional-development/archive/audio-recordings.aspx.

Monday

037 - Pricing Trends – Part I

Solvency II has a 2014 effective date, and, for those companies impacted, a more complex pricing environment will result. The requirements of Solvency II will cause the Statutory, GAAP and Economic pricing regimes to converge to similar measures. Statutory and GAAP regimes continue to move further away from deterministic and formulaic methods.

The presenters gave an overview of changes in pricing using a guaranteed benefits rider on a variable annuity as an example.

Three changes are required:

1) Change from real-world scenarios to risk neutral pricing of the economic scenarios.
2) Use stochastic scenarios, rather than a deterministic approach; and
3) Explicit modeling of the risks inherent in the product, including both policyholder behavior risks and economic risks.

048 - Pricing Trends – Part II

Market Consistent Valuation of New Business (MCVNB) is a pricing method that adjusts for market risks and uses best estimate assumptions. In MCVNB, the earned rate equals the discount rate equals the risk-free rate. The swap curve is often used in MCVNB to reflect these rates.

A financial reporting practice note, published by the American Academy of Actuaries in March 2011 provides MCVNB principles. You can find practice notes on the www.actuary.org website, under Publications, in the section for "Other resources."

Using MCVNB as an informing metric during pricing can be quite helpful in determining the risk of the product being priced. It is especially helpful to a company that is determining the appropriate business mix when evaluating credit or spread risk.

Tuesday

067 - The Latest on Mortality

When reviewing mortality results, it's important to know the purpose of the study. The study may be done for new business pricing or changes in underwriting methods. It is important to note the variations by line of business as well. The life settlement industry has directly impacted ultimate mortality experience in recent years.

Credibility and validation of the results are important in reviewing mortality. A good rule of thumb is to have at least 100 claims per cell to consider the results credible. When repeating earlier studies, it is important to group the data into cells only after analysis. If the data is grouped prior to analysis, proper groupings may not be identified. Groupings that may have been appropriate on prior studies may need to be revisited.

Current mortality improvement trends (medical advances, healthy lifestyles) may be offset with other trends (obesity, chemicals and hormones) that contribute to mortality deterioration.

There are several sources for mortality studies including the SOA, CDC Medicare and reinsurer's data. It is wise to review several sources when setting mortality assumptions, and use the source(s) closest to your business need.

078 - Standards of Practice in Product Development – Do They Apply to Me?

Actuarial Standards of Practice (ASOPs) apply to all actuaries. New ASOPs are being discussed that aim to address credibility as it relates to lapse and mortality assumptions.

ASOP 1 discusses the setting of non-guaranteed elements in life and annuity contracts. Actuaries are required to sign the annual statement interrogatory that states that this standard of practice was used in determining the non-guaranteed elements for that year. The ASOP gives guidance on the factors that can be used in setting the rates.

ASOP 12 for risk classification lists what should be considered. This can provide very practical advice in pricing.

ASOP 23 on data quality states that the actuary need not audit the data, but has certain responsibilities on validating the sources.

ASOP 24 covers the responsibilities of the illustration actuary. Another helpful source is the practice note.

Deficiency reserves are covered in ASOP 40. Although the appointed actuary is responsible for setting the X factors, the pricing actuary is responsible for clear communications with the valuation and appointed actuary throughout the process.

ASOPs in general are helpful in defining documentation for best practices.

106 - Regulatory Update for Product Developers

There are several international regulatory bodies whose governance is important to insurance companies, especially to companies with overseas operations:

- The International G-20 (est. 1999) is a group of 20 Finance ministers and Central Bank Governors, whose purpose is to discuss key international economic issues.
- The Financial Stability Board (FSB, est. 2009) is another international group, whose intent is to reduce moral hazard presented by Systemically Important Financial Institutions (SIFIs).
- International Association of Insurance Supervisors (IAIS, est. 1994)

The Dodd-Frank act created the Financial Stability Oversight Council (FSOC), which includes the creation of the Federal Insurance Office (FIO). It is the charge of this office to identify when a "non-bank financial institution" could pose significant risk to the United States. If so, the FIO would submit that institution to supervision by the Federal Reserve System.

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The Solvency Modernization Initiative is underway within the NAIC with several possible wide-reaching impacts. Included under this review are Principles-Based Reserves, convergence of U.S. GAAP and IFRS standards, and ORSA—Own Risk and Solvency Assessment requirements.

The Securities and Exchange Commission is encouraging convergence of US GAAP and IFRS. Possible impacts, as reflected in company interviews include increased volatility of results, changes to performance reporting, revisions to the definition of acquisition costs, and impact on relations with stakeholder and capital management.

