

# ILA – Life Finance & Valuation, Canada Exam

Spring 2019/Fall 2019

## Important Exam Information:

[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

A case study will not be used 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.

## 1. Topic: Accounting, Financial Statements and Disclosures

### Learning Objectives

The candidate will understand financial statements and reports of Canadian life insurance companies as well as the professional standards addressing financial reporting and valuation.

### Learning Outcomes

The Candidate will be able to:

- a) Construct, analyze and evaluate basic financial statements for a life insurance company
- b) Describe the structure of the Canadian Annual Statement and explain the purpose of its statements, key exhibits and schedules
- c) Describe, apply and evaluate regulatory documentation and disclosure requirements
- d) Describe, apply and evaluate the appropriate accounting treatments for insurance products, separate accounts, assets, derivatives and reinsurance
- e) Apply and recommend methods for performing reviews of financial statements including reserves

### Resources

- *Canadian Insurance Taxation*, Swales, et. al., 4<sup>th</sup> Edition, 2015
  - Ch. 3-6, 9 & 24
- LFV-102-09: Actuarial Review of Reserves and Other Annual Statement Liabilities
- LFV-618-13: OSFI Guideline D-10: Accounting for Financial Instruments Designated as Fair Value Option
- LFV-620-14: OSFI Guideline E15: Appointed Actuary – Legal Requirements, Qualifications and External Review, Sep 2012
- LFV-634-19: CIA Standards of Practice: Insurance Sections 2400 & 2700, Feb 2018
- LFV-635-13: Participating Account Management and Disclosure to Participating Policyholders and Adjustable Policyholders
- LFV-646-19: Chapter 1 (excluding 1.10, 1.12 & 1.13) of *Statutory Valuation of Individual Life and Annuity Contracts - Volume I*, Claire, D., Lombardi, L. and Summers, S., 5<sup>th</sup> Edition, 2018
- [CIA Educational Note: Valuation of Gross Policy Liabilities and Reinsurance Recoverables](#), Dec 2010
- [CIA Educational Note: CALM Implication of AcSB Section 3855 Financial Instruments – Recognition and Measurement](#), Jun 2006
- [CIA Educational Note on IFRS: Classification of Contracts under IFRS \(IASP 3\)](#), Jun 2009
- [CIA Educational Note on IFRS: Measurement of Investment Contracts and Service Contracts under IFRS \(IASP 4\)](#), Jun 2009
- [CIA Research Paper on IFRS: Embedded Derivatives and Derivatives under IFRS \(IASP 10\)](#), Dec 2009
- [CIA Research Paper: IFRS Disclosure Requirements for Life Insurers](#), Dec 2010

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- [Future Income and Alternative Taxes](#), CIA Educational Note, Dec 2012
- [Actuarial Aspects of SOX 404](#), Financial Reporter, Issue 59, Dec 2004
- [Responsibilities of the Actuary for Communicating Sarbanes-Oxley control: Effectiveness in Accordance with Actuarial Standards of Practice](#), Financial Reporter, Issue 59, Dec 2004
- [CIA Educational Note: Guidance on Fairness Opinions Required Under the Insurance Companies Act Pursuant to Bill C-57 \(2005\)](#)
- [CIA Educational Note: Dividend Determination for Participating Policies](#), Jan 2014

