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The Future of Risk Credentials: CERA

The Chartered Enterprise Risk Analyst (CERA) credential reflects evolution in the actuarial field — from helping the world better understand risk to leading an organization's risk strategies using the framework of enterprise risk management (ERM). This is the first new credential developed by the SOA since 1949, and was developed in response to the need for highly skilled professionals in the growing field of ERM. The CERA credential is arguably the most comprehensive demonstration of enterprise-wide risk management expertise available today.

The CERA credential helps actuaries apply their qualitative and quantitative insights on risk to numerous industries including broader financial services, energy, transportation, manufacturing, healthcare, insurance and human resources consulting.

One emerging role that is a strong fit for those with the unique training offered by the CERA credential is that of the chief risk officer. Because of the credential's focus on the unexpected and emerging risks and the impact on the bottom-line, it is a natural fit for those tasked with managing risks on a national and global level.

The CERA is the future of risk credentials and fosters the vision of actuaries as 21st century thought leaders by building on the profession's technical competencies and enhancing communication, business and other technical skills.

To learn more about CERA or risk management issues, please call ARM.

Events

August 11-14

Health Pricing and
Valuation Boot Camp
Lansdowne, VA

August 14-16

43rd Actuarial Research
Conference
Regina, SK, Canada

September 8-10

Insurance Product Tax
Seminar
Washington, DC

September 9-10

Predictive Modeling
Symposium
Hollywood, FL

September 22-24

Critical Illness
Insurance
Conference
Las Vegas, NV

September 24-26

DI & LTC Insurers'
Forum
Las Vegas, NV

September 25-26

Valuation Actuary
Symposium
Washington, DC



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 Consulting Network, provides all necessary actuarial expertise and tools to ensure we can cover all actuarial disciplines, including the banking sector.

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
- Enterprise Risk Management Assessments



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

Around the Actuarial World in 2 Minutes...

This month's highlights



1. Life 2008 Spring Meeting

ARM had a representative at the recent Society of Actuaries Life 2008 Spring Meeting held in June in Quebec City, Canada. Two of the more entertaining sessions were the following:

Session 1: Enterprise Risk Management or Looking for Trouble – Real-Life Examples of What Went Wrong

Examples of financial institutions that had significant risk management policies, systems and procedures in place and lost Millions:

- Riggs Bank, NA – fined \$25MM for violating the Banks Secrecy Act and violating Money Laundering rules
- National Bank of Australia – lost \$191MM in Foreign Exchange trading
- Freddie Mac – paid \$125MM and dismissed its CEO and other executives for smoothing earnings in connection with FAS 133

The panel suggested the following as examples of what an organization, specifically the lower level employees and mid-level managers, could introduce to help prevent fraudulent activity:

- Communication (open door policy, cross-functional communication networks, open to receiving information and insight from various areas and departments, equal access to information – transparency throughout the organization)
- Leadership (define acceptable behaviors and your expectations by your own actions and words, integrity, Inner Bridge – tapping into the collective intelligence of the organization)
- Management of Time and Resources (create a climate that allows for Risk Management, allocate time and resources in such a way as to free up for review and communication)

Session 2: Captive Reinsurers – Their Uses, Setting Them Up and Managing Them

This session provided those in attendance insight into various types of captive reinsurers, different ways to set them up, including the most commonly found jurisdictions, and how to manage them once they are setup.

The panel discussed various reasons companies form captives, including efficient use of risk management capital, the need to capture underwriting profits and investment income, to preserve upfront tax deductibility of insurance premiums, reduce impact of market fluctuations, and to stabilize risk transfer pricing.

