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## "Actuary in the News?"

According to the November 24<sup>th</sup> Financial Times,  
Warren Buffet acted more like an actuary...

"Selling naked at-the-money call or put options is incredibly risky. Yet this is what perhaps the savviest investor of our time has done. Warren Buffett's \$37b notional bet that the S&P 500 and other indices will not be lower in 15 to 20 years starting in 2019 has helped push the cost of credit protection on Berkshire Hathaway to a level nearly as high as ailing Citigroup. This seems an uncharacteristic bet for the man who famously called derivatives financial weapons of mass destruction. But, in fact, it is far less reckless than it seems – notwithstanding the recent slump in stocks to an 11-year low.

The put options are exercisable only at maturity, thus a catastrophic event in the interim would not force a payoff, and Berkshire never has to post collateral. The long time horizon makes it unlikely he will have to pay while boosting the time value of the \$4.5b premium. The spike in Berkshire's credit default swaps may be linked to these contracts, however, since counterparties, lacking collateral, may be forced to buy them to cover counterparty risk.

Still, timing is everything. These puts would have fetched far more with today's higher implied volatility as well as having a smaller chance of being paid out due to the lower starting market valuation. Crestmont Research points out that there have been 10 different 15-year periods since 1900 when the S&P 500 was lower at the end. But of these, six followed the Great Depression and three would have seen a lower payout on the puts than the future value of the premium.

Buffett has shrewdly traded short-term volatility for long-term returns but his odds were hurt by high starting valuations and the possibility of deflation down the line.

He is unlikely to lose but, in this case, he acted more like a good actuary than a great value investor."

## Events

### January 9

AAA's Council on  
Professionalism  
Orlando, FL

### January 15

AAA's Council of U.S.  
Presidents Meeting  
Tucson, AZ

### February 19-20

NAAC Meeting  
Zacateras, Mx

### February 19-20

SOA 5th Annual  
Teleunderwriting  
Seminar  
San Antonio, TX

### Feb 26-Mar 1

NCOIL  
Spring Meeting  
Washington

### March 14 -16

NAIC  
Spring Meeting  
San Diego, CA

### April 1

2009 Enrolled  
Actuaries Meeting  
Washington, DC



## ARM: Who We Are

Visit [www.actrisk.com](http://www.actrisk.com) for the comprehensive service listing.

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 Reviews of Actuarial Assets & Liabilities
- Data Management
- Product Development and Competitor Analysis
- Sarbanes-Oxley Assistance
- Retirement and Pension design and valuations
- Alternative risk management solutions, captive and self-insurance programs
- Enterprise Risk Management Assessments



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the next generation in actuarial delivery...**

# Around the Actuarial World in 2 Minutes...

## This month's highlights



### What's New in Society of Actuaries' Research?

#### 1. **Subprime Mortgage Crisis and Lessons for Insurers RFP**

The SOA is beginning a research study to evaluate the impact of the subprime mortgage crisis on insurers and what can be learned from it for future financial and risk management.

#### 2. **Operational Risk for Insurers within an ERM Framework-Intent Deadline Approaching**

The two US actuarial bodies (CAS & SOA) along with the Canadian actuarial body (CIA) have a Joint Risk Management Research Team that is beginning a research study on the impact of operational risk for insurers and how it can be managed under an enterprise risk management framework. The team is interested in exploring operational risk from a number of aspects and would like to initiate one or more related projects.

#### 3. **Implications of Post Retirement Risks Life Insurance RFP**

The Society of Actuaries' Committee on Life Insurance Research is in the early stages of a new study to examine the impact of public perceptions on post-retirement risks to life insurance product development and marketing strategies.

### Inside the Academy

#### 1. **Congressional testimony on the financial crisis**

In written testimony to the U.S. House Financial Services Committee, Academy Immediate Past President Bill Bluhm offered actuarial perspective and recommended that risk management principles should serve as a foundation for injecting much needed public confidence in the financial industry.

#### 2. **Concerns about SEC annuity proposal**

The Academy's Equity-Indexed Annuities Work Group voiced concerns in a comment letter to the Securities and Exchange Commission (SEC) about proposed SEC rule 151A, which would define some indexed annuities as securities. The work group will soon be submitting additional follow-up comments, which will be posted on the Academy website after they are filed.

#### 3. **LFRC seeks comments on practice note**

The Life Financial Reporting Committee just released for public comment a practice note on FAS 157.

## Pension Nightmare?

The results of the financial fallout has some estimates that U.S. companies could face a pension contribution tab of \$40 billion and have corporations looking at an expected combined pension deficit of well over \$200 billion, their worst ever.

