SOCIETY OF ACTUARIES

ERRATA for *Life Insurance Products and Finance*

By Atkinson, D., Dallas, J., 2000

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The formula for Risk-Based Capital was changed by the NAIC after this book was published. The third paragraph should read:

The risk components are referred to in the RBC formula as follows:

C0 = Asset Risk – Affiliated Amounts
C1o = Asset Risk – All Other
C1cs = Asset Risk – Unaffiliated Common Stock and Affiliated Non-Insurance Stock
C2 = Insurance Risk
C3a = Interest Rate Risk
C3b = Health Credit Risk
C3c = Market Risk
C4a = Business Risk – Non Health Portion
C4b = Business Risk – Health Portion

The RBC formula does not simply sum the individual risk components. Instead, the formula assumes that the C2 risk is totally independent of the C1 and C3 risks. To reflect this independence, a company's final risk-based capital is calculated by applying a 'covariance adjustment; to the components:

$$\text{Risk-Based Capital} = C0 + C4a + [(C1o + C3a)^2 + (C1cs + C3c)^2 + (C2)^2 + (C3b)^2 + (C4b)^2]^{1/2}$$

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The formula for Risk-Based Capital was changed by the NAIC after this book was published. Table 10.8.1 should be:

RBC Components	*Company 1*	*Company 2*
CO Risk	—	—
C1o Risk	90,000,000	10,000,000
C1cs Risk	—	—
C2 Risk	400,000,000	400,000,000
C3a Risk	10,000,000	10,000,000
C3b Risk	—	—
C3c Risk	—	—
C4a Risk	1,000,000	1,000,000
C4b Risk	—	—
Sum of Components	501,000,000	421,000,000
RBC, Reflecting the Covariance Adjustment	413,310,563	401,499,688
Ratio of RBC to Sum	0.82	0.95