



SOCIETY OF ACTUARIES

Article from:

In The Public Interest

January 2014 – Issue 9

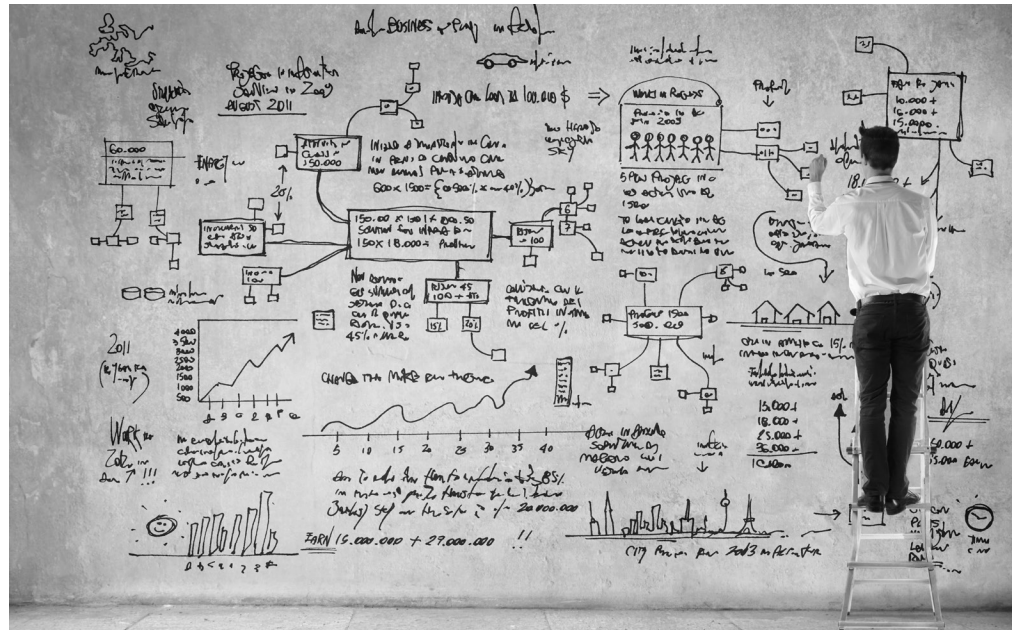
ACTUARIAL TIPS AND TRICKS

ARE WE HAVING FUN YET?

By Greg Sgrosso



Greg Sgrosso, FSA, MAAA, is an actuary at Milliman, Inc., in Atlanta, Ga. He can be reached at greg.sgrosso@milliman.com.



When I first joined an actuarial firm, I, naturally, started hanging out with my co-workers quite a bit. We never did start that company softball team, but we did meet up to go places, went to the lake to water ski, and we'd maybe get a game of poker in here or there.

Being actuaries, we tend to overanalyze a lot of items, like car prices, utility bills, and general budget items. When I started working, I was given a time sheet that had amazing functionality not only for tracking client codes and billable time, but also for mapping out study time on an accompanying calendar. Just a few years later, I received a retirement model that one of my co-workers had made. It was great, with lots of inputs to play with, but it could also be depressing at times. It had an age of "financial ruin," and, in order to make it to 90, it didn't look like I was going to be able to retire at 55 after all.

So, here I am, working in a math-intensive industry where we're all very familiar with spreadsheets and databases, and I'm thinking "How can I use my math knowledge for fun?" I found some time to help a buddy analyze his business

and come up with some benchmarks on numbers he had to hit each month to make some money. I had another friend who was writing a book and who wanted some insight into the assumptions he was making and data he would need to prove/disprove his theories on reversing the initial momentum of a game or match (i.e., the likelihood of winning a game when the other guy scored first). Those are all entertaining, and I love helping out a friend in need, but I thought there might be a way to do something bigger.

I am part of an investment group, and I built a model to track our revenue and expenses with projections for future years. Unfortunately, we bought properties in 2005 and 2006, right before the crash of 2008 and 2009, so that wasn't fun. I also entered a contest with four friends to lose weight, and developed a nice little allocation model to tie the amount owed proportionally to the amount of weight one lost. They were impressed, figuring it would be an all or nothing endeavor (I may have over-thought it). Of course, I spent too much time calculating and not enough time exercising. Not fun.

I'm really into sports, and I saw this show once about how the football (odds) lines in Las Vegas are chosen. I was excited and hoped to see the behind the scenes inter-working of multiple servers of data with detailed analysis of weather conditions and historical trends. But, what did I get? Three guys in a room picking their own number, and then talking it out to arrive at the line. Are you kidding me? This is the foundation of all of those Vegas riches and huge casinos?


The show continued on to present another man, sports betting legend Billy Waters, who has very successfully remained ahead of the curve and who uses a lot of analysis and information to accumulate his money. The story mentioned that in order to be successful you'd need to average at least a 57 percent winning percentage. That was interesting, but it was a full-time job for him, and I wouldn't know what to do with myself without getting to complete Medicare bids in the spring.

There was also a story about some Georgia Tech professors who developed a system to pick the March Madness bracket and had great success. Maybe there was a chance, after all, for some arbitrage on those football lines that seem so arbitrarily obtained....

I went to work and started collecting data as I went. Over the years I gathered varied information on football teams, fed it all into an Excel spreadsheet, and then looked for any trends or formulas that could be relied upon. I even had a nice Actuarial Control Cycle in place. My defined problem was to pick the football games more accurately. My modeling was an attempt to define the solution, and, by monitoring results, I was able to fine-tune the model to get some formulas that worked: one for college football and one for professional football. This was getting fun!

Just as with any control cycle, one cannot account for all external forces. And, unfortunately, there turned out to be a gap in the range of my results where (most of the time) picking a team

wasn't any better than a coin flip. I haven't taken the time (or had the time) to fine-tune my analysis, but I was able to use it to win a college football office pool one season, and that was fun.

Maybe I should just keep my head down and work hard, so I can retire as early as possible without hitting my financial ruin, and then I will have the time to bring more factors into my model to really enjoy football season. That will be fun. 

Over the years I gathered varied information on football teams, fed it all into an Excel spreadsheet, and then looked for any trends or formulas that could be relied upon.