



ReWard is Hannover Re's new evidence-based credit program

Credit Programs

On October 23, 1919, during a joint meeting of the Association of Life Insurance Medical Directors and the Actuarial Society of America, two esteemed employees from New York Life, Dr. Oscar Rogers and Chief Actuary Arthur Hunter, introduced “The Numerical Method of Determining the Value of Risks for Insurance”. Their findings were recorded in Transactions, the Society of Actuaries publication, Volume XX; Part two: No. 62, pages 273-332.

This influential paper introduced a superior means of defining and quantifying mortality risk by considering favorable (credit) and unfavorable (debit) factors. An individual’s overall risk was determined by summing all debits and credits, and the final summarized score reflected the mortality risk the individual presented to the company. Thus, the field of Underwriting was born.

Predictive modeling incorporates the concept of debits and credits. All the factors underwriters consider in assessing mortality risk are assigned risk scores akin to debits and credits. The resulting score represents a holistic view of an individual’s mortality risk. These same techniques are also found in the Framingham study which underlies the preferred risk classes that are in effect today. In both of these instances, the individual risk factors are weighted according to their impact on mortality. The mathematical techniques adjust for the confounding influence of the other factors. As a result, the factors are not double counted.

Recently, with the demise of table shaving, there is renewed interest in credits. But this time, credits have been applied in ways that are inconsistent with the fundamentals. Many of these new credit programs only look for favorable factors. These programs allow for credits when the factors are present, but ignore the adversity of the finding when the factors are unfavorable. That is akin to using half of the debit/credit numerical risk classification system. As the list of credit factors increases, so does the likelihood of a mortality reduction. When there is no offsetting debit associated with each factor, the final result is incomplete.

Defining the correct number of debits and credits for any factor is complicated. Some of the credit programs allow one point when the factor is present and 0 points when absent. This does not take into consideration the wide variance in value that should be associated with each factor. The value of the factor varies along its continuum of possible results.

Another way to think of this can be described by the often asked question:

Which preferred risk factor is more important?

Importance is associated with the slope of the line associated with the mortality curve described by the risk factor. When asked in this manner, the answer depends

upon where we are along the mortality curve and what two points we are comparing.

A well-crafted credit program can work. A correct model is consistent with both the fundamentals of underwriting and the latest buzz associated with predictive modeling. Credits are a fundamental of risk classification and should be part of the underwriting process. Applied correctly, the right risks are rewarded the credits they deserve.

The ReWard Credit Calculator takes these principles into consideration, and can be found in the hr | Ascent manual.

For more information on ReWard, visit our [website](#).



Doug Ingle, FALU, FLMI
Vice President, Underwriting Research
Tel. (720) 279-5027
doug.ingle@hramerica.com