The three types of captive reinsurance companies are:

A. Producer Owned Reinsurance Company

- Formed by key producer or group of agents to allow for participation in the underwriting and ultimate performance of the business written
- From producer's perspective, purpose is increased income over commission
- From insurer's perspective, provides incentive for producer to write high quality business

B. True Captive

- Joint venture between two or more insurers to share admin expenses, risks, profits, etc.
- Self insurance programs set up by corporations to manage their benefit plans

C. Special Purpose Vehicle

- Downstream captive typically set up for capital management through securitization technology
- Term life insurance (Reg. XXX) and secondary guarantee universal life (SGUL under Reg. AXXX) typically have excessive "hump-backed" reserves, much of it higher than economic reserves. These SPV captives finance these redundant reserves (and its the most common use) while other uses include embedded value monetization
- Surplus Notes or securities issued to investors from captive to achieve financing

Continued on page 6

Actuaries and Insurance Accounting

In late May 2008, the International Actuarial Association (IAA), the worldwide association regrouping local professional actuarial associations and their individual actuaries, received a report from the committee on insurance accounting and its subcommittee on actuarial standards. The meeting, held in conjunction with the SOA/CAS Quebec City meeting, informed the attendees on the activities of the last six months. The excerpts below are that from the meeting notes of the IAA.

International Accounting Standards Board (the IASB)

The Committee continues to actively participate in the development of the IASB's project on accounting for insurance contracts (phase 2) and related financial reporting projects. The early part of the last six months was spent in responding to the IASB's Preliminary Views on Insurance Contracts and the Financial Accounting Standards Board's (FASB) Invitation to Comment on the same paper. Much of the Committee's upcoming activities will also relate to this and related issues. The Committee has been very active in providing actuarial advice to the IASB. In addition, the Committee expects to respond in the next six months to several IASB Discussion Papers or Exposure Drafts, including one on Revenue Recognition, Complexity in Measurement of Financial Instruments, and Liabilities and Equity. The anticipation is that the Committee will continue this activity on relevant issues.

IAA International Actuarial Standards of Practice

The Subcommittee on Actuarial Standards of Practice and its small drafting team distributed for re-exposure two further International Actuarial Standards of Practice (IASPs) – Business Combinations and Disclosure, as a step towards possible re-exposure. After receiving several valuable comment letters, it is anticipating recommending approval of these two new IASPs in Quebec City in June. The Subcommittee (in cooperation with the Professionalism Committee) will be turning its attention to the management and maintenance of its IASPs at its Quebec City meeting, including discussion of the structure of IASPs appropriate for implementation of IASB Insurance Contracts phase 2 and a possible change to current IASP No. 2, Actuarial Practice, to a higher level standard. It has cooperated with the IAA Pension and Employee Benefits Committee in distributing an expanded scope of the current IASP No. 2 to cover practice with respect to IFRS in relation with Employee Benefit Arrangements. An exposure draft is anticipated shortly. In addition, the Subcommittee leadership has been working with the Professionalism Committee on the possible revision to the IAA's due process for IASPs.

International Association of Insurance Supervisors (IAIS)

Although the IAA Insurance Regulations Committee is the primary IAA committee charged with maintaining relations with the IAIS, representatives from the Committee on Insurance Accounting have also been involved with the IAIS's efforts associated with the development of IASB standards. There are various individuals working on, what some say is the early workings of an issue paper, outlining the relationship between the actuary, independent auditor and insurance supervisor.

Ad hoc Risk Margin Working Group (the RMWG)

The Committee has several members providing editorial support for the IAA's measurement paper (together with Insurance Regulation and its Solvency Subcommittee), for which there have been many face-to-face meetings and conference calls. In March 2008, it re-exposed a paper addressing the measurement of liabilities of insurance contracts. It has received several comment letters within the last several weeks prior to the Quebec City. It will discuss the completion of this paper in Quebec City and recommend further steps that the IAA should undertake in the near future on this topic.

International Auditing and Assurance Standards Board (IAASB)

The IAA Committee was particularly involved in two of the IAASB's projects, addressing auditing of estimates including fair values; and the use of experts in auditing. The IAASB issued ISA 540 on estimates including fair value estimates in December 2007. A roundtable discussion occurred in December on possible further IAASB actions on auditing of fair values. In addition, the Committee issued comments on the IAASB's exposure draft on the use of experts in auditing in February 2008. Since then the working group redrafted the revisions with the possibility for completion at the IAASB's June meeting.