Actuarial Guideline 38 (AG38) has been incorporated into NY Regulation 147. Currently New York actuaries and several of their domiciled insurance companies are reviewing NY's interpretation of AG38 as it relates to the minimum gross premium and resulting reserve calculations of UL products with secondary guarantees.

The Pension Protection Act clarifies tax treatment of combination products regarding the DAC tax, 1035 Exchanges, and taxation of benefits.

The Interstate Compact, which allows single filing of insurance contracts for approval in multiple states has developed standards for Long Term Care, with Disability Income and Group Life products under development. About 125 companies have signed up with the Interstate Compact to date.

Wednesday

115 - Product Development Section Hot Breakfast

Investment portfolio strategies at insurance companies have evolved during the period before, during, and after the financial crisis. Prior to the crisis (2002–2007), credit spreads were tight, which built leverage stress both on the asset and liability side. During the 2008 crisis, investing stopped suddenly. The problem was insurance companies were building large cash positions as they continued selling product. In the 2009–2010 timeframe, companies were very sensitive to inflation fears, so were too conservative to cash in on yield pick-ups. Derivatives would have been an efficient way to get this yield with less risk.

There are still concerns in 2011 about investing due to low yields (currently the 10-year treasury bond is yielding close to 2 percent). Companies need to start putting the cash to work, with the ongoing concern about locking in such low returns.

Even with the tough regulatory boundaries around insurance investing, insurance companies are employing many strategies to improve yield. Some of these are outlined in the presentation materials.

124 - Add Innovation to Your Product Development Process

Innovation can take two roads: 1) extend existing products to new customers; or 2) extend your product line for new or existing customers.

The planning process for innovation is something of an oxymoron. Corporate planning tends to stifle innovation, and innovation, by its nature, is hard to sustain in any setting.

Additionally, many innovative ideas will not be corporate successes. To truly grow a culture of innovation, the company needs to recognize and support ideas that become failures.

Most companies find that good ideas are plentiful. The hard part is to select the right ideas and then effectively execute on those ideas. By their nature, innovative ideas will run into barriers when implemented. Those companies that can push through those barriers will be successfully innovative companies.

Keys to successful innovation:

- Recognize that innovation happens at the "edge" of the enterprise. It needs to be driven and informed by people who are in touch with the customer.
- The best ideas come from rebels who question the facts that the corporation accepts.
- Inventors require perfect knowledge to know what it takes to make the idea come to life. Cross-functional teams are one way of pooling skills and knowledge to create this perfect information.

Insurance innovation includes more than product ideas. Changes in self-service models, bundling of products, mass customization and identifying new and emerging markets are places to look for original ideas.

136 - Identifying and Managing Risk in Product Design

The evolution of the guaranteed benefits riders for variable annuities is a framework for demonstrating risk and risk management for product design. Looking at these riders through the lens of a Market Consistent Embedded Value (MCEV) pricing framework and also from the experience of the 2008–2009 crisis, it is clear that many of the options in these riders were under-priced. Competition had driven the price to unsustainable levels it seemed. The various risks that became costly are:

- Basis risk – ability to map to hedge-able indices;
- Liquidity – became a larger issue when it was needed most;
- Policyholder behavior – very limited experience in election rates of these riders when they were "in the money"; and
- Execution risk – rebalancing and trading issues.

There are numerous tools to address these risks including:

- changes in product design and pricing;
- dynamic hedging;
- static or customized hedging; and
- and even complete transfer of risk through third party reinsurance.

These tools were discussed in more detail during the session.

Insurance companies operating in the United States have various profit measures to use when assessing their business. When measuring profitability, it is important to also analyze the risk measures associated with a particular profit measure. Some items to consider are:

- Method for determining Provision for Adverse Deviation (PAD);
- Analysis of stochastic results;
- Appropriateness of the current discount factor, and determining the method for choosing that rate; and
- Reflection of interest rate risk.

The sustained low-interest rate environment is a very real risk that must be addressed in current product development.

Other Product Development Sessions that I was unable to attend:

022 - In This for Life: Life Product Development Trends and Issues
093 - Annuity Product Development Trends and Issues
121 - Research Results on New Medical Markers
144 - Principles-Based Approaches for Pricing

As mentioned in the outset, these are highlights that may direct you to further review presentation materials or recordings of certain sessions. In no way is this summary a complete recap of the information from the sessions, or can this summary capture the experience of attending a meeting. For those of you that were unable to join us in Chicago, I hope you're able to join us next year in Washington, D.C.