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https://www.100test.com/kao_ti2020/84/2021_2022_SOA_E7_9C_9F_E9_A2_98N_c50_84060.htm COURSE 8: Fall 2003 -1- GO ON TO NEXT PAGEInvestmentMorning SessionSociety of Actuaries Course 8V Fall 2003**BEGINNING OF EXAMINATION**MORNING SESSIONQuestions 1-6 pertain to the Case Study.1. (4 points) LifeCo is reviewing its Operational Guidelines for the Use of Derivatives forconsistency with The Group of Thirty recommendations.(a) Identify and describe the various derivatives risks as outlined in the Group ofThirty recommendations.(b) Assess LifeCo ’s management of these risks associated with the derivatives usedto hedge its liabilities.COURSE 8: Fall 2003 -2- GO ON TO NEXT PAGEInvestmentMorning SessionQuestions 1-6 pertain to the Case Study.2. (10 points) LifeCo ’s ALM committee is concerned about the impact of the followingcapital market events on the company ’s value:(1) Low equity market return(2) Higher than expected credit loss(3) Low interest rate environment(a) Describe the minimum guarantees offered in the Variable Annuity product andhow the guarantees can be priced using the(i) actuarial approach, and(ii) capital market approach.(b) Assess the potential impact of the capital market events described above on theVariable Annuity product.(c) Recommend risk management strategies to mitigate the risks associated with thecapital market events described above on the Variable Annuity product.(d) Describe the characteristics of the Payout Annuity

product cash out flows.(e) Assess the potential impact of the capital market events described above on thePayout Annuity product.(f) Recommend investment strategies to mitigate the impact of the capital marketevents described above on the Payout Annuity product through(i) asset allocation, and(ii) use of derivative products.Justify your recommendations.COURSE 8: Fall 2003 -3- GO ON TO NEXT PAGEInvestmentMorning SessionQuestions 1-6 pertain to the Case Study.3. (5 points) LifeCo ’ s ALM report for December 2000 indicates a significant mismatch inthe Non-Traditional Life Products segment.(a) (1 Point) Compare the use of dollar duration to effective duration as a risk metricfor this product line.(b) (4 Points) Describe various approaches to ALM as outlined by Glacy and Vilmsand assess how each approach might be applied to the non-traditional life segmentin order to mitigate the mismatch problem.COURSE 8: Fall 2003 -4- GO ON TO NEXT PAGEInvestmentMorning SessionQuestions 1-6 pertain to the Case Study.4. (8 points) LifeCo is considering how to evaluate the performance of a new GIC product.You are given the following pricing assumptions for LifeCo ’ s new GIC product:Term: 3 yearsMaturity Value: 123% of the initial depositLapse: NonePolicyholder Options: NonePremium Size: $1,000Required Return on Capital: 8% per annumRequired Capital Factor for GICs: 3.6% of liabilitiesAsset Return: 8.5%Tax Rate: 35%Risk-Free Zero-Coupon Rate Curve: 1-year: 5.70%2-year: 6.08%3-year: 6.21%GIC Competitors:Required Return on Capital: 12%Required Capital Factor for GICs: 5% of liabilitiesAsset Return: 8%(a)

Compare the “ entity-specific ” and “ fair value ” systems.(b) Calculate the tax-adjusted liability value at issue for LifeCo ’ s new GIC productusing the Cost of Capital method.(c) Calculate the liability value at issue and the required spread of LifeCo ’ s new GICproduct using the Total Return method as presented by Ho, Scheitlin and Tam.(d) Describe the arguments for and against reflecting an entity ’ s credit standing in thefair value of its liabilities.(e) Assess how the Cost of Capital method reflects credit standing and how thismight impact the valuation of LifeCo ’ s liabilities.COURSE 8: Fall 2003 -5- GO ON TO NEXT PAGEInvestmentMorning SessionQuestions 1-6 pertain to the Case Study. 100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com