Other

The Committee responded to the International Valuation Standards Committee's (IVSC) exposure draft on Determination of Fair Value of Intangible Assets for IFRS Reporting Purposes.

US Standard of Practice #43

Unpaid Claim and Claim Adjustment Expense Estimates

The new Unpaid Claim Estimate Standard – Actuarial Standard of Practice #43 – has been in effect for all U.S. Property and Casualty estimates since September 1, 2007. It addresses the estimation process for unpaid claim liabilities, but not the selection of the provision actually carried on an insurer's balance sheet, although the provision could equal the estimate.

This article addresses the issue of why many actuaries believe there is a need for an unpaid claim estimate standard.

Currently, no ASOP exists to provide guidance to actuaries developing unpaid claim estimates. ASOP No. 36, *Statements of Actuarial Opinion Regarding Property & Casualty Loss and Loss Adjustment Expense Reserves*, which has been in effect since 2000, provides guidance to the actuary in issuing a written statement of actuarial opinion but not in developing an unpaid claim estimate.

The Casualty Actuarial Society's *Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Expense Reserves* contains some guidance. However, that Statement of Principles is currently under review, with a revised document expected soon and to contain significantly less guidance than the current version. Therefore, to address this issue, the Actuarial Standards Board (ASB) charged the Subcommittee on Reserving of the ASB Casualty Committee with creating an ASOP to provide guidance to actuaries regarding property/casualty unpaid claim estimates.

Scope of the standard:

- Provide guidance to actuaries when estimating unpaid claim and claim adjustment expenses for property/casualty coverages
- Applicable when estimating unpaid claims for all classes of entities (e.g., governmental entities, self insureds, insurance companies)
- Applicable when developing unpaid claims for events that have already occurred as of a specified date

Examples where standard does not apply:

- Estimation of losses in a ratemaking context
- Estimation of claim liability for losses that have not occurred for policies in force
- Estimates of liabilities for renewal of policies currently in force

The decision to exclude unpaid claim estimates developed for ratemaking purposes was to avoid placing inappropriate requirements on unpaid claim estimates in the ratemaking context, and to keep the scope workable by excluding additional considerations only applicable to the ratemaking context. Ratemaking requires more of a hypothetical analysis of possible future events than an analysis of the cost of past events. Hence, the selection and evaluation of assumptions and methods for ratemaking purposes may be different from the selection and evaluation of such for past event unpaid claim estimates.

To summarize, the loss reserving actuaries have various documents to guide them in current practice; however, the profession requires the need to continually refine and develop aids for the actuary.

To learn more about specific guidance on P&C reserving please contact ARM.

Around the Actuarial World in 2 Minutes... - *continued*

The panel then outlined how to choose the jurisdictions including the effects on:

- Tax & Legal Issues
- Capitalization Requirements
- Expenses, including Registration, Annual Fees, Premium Tax
- Captive Manager Requirements
- Reserve and Reporting Requirements
- Approval Process/Estimated Timeline

2. Defined Benefit Plans benefit from the Sub-prime Crisis

A recent Bloomberg article described how defined benefit plans improved their funding as follows:

“The subprime-mortgage crisis that crushed home sales and financial stocks during the past year was a boon to at least one group of investors: pension plans at some of the largest U.S. companies.

The global credit shortage and its effect on interest rates helped companies in the Standard & Poor's 500 Index cut estimates of pension obligations as their returns from U.S. government bonds increased. The combined pensions of S&P 500 companies swung to a \$63 billion surplus in 2007 after five years in the red, according to the S&P May 19 report. The number of over-funded plans rose to 127 last year from 85 in 2006.