<b>2. Topic: Valuation</b>
<b>Learning Objectives</b>
The candidate will understand and apply valuation principles to individual life insurance and annuity products issued by Canadian life insurance companies.
<b>Learning Outcomes</b>
The Candidate will be able to: a) Compare and apply methods for life and annuity product reserves b) Evaluate, calculate, and interpret liabilities c) Recommend and justify appropriate valuation assumptions
<b>Resources</b>
<ul style="list-style-type: none"><li>• LFV-133-16: Cluster Analysis: A Spatial Approach to Actuarial Modeling, Milliman, 2008</li><li>• LFV-634-19: CIA Standards of Practice: Insurance Sections 2100, 2300, 2500, Feb 2018</li><li>• LFV-637-13: OSFI Letter Evidence for Mean Reversion in Equity Prices</li><li>• LFV-646-19: Chapter 1 (excluding 1.10, 1.12 &amp; 1.13) of <i>Statutory Valuation of Individual Life and Annuity Contracts - Volume I</i>, Claire, D., Lombardi, L. and Summers, S., 5<sup>th</sup> Edition, 2018</li><li>• <a href="#">CIA Educational Note: Best Estimates Assumptions for Expenses</a>, Nov 2006</li><li>• <a href="#">CIA Educational Note: Margins for Adverse Deviations (MfAD)</a>, Nov 2006</li><li>• <a href="#">CIA: Valuation of Segregated Fund Investment Guarantees</a>, Oct 2005</li><li>• <a href="#">CIA Educational Note: Approximations to the Canadian Asset Liability Method (CALM)</a>, Nov 2006</li><li>• <a href="#">CIA Educational Note: Expected Mortality: Fully Underwritten Canadian Individual Life Insurance Policies</a>, Jul 2002 (excluding Appendices)</li><li>• <a href="#">Report of the Task Force on Segregated Fund Liability and Capital Methodologies</a>, Aug 2010</li><li>• <a href="#">CIA Educational Note: Reflection of Hedging in Segregated Fund Valuation</a>, May 2012</li><li>• <a href="#">CIA Educational Note: Future Income and Alternative Taxes</a>, Dec 2012 (excluding Appendix D)</li><li>• <a href="#">CIA Final Communication of a Promulgation of Prescribed Mortality Improvement Rates</a>, Jul 2017</li><li>• <a href="#">CIA Draft Report: Task Force on Mortality Improvement</a>, Apr 2017</li><li>• <a href="#">CIA Educational Note: Valuation of Universal Life Policy Liabilities</a>, Feb 2012</li><li>• <a href="#">CIA Use of Actuarial Judgment in Setting Assumptions and Margins for Adverse Deviations</a>, Nov 2006</li><li>• <a href="#">CIA Educational Note, Currency Risk in the Valuation of Policy Liabilities for Life &amp; Health Insurers</a>, Dec 2009</li><li>• <a href="#">CIA Education Note, Investment Returns for Non-fixed Income Returns for Assets</a>, Mar 2011</li></ul>

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- [Final Communication of Promulgations of the Maximum Net Credit Spread, Ultimate Reinvestment Rates and Calibration Criteria for Stochastic Risk-Free Interest Rates in the Standards of Practice](#), May 2014 (section 2 only)
- [Final Communication of Updated Promulgations of the Ultimate Reinvestment Rates and Calibration Criteria for Stochastic Risk-Free Interest Rates](#), Jul 2017
- [CIA Educational Note: Investment Assumptions Used in the Valuation of Life and Health Insurance Contract Liabilities](#), Sep 2015
- [CIA Research Paper, Fixed Income Calibration](#), Apr 2014
- [CIA Educational Note, Development of the Equilibrium Risk-Free Market Curve for the Base Scenario](#), Dec 2015
- [CIA Educational Note: Selective Lapsation for Renewable Term Insurance Products](#), Feb 2017

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<b>3. Topic: Emerging Standards</b>
<b>Learning Objectives</b>
The candidate will understand and apply emerging financial and valuation standards, principles and methodologies.
<b>Learning Outcomes</b>
The Candidate will be able to:  a) Describe emerging developments impacting Canadian valuation, capital, and International Financial Reporting frameworks, and assess their impact on the valuation of reserves, capital and financial statements
<b>Resources</b>
<ul style="list-style-type: none"><li>• LFV-141-18: IFRS 17 Insurance Contracts – IFRS Standards Effects Analysis, May 2017, IASB (sections 1, 2, 4, 6, 7 and Appendices A &amp; B)</li><li>• LFV-648-19: PwC In depth A look at current financial reporting issues IFRS 17, Jun 2017</li><li>• <a href="#">CIA Educational Note: Comparison of IFRS 17 to Current CIA Standards of Practice</a>, Sep 2018</li></ul>

#### 4. Topic: Financial and Capital Management

##### Learning Objectives

The candidate will understand how to explain and apply the methods, approaches and tools of financial management and value creation in a life insurance company context.

