
SOCIETY OF ACTUARIES
Retirement Plan Investment & Risk Management Exam

Exam RETRPIRM

Date: Thursday, May 1, 2014

Time: 2:00 p.m. – 4:15 p.m.

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has a total of 40 points.

This exam consists of 5 questions, numbered 1 through 5.

The points for each question are indicated at the beginning of the question. Question 2 pertains to the Case Study, which is enclosed inside the front cover of this exam booklet.
2. Failure to stop writing after time is called will result in the disqualification of your answers or further disciplinary action.
3. While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions on the exam booklet.

Written-Answer Instructions

1. Write your candidate number at the top of each sheet. Your name must not appear.
2. Write on only one side of a sheet. Start each question on a fresh sheet. On each sheet, write the number of the question that you are answering. Do not answer more than one question on a single sheet.
3. The answer should be confined to the question as set.
4. When you are asked to calculate, show all your work including any applicable formulas.
5. When you finish, insert all your written-answer sheets into the Essay Answer Envelope. Be sure to hand in all your answer sheets because they cannot be accepted later. Seal the envelope and write your candidate number in the space provided on the outside of the envelope. Check the appropriate box to indicate Exam RETRPIRM.
6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

Tournez le cahier d'examen pour la version française.

CASE STUDY INSTRUCTIONS

The case study will be used as a basis for some examination questions. Be sure to answer the question asked by referring to the case study. For example, when asked for advantages of a particular plan design to a company referenced in the case study, your response should be limited to that company. Other advantages should not be listed, as they are extraneous to the question and will result in no additional credit. Further, if they conflict with the applicable advantages, no credit will be given.

****BEGINNING OF EXAMINATION****

- 1.** (7 points)
- (a) (4 points) Compare and contrast the traditional and financial economics methodologies for determining the discount rate for a pension plan valuation.
 - (b) (3 points) Critique the use of a salary increase assumption in determining pension plan liabilities from a financial economics perspective.

Question 2 pertains to the Case Study.

- 2.** (7 points) The CEO of NOC is considering liability risk transfer strategies for the pensioners and beneficiaries in the NOC Full-Time Salaried Pension Plan.
- (a) (4 points) Compare and contrast buy-in and buy-out annuities from both NOC's and the plan participants' perspectives.
 - (b) (3 points) Describe the decision-making process of entering into a risk transfer agreement with an insurance company, including the potential impact on NOC's investment policy.

3. (7 points)

- (a) (4 points) A local government provides a defined benefit pension plan for its employees. Describe the impact of investing a portion of the plan assets in equities on:
- (i) future taxpayers; and
 - (ii) plan participants.
- (b) (3 points) It has been argued that pension plan assets should not be invested in equities. Describe the rationale for this argument from a corporate finance perspective.

4. (11 points)

- (a) (4 points) Describe the risks of investing pension plan assets in fixed income securities.
- (b) (3 points) Describe how the risks in part (a) apply to mortgage-backed securities.
- (c) (4 points) Describe four active management fixed income investment strategies.

5. (8 points)

- (a) (5 points) Describe a company's fiduciary duties with respect to sponsoring a Defined Contribution (DC) pension plan.
- (b) (3 points) Describe the advantages and disadvantages of including Lifestyle funds in a DC plan from both an employee and employer perspective.

****END OF EXAMINATION****

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