



What's Inside

Objectives of PBA
regulation in US 1

About ARM 2

Around the
Actuarial World
In 2 Minutes 3

The Claim
Reserve 4

Regulatory
Roundup 5

Using the Work
of an Auditor's
Expert 5

Today's Life
Insurance Products
Part 1 6

Meet One of
ARM's Experts 7

6500 River Place Blvd.
Building 2, Suite 204
Austin, TX 78730

(512) 345-5200
1-866-480-RISK (7475)
newsletter@actrisk.com



Objectives of principles-based regulation (PBA) in the US

By Corwin Zass

The NAIC is rapidly moving toward a non-formulaic reserving approach for life insurance, annuities, and supplemental health like Medicare supplement and long term care. The objectives of a PBA regime are to:

- Capture all of the material risks, benefits and guarantees associated with the contracts, including tail risk and funding of the risks
- Utilize risk analysis and risk management techniques to quantify the risks; may include stochastic models
- Incorporate assumptions and methods that are consistent with those used in the overall risk management process
- Permit the use of company experience to establish company specific assumptions
- Provide for the use of assumptions set on a prudent estimate basis that contain an appropriate level of conservatism when viewed in the aggregate

Within the next few years, PBA will apply to risk-based capital (RBC) and statutory reserves for all life, annuity, and supplemental health products sold in the US. This new reserving process requires more sophisticated stochastic modeling. Insurance companies will see some major impacts with PBA, including:

- Increased scrutiny of regulators and rating agencies as part of ERM/EC assessment
- Focus on efficient use of capital and better capital management
- Greater focus on risk management and reducing financial volatility
- More volatility in capital/reserves will lead to greater earnings volatility
- Risk mitigation involves an understanding of tail risk
- Pricing, product development and valuation

To learn more about PBA or how this new regime impacts your insurance clients, please give us a call.

Visit our new website

www.actrisk.com

Events

May 5–6

8th Annual Product
Development Actuary
Symposium
Tampa, FL

May 15–16

Advanced Financial
Reporting
New York, NY

May 28–30

SOA Health Spring
Meeting
Los Angeles, CA

May 31-June 3

NAIC Summer Meeting
San Francisco, CA

June 2-5

2008 Reserves Week
Chicago, IL

June 4-6

SOA Employee Benefits
Spring Meeting
Tampa, FL

June 9-13

Asset Liability
Management
Toronto, Canada

August 11-14

Health Pricing and
Valuation Boot Camp
Lansdowne, VA



ARM: Who We Are

Actuarial Risk Management (ARM) is an independent member of the BDO Seidman Alliance. ARM's staff, along with the expert actuaries from ARM's Actuarial Consulting Network, provides all necessary actuarial expertise and tools to ensure we can cover all actuarial disciplines.

All ARM representatives must comply with strict ethics and standards. We have access to the latest technological tools, ranging from modeling software for our life clients to proprietary claims analysis tools for our health clients.

Our fees are aggressively competitive and our experienced actuaries provide you with objective, independent, and responsive actuarial consulting services.

Actuarial services include:

- Valuation and Financial Reporting
- Predictive Modeling & Loss Forecasting
- Corporate Modeling
- Reinsurance Expertise
- Expense Allocations and Analysis
- Capital Management
- Mergers and Acquisitions, Due Diligence
- Statutory, Tax and GAAP Audits of Actuarial Assets & Liabilities
- Data Management
- Product Development and Competitor Analysis
- Sarbanes-Oxley Assistance
- Retirement and Pension design and valuations
- Alternative risk management solutions, including captive and self-insurance



**Discover what BDO Seidman knows,
the next generation in actuarial delivery...**

Around the Actuarial World in 2 Minutes...

This month's highlights

By Evelina Kaminski

1. The 2008 ERM Symposium

The 2008 ERM Symposium, which is the 6th Annual Premier Global Event on Enterprise Risk Management (ERM), took place in mid April in Chicago. The event theme was "Risk and Return in the Age of Turbulence" and was co-sponsored by three of North America's largest actuarial bodies, the Society of Actuaries, the Casualty Actuarial Society, and the Canadian Institute of Actuaries. This year's Symposium illustrated why a strong ERM program is essential before, during and after each relative cycle of results – both good and bad.

The symposium included professionals from a variety of insurance sectors, including Chief Risk Officers (CRO), Chief Financial Officers, Actuaries, Members of Boards of Directors, and Investment Professionals. CROs have had numerous challenges during the past year. Among these have been the subprime lending problem, the California disaster, and the liquidity crisis that arose in commercial paper markets. Many of the larger insurance companies were early adopters of ERM. Thanks in large part to the involvement of actuaries within the individual insurance companies, these insurers are considered by many as being at the cutting edge of ERM. An additional reason for the early interest in ERM by the insurance industry has been the support of the concept by the various rating agencies.