The funded status of the U.S. defined benefit plans of companies, in the Standard & Poor's 500 index, was 86%, which translated into an aggregate underfunding of \$160 billion as of mid-November 2008. To put things in perspective, at the end of 2007, the U.S. plans of the S&P 500 companies were 108% funded for a surplus of \$95 billion.

The hit to funding levels is entirely a result of the collapse in returns on the asset side. Because of rising interest rates — especially the wide spread between corporate and Treasury bonds — pension liabilities have fallen, offsetting somewhat the drop in pension assets. The expectation is that many DB plans will see a dramatic shift in pension investment strategy.

Besides causing big expected increases in cash outlays for pension contributions, the rise in pension underfunding will hurt corporate financial statements and shareholders. One large Wall Street analyst said "There will be a lot of (pension) asset losses, and it's going to be immediate and it's going to look ugly."

On the other side of the pond, trustees and sponsoring employers of UK pension funds have been urged to re-examine the actuarial assumptions they use for valuations in light of recent economic conditions.

The Financial Reporting Council (FRC) said there have been "dramatic changes" in the markets over the past few months, leading to "increased uncertainty" about the economy.

As a result, it is advising pension fund governors to consider whether actuarial assumptions they may have used a few months ago are still valid under current circumstances, or whether they represent a "fundamental change" in the financial landscape that should be reflected in their assumptions.

We will find out in the months to come. Please contact ARM to help you evaluate these pension programs as this year is far from typical.

## NAIC Winter Meeting

The NAIC completed their winter meeting in the early December. Given the condition of the markets and the economy showing significant deterioration signs, the theme was the impact to insurers from the calamity.

The Casualty Actuarial and Statistical (C) Task Force discussed the draft guidelines to supplement the Medical Professional Liability Closed Claim Reporting Model Law. The guidelines, as recently re-drafted, include a suggested regulation on reporting requirements, a mechanism for reporting and collecting data, some insurance department outreach efforts, and details about compiling, verifying, and releasing data.

*Continued on page 5*

## NAIC Winter Meeting (cont'd)

During the winter meeting, the Life and Health Actuarial Task Force (LHATF):

- Discussed presentations by the American Academy of Actuaries and the Group of North American Insurance Enterprises regarding developments in international accounting for life insurance.
- Discussed the appropriate experience mortality tables and the margins on those mortality tables for the Principle-Based Reserving system.
- Discussed a presentation of the American Academy of Actuaries' Economic Scenarios Work Group regarding the development of a generator to produce interest rate scenarios.
- Discussed a presentation by the American Council of Life Insurers regarding an additional net premium reserve methodology for VM-20, the section of the valuation manual for life insurance products.
- Received reports from the Accident and Health Working Group.
- Discussed and amended the proposed revision to the Standard Valuation Law. The current version was released for comment.
- Released the Standard Nonforfeiture Law for comment.
- Received reports from subgroups on various portions of the Valuation Manual.

## Is The UK's Financial Services Authority (FSA) Starting to Think Like Actuaries?

According to the Financial Services Authority, stress testing at UK financial firms is too weak and should perform "reverse stress tests" to identify high-risk scenarios. The FSA will release their paper in early 2009.

"For example, the holding period and the duration of the stress are often very short and take little account of the possibility of extended periods of market disruption such as conditions witnessed over the past year. Furthermore, the implementation of these stress tests fails to take into consideration the correlations and co-dependencies of the firms' risks and positions beyond those in their trading books," the FSA said, adding that most firms "have not yet gone so far as to significantly challenge their underlying business models".

The FSA believes managers might have been unwilling to prepare for severe events because of moral hazard. "They felt they could actively manage these [moderate] events while public authorities would step in during market-wide, severe scenarios," noted the FSA.

The FSA states a reverse stress test is based on scenarios that could threaten the survival of the organization and what risk mitigating precautions the organization is taking against them. As an example, survival could be threatened by a general loss of market confidence, even if the organization still had adequate regulatory capital, the FSA added. Since the early 1990s, the US life insurance industry has used asset adequacy testing to test solvency by stressing the inforce block of business against a set of seven interest rate changes, known as the New York 7. These cash flow testing methods have evolved since then to include stochastic models with some severe scenarios, like a "run on the bank" situation.

ARM expects that the banking sector in the US will also be required to demonstrate adequate capital using this stress testing approach. To learn more, please contact us.