As home-loan delinquencies climbed in the past 12 months, banks scaled back lending and investors fled corporate debt for the safety of Treasuries. The market adjustment caused Treasury yields to fall and corporate yields to rise, driving up the so-called discount rate used by most pension plans by an average of 50 basis points. ”

3. The Introduction of New 401(k) / Variable Hybrids?

Some insurers recently introduced an option for their 401(k) plans, which allows the participant to buy guaranteed lifetime income in small denomination increments, like \$10 per month. Like other options available under the plan, the plan's contributions, exchanges and rollovers fund these lifetime income options.

These types of guarantees may require additional liabilities, typically valued in variable annuity products and known as Living Benefits, over and above the 401(k) funds.

4. Are Consumer Driven Health Plan Companies Moving to Setup Their Own Banks?

In 2003, United Health Group chartered its own bank to administer health savings accounts (HSA). This was uncharted waters as most health plans opted to partner with recognizable commercial banks to administer their HSA funds.

There are those that will continue on the same path of joint ventures with banks while others recognize the need to lower costs, provide additional consumer solutions, and to keep bank fees and revenue within the organizational family.

According to a recent study, HSA accounts are likely to hold more than \$75 billion in assets by 2010.

What does this mean in the long term? The belief is that insurance companies that want to step outside the box will gain some synergies but it is more likely they will remain the exception, not the norm.

ARM is available to discuss any of these hot topics mentioned above.

Today's Life Insurance Products

How Good Experience Can Lead To Problems – Part 3

In the previous two months we have explored the potential for problems with return of premium benefits (ROP) on term products. There has been a proliferation of this business written over the last 5 years. In addition to the sales sizzle of this benefit, companies assume that the ROP benefit will improve product persistency. But by how much? The reality is that if persistency improves too much the company's profits may be at risk. From the audit perspective, reserves could be understated.

As a result, we saw that both Statutory and GAAP profits can be reduced substantially on these products if lapse rates are significantly better than assumed when the product was priced. This occurs because the product actually provides for some profit on lapse via the release of a larger reserve than the cash value payout. Since these riders are relatively new and little experience is currently available, it may be a few more years until we know the extent of this problem.

In addition, here are a few common mistakes that can lead to additional writedowns due to reserve insufficiency.

1. Actuaries commonly base reserve calculations on the assumption that premiums are paid annually. The premium mode generally has some impact on the profits, but the benefits are generally the same regardless of the premium mode. However, what happens with an ROP benefit? The benefit provided generally returns all of the premiums paid. If the premiums are paid monthly with a .09 modal factor, then the total premiums paid each year are 108% of the annual premium. As a result, the final ROP benefit provided is actually 8% higher in this situation. But if the reserves are calculated based only on annual mode, then insufficient reserves will be accumulated. This will often not be discovered until the ROP benefits are actually paid out 20 years later. If there are similar blocks of business inforce, an 8% increase in those reserves may be quite significant at that point in time.
2. Administrative systems are often not adept at handling the payment of benefits like ROP. Companies are used to paying cash values and death benefits, but endowment benefits do not occur as often. Claim systems are set up to keep track of reported death claims, but what happens when one of these policies with a 20 year ROP benefit crosses the 20th anniversary? In most of the designs the policy actually stays inforce at that point in time with higher premiums. There may be no trigger to cause the automatic payment of the return of premium benefit and companies are often dependent on manual reports or staff remembering to check some list. We have seen situations where some of these benefits get "lost", and if the benefits don't get paid, a liability needs to be set up somewhere. The reserves will automatically drop as soon as the policy passes the 20th anniversary whether or not the ROP benefit is actually paid. So you would need to watch for any of these unpaid benefits which can add up to a significant amount.

ROP is a benefit that can certainly be priced profitably and is here to stay. However, there are a number of issues related to its unique properties that can lead to problems if you are not careful.