##### Learning Outcomes

The Candidate will be able to:

- a) Assess financial performance, including analyzing and interpreting the financial performance of a product line or company
- b) Apply methods and principles of embedded value
- c) Explain and apply methods in determining regulatory capital and economic capital
- d) Explain and evaluate the respective perspectives of regulators, investors, policyholders and insurance company management regarding the role and determination of capital
- e) Explain Canadian regulatory capital framework and principles
- f) Explain and apply methods in earnings management and capital management

##### Resources

- LFV-106-07: Chapter 4 of Insurance Industry Mergers & Acquisitions (sections 4.1-4.6)
- LFV-136-16: Life Insurance Products and Finance, Atkinson & Dallas, Ch.11, pp. 499-502
- LFV-137-16: EVARAROC vs MCEV Earnings – A Unification Approach, Kraus, 2011
- LFV-138-16: Prudential Financial Stockholder’s Equity and Operating Leverage, HBR, 2008
- LFV-603-13: OSFI Guideline D-9 -Source of Earning Disclosure (Life Insurance Companies)
- LFV-626-10: Session PD-28: Embedded Value (EV) and Market-Consistent Embedded Value (MCEV). What is the Difference?
- LFV-636-18: OSFI Guideline A-4 Internal Target Capital Ratio for Insurance Companies
- LFV-641-19: OSFI: Own Risk and Solvency Assessment (E-19), Dec 2017
- LFV-645-19: OSFI Guideline – Life Insurance Capital Adequacy Test (LICAT), Chapters 1-3, 5-9, 11, November 2017
- LFV-646-19: Chapter 1 (1.12 & 1.13 only) of *Statutory Valuation of Individual Life and Annuity Contracts - Volume I*, Claire, D., Lombardi, L. and Summers, S., 5<sup>th</sup> Edition, 2018
- LFV-647-19: CIA Educational Note: Life Insurance Capital Adequacy Test (LICAT) and Capital Adequacy Requirements for Life and Health Insurance (CARLI), March 2018
- [CIA: Sources of Earnings: Determination and Disclosure](#), Aug 2004
- [Economic Capital for Life Insurance Companies](#), SOA, Feb 2008, Ch. 1, 3-6
- [A Multi-Stakeholder Approach to Capital Adequacy](#), Conning Research

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- Strategic Management of Life Insurance Company Surplus, TSA XXXVIII, pp. 105-116
- Embedded Value: Practice and Theory, SOA, Actuarial Practice Forum, Mar 2009



<b>5. Topic: Reinsurance</b>
<b>Learning Objectives</b>
The candidate will understand the nature and uses of basic reinsurance arrangements used by life insurance companies.
<b>Learning Outcomes</b>
The Candidate will be able to understand the various forms of reinsurance, and be able to, with respect to both the ceding and assuming parties, analyze and evaluate: <ul style="list-style-type: none"><li>a) Risk transfer considerations</li><li>b) Cash flow mechanics</li><li>c) Accounting and financial statement impacts</li><li>d) Reserve credit considerations</li></ul>
<b>Resources</b>
<ul style="list-style-type: none"><li>• <i>Life, Health &amp; Annuity Reinsurance</i>, Tiller, John E. and Tiller, Denise, 4<sup>th</sup> Edition, 2015<ul style="list-style-type: none"><li>○ Ch. 4, 5, 6 (pp. 157-160 and 173-174), 7, 8 (Canadian content only), 12 &amp; 17</li></ul></li><li>• LFV-632-12: OSFI Guideline B-3: Sound Reinsurance Practices and Procedures</li><li>• LFV-645-19: OSFI Guideline – Life Insurance Capital Adequacy Test (LICAT), Chapter 10, Nov 2017</li><li>• <u>Accounting for Reinsurance Contracts under International Financial Reporting Standards, (IASP 9)</u>, (excluding Appendices C &amp; D)</li></ul>