Now the insurance sector is looked upon by other sectors as an example for setting sound ERM protocols. The last 12 months have led to many voices calling for sound ERM, including the subprime mortgage mess. To learn more about ERM, please contact us. Please look for future articles devoted to ERM.

2. ERM & EC

Standard & Poor's is taking a strategic view of an insurance company's ERM practice, with emphasis on risk management modeling. Risk modeling has evolved over time, from the NAIC's Risk-based capital, adopted in the 1990s and updated with the latest approach introduced in 2007, to more formal stochastic economic capital (EC) models. Companies will need to bolster their current capital modeling capabilities so the measurement of risk is in line with the retained risks of the product portfolio.

A.M. Best also sees a movement toward a strong EC model. The objectives of these enhanced EC models are to address new risks and measure the volatility and correlation of those risks. Best will use the company's EC model to determine the strength of the risk mitigation process and the insurer's financial flexibility as part of long-term strength. The Best rating agency will give the highest points to those companies with EC models, which must include a stochastic framework, and part of a global ERM structure within the organization.



The Claim Reserve

By Corwin Zass

The claim process requires the development of a claim reserve. Generally, the delay between the event and settlement dates means that a company must set up "reserves" in respect of those claims still to be settled. The company must be able to quantify this liability if it is to assess its financial position correctly, both for statutory and for internal purposes. The reserve estimates are key to proper balance sheet accounting and can have material impacts on income if reserves (and methods) are not reasonable and appropriate. Note these "reserves" come in a variety of forms outside the insurance carrier setting. For non-insurance companies, the claim reserves will show up for entities with large deductible policies, retrospectively rated policies, self-insured plans, and captive insurers.

There are two distinct categories of claims, which have occurred as of a particular date (the "valuation date"):

- Claims for which the event has occurred, and which are already known and reported to the insurer
- Claims for which the event has occurred, but which have not yet been reported to the insurer and are therefore not yet known. These are often referred to as "incurred but not reported"

Elements of a Loss Reserve =

- Reopened Claims Reserve
- + Development on Known Claims
- + Formula Reserve/Case Reserve
- + Claims in Transit
- + Incurred But Not Reported

The claim reserve should follow sound actuarial principles using estimates derived from reasonable assumptions using appropriate methods. To demonstrate the inherent uncertainty in some lines of business, an actuary may include a range of possible values (each of the possible values being actuarially sound). Loss Adjustment Expenses (LAE), generally defined as the expenses associated with settling claims include salaries of adjusters, legal fees, court costs, expert witnesses and investigation costs, and consist of the sum of DCC (or Defense & Cost Containment) and AO (Adjusting and Other). The "old names" for these components are the ALAE (allocated loss adjustment expenses) and ULAE (unallocated loss adjustment expenses), respectively. These estimated expense amounts must be included in the total claim reserve.

With the old adage of "garbage-in, garbage-out", one of the most important considerations in claim reserving, regardless of method, is the nature and quality of data. Good sound actuarial principles should include the following steps:

- Construct a model of the process, with documentation of all assumptions
- Fit the model, using past observations
- Test the fit of the model and the assumptions, rejecting or adjusting as appropriate
- Use the model to make predictions about future statistics of interest
- Apply professional judgment and experience to choose a number

Many of today's actuaries use deterministic reserving models, which only make assumptions about the expected value of future payments. On the other hand, stochastic models analyze variations of those future payments and are being used more and more since actuaries are recognizing the need to reflect the random nature of a model. Stochastic models allow the user to test statistically the validity of the assumptions, and produce estimates not only of the expected value of the future payments, but also of the variation about that expected value.

I believe everyone agrees the claim reserving process does not follow rigid formulaic approaches but is statistical and probabilistic in nature. One could say, "more art than science" but we all know that art is interpreted in many different ways, which translates into widely varying values of that art!

To learn more about loss reserving or claim reserving, please contact ARM.