Stock Option Valuation: Actuaries Needed

A paper presented at the Society of Actuaries Life 2008 Spring Meeting in Quebec City, Canada outlines the role of an actuary in stock option valuation. One of the challenges in option valuation is that most companies do not have sufficient stock price paths to accurately develop exercise behavior under all possible scenarios. Further, companies change award provisions (vesting schedules, contractual terms), which modifies the underlying exercise behavior.

Through aggregation of data, the credibility and consistency of option valuation can improve from current approaches. The Society of Actuaries recently studied how to aggregate employee exercise behavior into defensible tables of exercise behavior.

We note that in March 2005, the SEC issued Staff Accounting Bulletin (SAB) No. 107, which provides additional guidance on implementation of FASB 123R for SEC registrants. The simplified expected life method expired 12/31/2007 for most companies, while SAB No. 110 extended simplified method for companies without credible experience

Actuaries are perfectly suited for these roles since they have a fundamental understanding of financial models and market theory. Actuaries can assist companies with hedging strategies and have the ability to interpret participant behavior, which influences settlements and forfeitures. Also, actuarial models typically make adjustments to historical results to help develop forward looking assumptions and actuarial valuation expertise helps optimize plan design.

ARM's relationship with BDO provides the client with the assurance of compliance and proper interpretation of accounting rules effecting option valuations.

Spotlight

Questions for the Client's Loss Reserving Actuary

During a reserve review of losses, ARM typically has a discussion with the loss reserving actuary on various topics, including procedures, methodology and internal controls (or SOX-like compliance).

The following questions, while not the only ones used, provide some understanding of loss reserving ideology within the organization.

- Are the current methods the "best"?
- What evidence supports the selection of method(s)?
- Do you combine the results from various methods and how do you determine the appropriate weights used from each method?
- When and why did you change methods?
- What is the confidence range around estimates?
- Is there any consideration for the development of new data sources or newer robust methods, like stochastic modeling?

Gaining some insight into the thinking of the loss reserving actuary allows the reviewer to see whether the organization follows "best practices" for reserving approaches and internal control procedures.

Meet One of ARM's Experts

With Enterprise Risk Management now at the forefront of companies' minds, ARM is excited to add a new member to our team:

Max J. Rudolph, CERA, CFA, FSA, MAAA

Max J. Rudolph, founder of Rudolph Financial Consulting, LLC, has over 25 years of experience developing financial risk models dealing with strategic balance sheet risks like interest rate, liquidity and capital. Max is active within the actuarial profession, specifically in the area of enterprise risk management, serving in numerous leadership positions.

Some of his key recent accomplishments include:

- Led efforts to adjust deferred annuity sales and investment strategy
- Implemented ERM process for small/midsize insurance company
- Developed educational module material for investment and operational risk
- Conducted research on third party asset managers used by insurers
- Provided peer review of insurer's pricing discipline process
- Provided expert witness testimony on actuarial topics
- Managed interest rate risk exposure for enterprise
- Developed recommendations to improve enterprise liquidity and capital ratios
- Led industry initiatives on Enterprise Risk Management (ERM)
- Developed rating agency relationships and presented financial risk measures and management plan to S&P, Moody's and AM Best
- Developed efficient frontier tool to generate optimal investment strategies
- Developed interactive planning tool to show impact of various strategies
- Utilized networking contacts to develop and report on current investment strategies used by a broad cross section of insurers
- Supervised employees and led key industry initiatives using dispersed teams

His work focuses on best practice strategies related to ALM, ERM, liquidity, capital management and pandemics.

Mr. Rudolph will provide valuable ERM expertise to the financial sector. He is Chartered Enterprise Risk Analyst, a Chartered Financial Analyst, a Fellow of the Society of Actuaries, and a Member of the American Academy of Actuaries. He has served in a variety of volunteer roles, including as a member of the SOA Board of Governors and chair of the SOA Investment Section. He currently chairs the American Academy of Actuaries Economic Scenario Work Group and will chair the 2009 ERM Symposium.

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

Also, visit our new website at www.actrisk.com

Our Services

2008 Actuarial Risk Management

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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