## NAIC/AICPA Working Group

The NAIC/AICPA Working Group of the Financial Condition (E) Committee met via conference call during the winter meeting. During this meeting, the Working Group:

- Received a report from the American Institute of Certified Public Accountants (AICPA) regarding projects that affect state insurance regulators and the insurance industry. The AICPA report discussed a new Statement on Auditing Standards (SAS) that is expected to be adopted in December 2008 that would supersede SAS No. 103, Audit Documentation. The new SAS has been drafted using International Standard on Auditing 230, Audit Documentation, as a base and has been drafted in accordance with the Accounting Standards Board's (ASB) clarity project. The ASB also plans to issue six additional proposed SASs in accordance with the clarity project, which are expected to be exposed for comment beginning in January 2009.
- Discussed a survey of the states regarding their progress of adopting the revised Model Audit Rule requirements. Based on the results of the survey, five states (Alabama, Delaware, New Hampshire, Oregon and Virginia) have adopted the revised requirements. In addition, nine other states (California, Connecticut, Nebraska, Nevada, Ohio, Oklahoma, South Carolina, Tennessee and Wisconsin) have publicly exposed revised statutes or regulations that incorporate the new requirements. Altogether, 13 states plan to adopt the revisions prior to the conclusion of 2008 and the remaining 33 states plan on adopting the revisions in 2009. It should be noted that the effective date of the revisions will not be until 2010. NAIC staff will continue to update this survey on a quarterly basis, and the results will be discussed at each of the National Meetings.
- Discussed the process for external auditors to comply with Section 11 of the Annual Financial Reporting Model Regulation.
- Discussed and adopted non-substantive changes to the Implementation Guide (Guide) for the Annual Financial Reporting Model Regulation. The non-substantive changes were made to update the Guide for changes in auditing standards that are referenced within the document.
- Discussed interpretations of Annual Financial Reporting Model Regulation requirements to clarify that all material statutory financial reporting control processes of entities exceeding the \$500 million premium threshold are required to be included in Management's Report on Internal Controls over Financial Reporting

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## Application of Life Insurance Analysis Techniques to Banking Liabilities

Recently, ARM had the opportunity to participate with BDO in the review of a mid-size bank's methodology and applications used to calculate the Allowance for Loan and Lease Losses (ALLL) liability.

A bank establishes an ALLL liability in accordance with FAS 5, as a bank's best estimate of the probable amount of loans and lease-financing receivables that it will be unable to collect based on current information and events.

One of the initial steps many banks follow is to develop a migration matrix based on historical experience. The migration matrix is a table showing the historical transition of loans from one rate class to another rate class (or to point of default), and is the basis for determining the probability of loan default.

The procedures banks use to develop this migration matrix and the resultant migration probabilities are directly comparable with the procedures life insurance companies use to analyze experience for mortality, lapse and morbidity.

Life insurance actuaries not only have a longer history of analysis in this area, but life insurance actuaries were some of the early pioneers of credibility theory which is used to determine the amount of reliance companies should place on their own experience.

We found that our experience in this area could be directly applied to reviewing the bank's methodology, and assisted us in providing worthwhile commentary and guidance to the bank, as well as providing recommendations for best practice methods.

During the course of this project, we also had the opportunity to review various methods used by the banking industry to determine the ALLL liability. In many instances, we discovered that banks, small and large, tend to use approximations and simplifying assumptions, which could produce results that may not even replicate the banks' own historical experience, much less producing an accurate projection of future experience.

The banking industry has not yet reached a mature state in this area. There have been recent papers which recommend theoretically correct techniques, but there are few banks which have adopted their use.

While there has been some regulatory guidance and requirements for ALLL, as a result of the recent credit risk crisis it may not be surprising to see in the near future greater regulatory involvement and requirements for theoretically correct models.

## Meet One of ARM's Experts

### Susan Fleming Cabrera

Ms. Cabrera provides extensive experience with mergers, acquisitions, valuation and strategic planning for the insurance industry. She spent a dozen years as a private equity investor and an investment banker investing in and advising financial services companies, with a particular focus on the insurance industry. Ms. Cabrera is also an educator, frequently teaching executives, investment professionals, MBAs and undergraduates in areas of corporate finance and valuation of insurance companies.

Ms. Cabrera has previously served on the board of directors of four publicly traded insurance companies and currently serves on the board of Hanover Investors, L.P. a UK based hedge fund and Virtus Investment Partners, Inc., a publicly traded asset management company. She provides consulting expertise with ARM, via her own independent consulting firm.

Ms. Cabrera held various positions in the investment community, including that of Partner at Capital Z Financial Services Partners, a \$1.85B private equity fund investing in the financial services sector, and Vice President of Insurance Partners, L.P., a \$540 million private equity fund investing solely in the insurance industry.

Her positions had her evaluate existing and start-up ventures, oversee all aspects of deal execution, including due diligence, financial valuation, negotiation of deal terms, and deal documentation, deal sourcing, and monitoring of portfolio companies through participation on boards of directors.

Ms. Cabrera holds a MS in Management from Cornell University and expects to complete her PhD in Management in 2009.



### 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](mailto:newsletter@actrisk.com)

Also, visit our new website at [www.actrisk.com](http://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

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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

