Implementing Risk Appetite for Variable Annuities

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Abstract

The following paper starts by defining and discussing the nature of risk and its primary relationship to capital preservation. The paper then continues with a guide for implementing a company's risk appetite statement for a variable annuity product. A company's unique risk profile changes at the level of individual transactions. Because it is impractical to set limits and monitor risk at such a low level, companies group risk into larger classes in accordance with a chosen risk framework. One function of a risk appetite statement is to define the risk capital allocated to the variable annuity business by risk class. Risk capital is typically defined in terms of economic capital allocations at the corporate level. To implement the risk limits set forth by this statement, a company can 1) create a risk map from risk class to transaction type for each related control variable, 2) model the sensitivity of capital to each control variable in terms of risk appetite and 3) set the allowable range for each control variable in order to stay under the explicit limits of the risk appetite statement. All this must be done while maintaining compliance both with regulations and company best practices. Several potential models are discussed to model the capital sensitivity. The focus is on those elements that influence the liability side of the balance sheet.