Regulatory Roundup

Corwin Zass

From the Department of the Treasury/IRS:

- *Revenue Ruling 2008-13*, reversing in certain circumstances the IRS's long-held position that a public company has the right to deduct certain "performance-based compensation"
- *Revenue Ruling 2008-7*, addressing the application of the accrual rules for pension plans under tax code section 411(b)(1), validating most "greater-of" formulas for plans converting to cash-balance or other hybrid formulas

From the Pension Benefit Guaranty Corporation:

- Proposed rule implementing the Pension Protection Act's revisions to ERISA section 4010 annual financial and actuarial information reporting

Using the Work of an Auditor's Expert

Corwin Zass

The American Academy of Actuaries' Financial Reporting Committee ("AAAFRC") recently provided the International Federation of Accountants comments on the proposed ISA 620 audit standard, "Using the Work of an Auditor's Expert". The AAAFRC believes comments are critical especially given the role of actuaries in their work as outside experts for the auditing of insurance enterprises and the auditing of pension and retiree benefit estimates for nearly all enterprises.

The letter comments in general about the proposal, and provides responses to the specific questions raised in the proposed revised audit standard and to individual paragraphs of that proposed audit standard.

In general, with regard to accounting estimates based on the work of experts, the AAAFRC believes the proposed audit standard should more thoroughly address the potential uncertainty surrounding such estimates. Specifically, they believe this is a major issue with regard to reliance on experts in areas containing significant uncertainty, whether the experts are those of management or the auditor.

With regard to the provisions in paragraph A4, whereby an auditor can effectively self-certify the auditor's (sufficient level of) expertise in an area other than auditing/accounting, the AAAFRC acknowledge that such a provision may be needed but note that it also raises additional risks. The recommendation is that the standard alert the auditor of the potential risk associated with evaluations outside the auditor's area of professional certification, with appropriate guidance on any steps to address such risk.

The Academy is attempting to raise awareness of using an expert, such as a qualified actuary, or specifically the risks of not using one in an audit of actuarial type liabilities.

Today's Life Insurance Products

How Good Experience Can Lead to Problems – Part 1

Brian Forman

When thinking about inforce life insurance policies, one of the key questions always relates to actual experience as compared to the assumptions made when pricing the product. With the proliferation of simplified underwriting and super preferred risk classes, setting the mortality assumption is often as much an art as it is a science. In the end, mortality that is 10% worse than originally assumed can be enough to wipe out profits on a life insurance product.

In most cases we can follow similar thoughts with respect to lapse rates. When more people stop paying premiums on their policies than were assumed in pricing, the company has less time to recover the original acquisition expenses. In addition, profits on remaining premiums are lost, and as a result, overall profits are compromised. However, in auditing life insurance companies you must be aware that the opposite can sometimes be true. Over the last 5 years insurance companies have written a tremendous amount of term insurance with a return of premium benefit (known as ROP in the industry). This generally provides an incentive for the insured to continue to pay their premiums by returning all of the premiums if they are still alive at the end of the level term period. What can be wrong with that?

The key in this situation is that actual profits on lapses may be built into the original pricing. Proper reserving requires a certain amount of prefunding of this refund benefit. In the United States, companies are also required to provide cash values on these products. Don't be misled by the fact that these are term policies – they do have cash values. But the cash values will generally be less than the reserves that the company is required to hold. In a typical US product, the cash value on a 20 year term policy with ROP may start to develop at year 6, but the cash value is only 25% of the reserve at duration 10 and 50% of the reserve at duration 15. As a result, when a policy lapses the company may release more in reserves than the cash values that they pay out. Thus there can be a gain on lapse.

The problem here is if the company depends too much on those gains. Actuaries are generally aware that the return of premium benefit is supposed to improve persistency, but by how much? Since this benefit has not been around for a long time and policies have not yet reached the point when the refund benefits are paid out, its impact is still somewhat of a guess. In spite of the incentives to keep the policy, there are always opposite forces at work including the cheap term rates associated with the super preferred classes and the concern about what happens when the term policy expires a few years in the future. If the actuary assumes too many lapses when pricing this product, he may actually overstate the product profitability.

In certain international areas where there are different nonforfeiture laws, things can even get more out of whack. Companies may be allowed to provide the return of premium benefit without any associated cash value. In those situations there may be very large gains assumed upon lapse because the reserve will be released without payment of any cash value benefit.

The bottom line is that you need to understand the benefits associated with the company's liabilities, and you always need to understand the risks associated with those benefits. Thinking that lapse experience better than assumed is always a good sign and source of comfort may be just the thing that can cause a company large problems a few years down the road.

Next month we will take these concepts one step further with an example that shows you just how large of an impact can be created by changes to lapse rates on ROP products.

Meet One of ARM's Experts

By Evelina Kaminski

James P. Galasso, FSA, MAAA

Jim is the Founder and President of Actuarial Modeling, an actuarial firm specializing in Healthcare Financial Modeling and Managed Care Consulting.

