

**Individual Life and Annuity Life Pricing
Fall 2013**

Important Exam Information:

Exam Date and Time	A read-through time will be given prior to the start of the exam—15 minutes in the morning session and 15 minutes in the afternoon session.
Exam Registration	Candidates may register online or with an application.
Order Study Notes	Study notes are part of the required syllabus and are not available electronically but may be purchased through the online store.
Introductory Study Note	The Introductory Study Note has a complete listing of all study notes as well as errata and other important information.
Case Study	There is no case study for this examination.
Past Exams	Past Exams from 2000-present are available on SOA website.
Updates	Candidates should be sure to check the Updates page on the exam home page periodically for additional corrections or notices.

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1.

Learning Objectives

The candidate will understand feasibility step of new product and how it drives design.

Learning Outcomes

The Candidate will be able to:

- a) Explain considerations for prudent and practical decision making
- b) Describe tax regulation and perform calculations to evaluate compliance
- c) Describe how investment policy and policy loans can impact design
- d) Identify gaps between the product design and the operations of the company and procedures and systems
- e) Recommend ways to close the gaps between design and the internal/external constraints
- f) Describe non-forfeiture regulation and perform calculations to evaluate compliance

Resources

- *Life Insurance Products and Finance*, Atkinson & Dallas, Ch. 2
- *Life Insurance and Modified Endowments Under Internal Revenue Code Sections 7702 and 7702A*, DesRochers, Ch. 2-4, 6
- [2008 Supplement to Life Insurance and Modified Endowments Under Internal Revenue Code Sections 7702 and 7702A](#), DesRochers, pp. 3-33, 40-56, 71-81, Appendices A-C
- *Canadian Taxation of Life Insurance*, Marino, 6th Edition, Ch. 1, 3, 14, 15
- LP-121-13: Life Insurance and Annuity Non-forfeiture Practices (formerly ILA-D800-07)
- LP-122-13: NAIC Standard Non-forfeiture Law for Life Insurances: Sections 1-4, 5c, 6-9 (formerly ILA-D801-07)
- LP-123-13: NAIC Standard Non-forfeiture Law for Individual Deferred Annuities (formerly ILA-D802-07)

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2.

Learning Objectives

The candidate will understand the design and purpose of various product types, benefits and features.

Learning Outcomes

The Candidate will be able to:

- a) Describe in detail product types, benefits and features
- b) Construct and recommend a design that is consistent with the market needs identified in the idea generation
- c) Evaluate the feasibility of the recommended design

Resources

- *Investment Guarantees*, Hardy, Ch. 1
- LP-102-07: Equity Indexed Annuities: Product Design and Pricing Consideration (formerly ILA-D102-07)
- LP-105-07: Life and Annuity Products and Features (formerly ILA-D105-07)
- LP-116-10: Variable Annuities, Kalberer and Ravindran , Ch. 5, 9-11 (formerly ILA-D116-10)
- LP-126-13: Pricing Critical Illness Insurance in Canada, Mooney (formerly ILA-D610-08)
- LP-127-13: Product Design of Critical Illness Insurance in Canada (formerly ILA-D611-08)
- [EIUL: The Devil's in the Details](#), Product Matters, Aug (62)2005
- ["What's Backing Your Life Insurance Guarantee?"](#), The Actuary Magazine, Feb 2005
- ["Term Mortality and Lapses"](#), Product Matters, Aug (62) 2005,
- [Designing & Pricing LTCI Combination Insurance Products](#), Long Term Care News, Dec 2004
- [Annuity/LTCI Combinations](#) , Product Matters, Oct, 2009
- [ASOP #2 Non-guaranteed Charges or Benefits for Life Insurance Policies and Annuity Contracts](#), Mar 2004
- [Quantification of the Natural Hedge Characteristics of Combination Life or Annuity Products Linked to Long-Term Care Insurance](#), Mar 2012
- [Is This Correction Good For Life Insurance](#), Product Development News, Feb 2011

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3.

Learning Objectives

The candidate will understand the relationship between the product features, their inherent risks, and the selection of appropriate pricing assumptions, profit measures and modeling approaches.

Learning Outcomes

The Candidate will be able to:

- a) Identify and explain the setting of an appropriate assumption for product characteristics such as the following:
 - i) Riders
 - ii) Policyholder dividends
 - iii) Equity linked
 - iv) Embedded options
 - v) Return of premium
 - vi) Secondary guarantees
 - vii) Payout annuity benefits
 - viii) Crediting methodology
 - ix) Other non-guaranteed elements
- b) Identify and explain the setting of an appropriate assumption for risk and other factors such as:
 - i) Available experience data
 - ii) The marketplace
 - iii) Underwriting
 - iv) Distribution channel characteristics
 - v) Reinsurance
 - vi) Expenses (fixed, variable, marginal)
 - vii) Taxes (income and premium)
 - viii) investment strategy
- c) Analyze results and recommend appropriate action from an array of risk and profit measures such as: Statutory, GAAP, Return on Equity, Market Consistent Pricing, Embedded Value
- d) Analyze the capital requirements for a product and describe solutions such as securitization
- e) Describe when a stochastic model should be used, its advantages and disadvantages, how to build it and how to analyze its results

