

# A message from 21st Services Chief Actuary Vincent J. Granieri

In the past year, 21st Services has made enormous strides in refining our mortality tables and our underwriting system. As always, our motivation is to provide the most accurate product possible, based on the information provided to us, on all other data we can obtain and on our proprietary analytical processes. I would like to provide some insights into the changes we have made so far and those still coming. And I'd like to comment on how they fit into our overall strategy.

As the Chief Actuary for 21st Services, it is my responsibility to carry out an ongoing assessment of our mortality tables and underwriting systems in light of available information and to pursue whatever data is necessary to advance the state of the art in assessing senior mortality. Several projects are under way to those ends.

We work with two excellent independent actuarial firms, one in Europe and one here in the United States. As we have studied the recent trends in the data, two broad themes have emerged.

The first relates to the newly completed Society of Actuaries' (SOA) 2008 Valuation Basic Tables (VBT) and 21st Services' actual mortality experience at early durations.

The second relates to a unique opportunity for 21st Services to utilize millions of records on senior mortality.

## 2008 VBT and 21st Services Experience

From an actuarial or statistical perspective, the life settlements industry is in its infancy. What I mean by that is simply this: For many reasons, including a rapidly changing market and a relatively small number of cases, it is extremely challenging to find the appropriate mortality tables on which to base life expectancy estimates.

Early on, the SOA 2001 VBT emerged as the mortality table of choice in the life settlements market. Keep in mind that the VBT serve as the basis for setting life insurance policy reserves and are therefore designed to be conservative for that purpose. This means that the VBT are biased toward setting higher life insurance reserves, which means they have higher underlying mortality. When this is applied to the life settlements market, it is not conservative at all, since higher mortality means shortened LEs, all else being equal.

The VBT pose another challenge. For older ages, the tables grade to population mortality because there is so little life insurance experience at the older ages. Again, this is conservative if you are reserving for life insurance policies, but not for the life settlements market. 21st Services has recognized these conservative biases and adjusted the VBT to develop mortality tables that are more appropriate for the life settlement market.



The Society of Actuaries has done a professional and thorough job and have disclosed their methodology and assumptions. In early 2008, an updated VBT was released with a significant amount of new data. Having analyzed both the 2008 VBT and our own experience, we now conclude the following:

1. The 2008 VBT, being more current and based on more senior lives than the 2001 VBT, are more appropriate for the life settlements market. With some proprietary adjustments – removing inappropriate elements in the underlying data and including other elements that were excluded by its authors – 21st Services will base its proprietary mortality tables on the 2008 VBT.
2. The 2008 VBT is particularly liberal in its treatment of smokers relative to the 2001 VBT. Adjustments are needed here.
3. 21st Services' experience in early durations suggests that the market has shifted markedly toward healthier lives since 2004, and even more credits for healthy lives are appropriate.
4. Since life insurance companies can exclude older aged clients through the underwriting process but the life settlement market desires LE determinations on them, 21st Services must look for new sources of data with which to enhance its underwriting methods.
5. It is important to reflect the results of these studies as soon as practical into our mortality tables.

#### **Multi-Year Medical Data Study**

The need identified in number 4 above has led us to partner with a not-for-profit research foundation with access to tens of millions of medical records on individuals aged 65 and above.

Consistent with 21st Services' philosophy and the research group's charter, no individual data will be identifiable, preserving the confidentiality of the records.

This study will make available for the first time, to the life settlement industry and, to my knowledge, to the life insurance industry, data linking various medical conditions to the probability of survival for individuals exhibiting those conditions.

Unlike mortality studies which produce actual-to-expected ratios over broad categories such as age, sex and smoking status, this study will offer levels of granularity that were unavailable previously. Because 21st Services employs an objective, automated evaluation process, data pools such as the results of this study can be analyzed and easily incorporated into our underwriting process. 21st Services is unique among life expectancy evaluators in this regard. As more data are analyzed in the next several years, we will use it to make on-going improvements to our underwriting system.

I welcome your comments and questions. We are very excited about the potential of these projects, not only for their benefit to our business but for the opportunity they present to advance the statistical foundation of our industry.

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