



Article from

**Reinsurance News**

November 2018

Issue 92

# Letter From the Editor

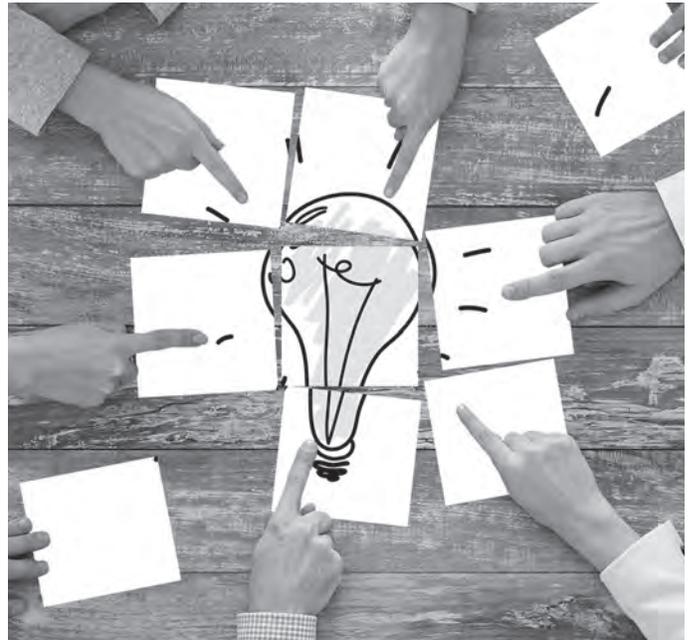
By Dr. Dirk Nieder

**W**elcome to another issue of *Reinsurance News*! I am an actuary. Like many of you, I studied mathematics. I was taught to think logically, and to structure and solve problems. Typically, our goal was to look for a solution to a problem and to ensure the uniqueness of this solution. The existence of multiple solutions was considered undesirable and indicated the need to reframe the problem.

An example of the problems which can occur with multiple solutions comes from the field of Differential Equations. A brigade of soldiers was marching in step across England's Broughton Suspension Bridge in April 1831. Their rhythmic marching amplified the frequency of the natural vibrations of the bridge, and the resonance was strong enough to make the bridge vibrate until it collapsed. The bridge broke apart, and dozens of soldiers fell into the water.<sup>1</sup> Since then, soldiers are not allowed to march in step when crossing a long bridge. Another more recent example occurred in June 2000 when the London Millennium Bridge was opened. The bridge started to sway as large groups of people walked onto the bridge. The widening swings caused many pedestrians not to fall down but to fall into step with the bridge's vibrations, amplifying the vibrations—and the swaying.<sup>2</sup>

My entire mathematical education was focused on framing problems and finding unique solutions. I am convinced that this problem-solving approach was a decisive factor in my success when applying for and getting my first job. It also served me well throughout the actuarial exams.

However, my thinking process was challenged when I started my MBA studies. We were given a case study to prepare for class. As you might expect, I was looking for “the” solution to the case study. You may imagine my confusion when the case study triggered an intensive discussion in class that did not converge on one solution but allowed opposing solutions. Obviously, the situation was a set-up: These case studies were designed to initiate discussions and to allow multiple solutions. It was an important learning experience to look not only for my unique solution, but to appreciate the enrichment that comes with multiple, sometimes also opposing solutions.



To jump-start creative thinking, inspirations from places beyond our usual comfort zone are very important.

I am thus very happy about the diversity and variety of articles that we collected for this issue of *Reinsurance News*. Geographically, the articles move from the Far East to the North Atlantic Ocean—with topics as varied as issues that exist with mortality improvement, principle-based reserving, and a very personal volunteer experience. I would like to thank all of the writers who have contributed to this edition of the newsletter.

I would like to take this opportunity to encourage all readers to share their experiences and knowledge, whether professionally or personally. We rely on your input and we are looking forward to your contributions to *Reinsurance News*.

I hope that you will find inspiration in this great collection of articles in this issue of *Reinsurance News*. ■



Dr. Dirk Nieder, FSA, is regional director, Gen Re, Life/Health North East Asia. He can be contacted at [nieder@genre.com](mailto:nieder@genre.com).

## ENDNOTES

- 1 Elizabeth Howell, Why Do Soldiers Break Stride On A Bridge?, Live Science Contributor, 22 May 2013, [www.livescience.com](http://www.livescience.com).
- 2 Strogatz et al, Theoretical mechanics: Crowd synchrony on the Millennium Bridge, *Nature*, volume 438, pages 43–44 (03 November 2005).