Resources

- *Life Insurance Products and Finance*, Atkinson & Dallas, Ch. 3, 8, 10, 11, 13

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- *Investment Guarantees*, Hardy, Ch. 1 (p. 14), 2, 6, 8, 12, 13
- *Stochastic Modeling: Theory and Reality from an Actuarial Perspective*, IAA, Intro, IA – IB.2, I.E, IIA – IIA.3, III, IVA – IVA.9
- Marketing for Actuaries: Individual Life and Health Insurance, Laporte, 2000 Edition, Ch. 4 and 6
- LP-102-07: Equity Indexed Annuities: Product Design and Pricing Consideration (formerly ILA-D102-07)
- LP-103-07: Price WaterHouse Coopers, Innovative Financing: Life Insurance Securitization, January 2006 (formerly ILA-D103-07)
- LP-106-07: Gross Premiums for Disability Waiver Benefits (formerly ILA-D106-07)
- LP-107-07: Experience Assumptions for Individual Life Insurance and Annuities (formerly ILA-D107-07)
- LP-109-12: Moody's Investors Service Corporate Default and Recovery Rates (formerly ILA-D109-12)
- LP-110-07: Policyholder Dividends (formerly ILA-D110-07)
- LP-113-09: Swiss Re, Economics of Insurance: How Insurers Create Value for Shareholders (formerly ILA-D113-09)
- LP-114-09: CIA Research Paper, Life Insurance Costing and Risk Analysis, June 2008 (formerly ILA-D114-09)
- LP-115-09: IAA Measurement of Liabilities for Life Insurance Contracts: Current Estimates and Risk Margins April 15, 2009 – pp.75-112 only (formerly ILA-D115-09)
- LP-118-11: Traditional versus Market Consistent Product Pricing, Senjeeb Kumar (formerly ILA-D118-11)
- LP-119-11: A Comprehensive Guide to Measuring and Managing Life Insurance Company Expenses, Gutterman, Chapter 5 (formerly ILA-D119-11)
- LP-120-11: Session PD-5: Pricing Best Practices (formerly ILA-D120-11)
- [Report on the Lapse and Mortality Experience of Post-Level Premium Period Term Plans](#), (pp. 14-31, 40-51)
- [ASOP #1 Non-guaranteed Charges or Benefits for Life Insurance Policies and Annuity Contracts](#)
- [Ending the Mortality Table](#), Living to 100 Symposium
- [The Response of Life Insurance Pricing to Life Settlements](#), Product Matters, Sep 2006
- [Mortality Table Slope – the Discussion Goes On](#), Product Matters Jul 2004
- [Does Preferred Wear Off?](#) Product Matters, Jul 2004
- [Product Development Challenges in a Principles-Based World](#), Product Matters, Oct 2007
- [Pricing in a Return-on-Equity Environment](#), TSA XXXIX, 1987
- [Risk Based Pricing – Risk Management at Point of Sale](#), Product Matters, June 2009
- [Predictive Modeling for Life Insurance](#), Deloitte
- [Level Term Lapse Rates – Lessons Learned Here and in Canada](#), Product Matters, Oct 2011

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4.

Learning Objectives

The candidate will understand actuarial requirements of product implementation and the monitoring of experience versus product assumptions.

Learning Outcomes

The Candidate will be able to:

- a) Describe and evaluate compliance with illustration regulation and other policy form regulations
- b) Evaluate, through the use of Experience Studies, how actual experience varies from expected relative but not limited to: mortality, investment returns, expenses and policyholder behavior such as policy and premium persistency
- c) Describe how to ensure the quality of data
- d) Recommend changes to non-guaranteed elements for deviations from expected

Resources

- LP-107-07: Experience Assumptions for Individual Life Insurance and Annuities (formerly ILA-D107-07)
- LP-110-07: Policyholder Dividends (formerly ILA-D110-07)
- LP-124-13: Role of the Actuary in Product Roll-out (formerly ILA-D803-07)
- LP-125-13: NAIC Life Insurance Illustrations Model Regulation (formerly ILA-D804-09)
- LP-128-13: CLHIA - Guideline Illustrations (formerly ILA-D614-11)
- [Lapse Experience Under Lapse Supported Products](#), Product Matters, December (63) 2005
- [Expected Mortality: Fully Underwritten Canadian Individual Life Insurance Policies, CIA Education Note, July 2002 \(excl. Appendices\)](#)
- ["Experience Data Quality: How to Clean and Validate Your Data"](#) (Exclude Appendices) SOA/LIMRA Research Report
- [ASOP #1 Non-guaranteed Charges or Benefits for Life Insurance Policies and Annuity Contracts](#), March 2004
- [ASOP #23 Data Quality](#) (excl. Transmittal Memo and Appendices)