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Gambling, or a Competitive Advantage?

The Investment Actuary Symposium Looks At Stochastic Modeling

by Max J. Rudolph

Financial risk management changed on September 11, 2001. Everyone knows that. But the techniques that we use to deal with this new environment are not that much different than the tools developed to deal with the old world. Actuaries are familiar with these tools. How can we become more involved as leaders in the new environment? It was within this framework that the Investment Actuary Symposium was held on November 8–9, 2001 in Las Vegas, Nevada. A total of 12 distinct topics were covered. Originally 21 sessions were scheduled across three tracks, but a slowing economy and travel concerns resulted in lower attendance than had been originally expected. Even so, the excellent networking opportunities and quality speakers made the seminar worthwhile for everyone who attended.

Adam Berger and Jay Glacy got things started with a portfolio optimization discussion that focused on efficient frontier concepts, adding constraints to extend the models to solve non-convex problems. Michelle Smith showed how, when determining changes in embedded value across years, to use a bridge run and waterfall charts to aid results analysis.

Kurt Karl shared Swiss Re's economic forecasts for international growth, while focusing on the U.S. outlook and his favorite leading indicators. His list of risks for the next year included both downside and upside possibilities. This tied in well with the general conference theme of using stochastic distributions of results to make decisions.

By showing how stochastic generators vary between pricing and risk management projects, Eric Thorlacius and Stephen Britt demonstrated the risks of using pricing based scenarios for risk management projects.

The lunch speaker, Michael Shackleford provided a nice break as he showed why he is the "Wizard of Odds," having parlayed his ASA into a job consulting for gaming concerns. His Ten Commandments of Gambling range from "Expect to Lose" to "Have Fun," but he also has run millions of scenarios to calculate odds of various games to the near basis point. Best advice: go off the main "tourist" strip to get better odds. Mike shared some results from his work and generated some great questions. Thanks Mike!

Samir Nangea then shared his thoughts on modeling credit risk using default models, correlation approaches and portfolio analysis. The current work being done on C-3 for equity risk was described by Stephen Britt and Mark Tenney. Complex products require stochastic RBC calculations to drive reasonable capital requirements, and the scenario generators must be up to the challenge.

Optimizing enterprise value is certainly high on everyone's list of things to accomplish, much like Mom and apple pie. Frank Sabatini not only talked about it, he shared an example of how you can use stochastic analysis to create shareholder value and give your company a competitive advantage.

Since the seminar was shortened from its original length this year, topics such as international issues, fair value and comparing CFA material against the SOA syllabus will have to wait until next year. It was interesting to take an informal poll of current CFA charter holders and those taking exams to see that half of the room had multiple designations.

On the second day of the symposium, Marc Altschull, David Weinsier and Jay Glacy discussed various graphical tools that you can use to leverage existing models as you generate efficient frontiers, perform risk-return analysis, and match duration and convexity across alternative strategies. Jay also shared some of the work being done at the Santa Fe Institute on Complex Adaptive Systems and how it could be applied to insurers. Be sure to ask him about the "Whack a Mole" analogy!

Alton Cogert shared an institutional money manager's perspective on current events and shared a sample checklist of questions to ask your manager. It just might improve the results if the manager sees that you are asking the right questions. He also discussed some risks to be aware of, both from new asset types and old.

Portfolio managers are always looking for alternative investment strategies to move them toward the efficient frontier. Jeff Jakubiak and David Hopewell shared some research showing returns and risk across a range of asset types. They shared the potential benefits of adding hedge funds to an institutional investor's portfolio, along with some new risks associated with the product.

David Braun described various risk management tools that can be used with variable annuity products. He showed how a combination of reinsurance, derivative-based hedging and natural hedges could mitigate the risks inherent in these products.

For those of you who did not make it to the symposium but would like more information, the SOA has made available (for a fee) the binder containing all of the handouts. You can order it from *www.soa.org.*

Planning will start soon for next fall's Investment Actuary Symposium. If you are interested in helping or have suggested topics, please contact either Max Rudolph or Frank Sabatini at the contact info listed in the online directory. We expect to provide a multi-track seminar in 2002 and are working with the CIA to merge with their seminar in 2003.

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