Areas of focus include:

- Pricing and Underwriting Health Care Plans (including Consumer Driven Health Plans and Predictive Risk Modeling)
- Premium Rate Filings
- Provider Contracting
- Actuarial Valuations
- Corporate Modeling, e.g. Financial Projections, Capital Planning (including Risk-Based Capital analysis)
- Market Segment Reporting
- Expense allocations & analysis
- Incurred But Not Paid claims analysis
- Mergers & Acquisitions / Due Diligence
- Expert Witness Testimony
- Best-Practices Benchmarking
- Data Management
- Competitor Analysis

Jim has over 25 years of experience in all aspects of the health care insurance and managed care industry, as the Chief Financial Officer of two major Healthcare Companies, as a Chief Actuary and as a Partner with Ernst & Young LLP.

He has developed several sophisticated proprietary software models focused on the health care industry (IBNR estimation models, software used to "recast" financial statements to reflect the most current actuarial estimates and to analyze trend patterns, and a model used for projecting financial results and evaluating health care firms).

He has substantial due diligence experience having reviewed several health care industry transactions (for example, Prudential Healthcare, MetLife Healthcare, and Oxford Health Plans). He has provided substantial services reviewing major managed care company credit risks for a consortium of banks led by Bank of America.

He has also provided actuarial opinions and actuarial reserve reviews for major Blue Cross Blue Shield Plans and other health care insurers and managed care companies.

Jim frequently speaks at various actuarial conferences, has published several actuarial papers, and has developed several actuarial training courses for industry actuaries that have been approved by the American Academy of Actuaries for continuing education credit. He is also a certified arbitrator with ARIAS US.

Looking forward to hearing from You – How and where can we work together?



If you have comments or suggestions for this newsletter, or if you have questions about our business, do not hesitate to e-mail us at newsletter@actrisk.com

Our Services

2008 Actuarial Risk Management

Risk Review is published electronically by Actuarial Risk Management, an independent member of the BDO Seidman Alliance, to provide members the latest news and information about managing risk.

EDITORS

Corwin Zass

Evelina Kaminski

If you have questions or comments about Risk Review, please send an email to

newsletter@actrisk.com



Actuarial Risk Management offers a wide range of services. Some of our services include:

Life & Annuity:

- Financial Reporting Duties for Statutory, Tax, GAAP, and IFRS
- Audits of Actuarial Liabilities
- Principle Based Capital and Reserves
- Economic Capital
- Value Based Management
- Merger, Acquisitions and Restructuring
- Products, Markets and Distribution
- Risk Assessment
- Reinsurance
- Expert Witness
- Experience Studies
- Sarbanes-Oxley / Model Audit Implementation

Who Are Our Clients?

- Insurance Companies
- Regulators
- Agencies
- Business Owners
- Hospitals
- Managed Care Providers
- Employers
- Hedge Funds
- Private Investors

Employee Benefit:

- Medicare Part D Assistance and Analysis
- Pricing of Group Medical, Dental, Disability, Life, Drug Plans
- Strategic Planning and Management Analysis
- Plan Funding (fully insured or self-insurance)
- Actuarial Plan Projections and Forecasts
- Self-Insurance Feasibility Studies
- Cost Containment Program (identification & evaluation)
- OPEB Valuations and Program Assessments (under FASB, GASB)

Managed Care:

- Valuation & Financial Reporting
- Provider Network Evaluations
- Benefit Plan Pricing & Premium Rate Filings
- Small & Large Group Underwriting
- IBNR Analysis
- Financial Reporting & Projections
- Predictive Risk Modeling
- HSAs & Consumer Driven Health Plans
- Actuarial Training Programs (Managed Care specific)
- Payor Drug Cost Reviews
- Expert Witness

Property & Casualty:

- Outstanding Claims Liability, IBNE, IBNR and Loss Reserve Analysis
- Product Profitability & Company Capital Management
- Excess Insurance Evaluations
- Loss Forecasts and Historical Profitability Analysis
- Models for Dynamic Financial & Cash Flow Analysis
- Cost Driver Analysis
- Reinsurance & Risk Transfer
- Relativity Factors
- Deductible Credits
- Regulatory Assistance
- Self-Ins. and Captive Prgms
- Audit Support
- Expert Witness

Retirement:

- Actuarial Funding Valuations
- Accounting Valuations and Disclosures (FASB 87, 88, 106, 112, 132, 158)
- Government Plan Valuations (GASB 25, 27, 43, 45)
- Claims Analysis
- Forecasts and Projections
- Plan Design, Evaluation and Re-Design
- Opinions / Recommendations on Assumptions