

## Individual Life and Annuity Company/Sponsor Perspective – Canada

### Important Information

The examination for this course will be given on Friday, May 9<sup>th</sup> 8:30am–11:45am and 1:30pm–4:45pm and will consist of six hours of written-answer questions. 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. Information regarding registering for exams is available on the [Exam Registration](#) page.

Study notes are part of the required Course of Reading and are not available electronically. Candidates must order the study notes from the Society of Actuaries using the [Study Note Order Form](#). Past exams are available on the Exam Archives page of the SOA web site under [Multiple Choice/Essay Examinations](#).

Candidates should be sure to check the [Updates](#) page of the web site periodically for additional corrections or notices.

The candidate should be very familiar with the Learning Objectives as described in the Basic Education Catalog. These Learning Objectives are the first ingredient in developing the syllabus and also guide the examination committee when writing questions. The Learning Objectives set out the cognitive level needed to pass this exam. You will notice that the candidates are expected to “analyze,” “explain,” “calculate,” “describe,” “apply,” etc. While studying the syllabus material, candidates may want to refer back to the Learning Objectives to remain focused on the goals of the exam.

Exam: ILA - CSP	TOPIC: <b><u>Financial Reporting</u></b>
Learning Objectives	
<b>1. The candidate will understand the preparation of financial statements and reports of Can life insurance companies and be able to analyze the data in them.</b>	
Learning Outcomes	
The candidate will be able to:	
A. Prepare the 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 how to compute the taxable income of a life insurance company	
D. Explain fair value accounting principles	
E. Describe international accounting standards	
Syllabus Resources	
<ul style="list-style-type: none"> <li>• <i>Canadian Insurance Taxation</i>, Second Edition, PriceWaterhouseCoopers, 2000:               <ul style="list-style-type: none"> <li>○ Chapters 3, 4, 5, 6, 11 and 28</li> <li>○ Chapters 1, 2, 7-10 and 27 for background only</li> </ul> </li> <li>• <i>Valuation of Life Insurance Liabilities</i>, Lombardi, Fourth Edition, 2006, Chapter 1, Overview of Valuation Requirements</li> <li>• ILA-C100-07 (formerly 8FE-412-05), Financial Reporting Developments Accounting for Derivative Instruments and Hedging Activities: A Comprehensive Analysis of FAS 133, as Amended and Interpreted (Overview and Appendix C only)</li> <li>• ILA-C101-07 Ernst and Young - IASB IFRS 4 and IAS 39 - Insurance and Investment Contracts: Assessing the Implications of Phase 1 for Insurers. (p. 9-20 only)</li> <li>• “An Approach to Fair Valuation of Insurance Liabilities Using the Firm’s Cost of Capital”, NAAJ, Apr 2002, <a href="http://www.soa.org/library/journals/north-american-actuarial-journal/2002/april/naaj0204_3.pdf">http://www.soa.org/library/journals/north-american-actuarial-journal/2002/april/naaj0204_3.pdf</a></li> <li>• “Fair Value of Liabilities: The Financial Economic Perspective”, NAAJ Jan 2002, <a href="http://www.soa.org/library/journals/north-american-actuarial-journal/2002/january/naaj0201_2.pdf">http://www.soa.org/library/journals/north-american-actuarial-journal/2002/january/naaj0201_2.pdf</a></li> </ul>	

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- CIA Educational Note: Calm Implications of AcSB Section CICA 3855 Financial Instruments – Recognition and Measurement – June 2006, <http://www.actuaries.ca/members/publications/2006/206077e.pdf>
- Educational Note: Implications of CICA Accounting Standard 3855 and 1530 – Jan 2007, <http://www.actuaries.ca/members/publications/2007/207002e.pdf>
- Educational Note: Implications of CICA Handbook Section 3855 – Financial Instruments on Future Income and Alternative Taxes: Update to Fall Letter: April 2007, <http://www.actuaries.ca/members/publications/2007/207029e.pdf>
- Educational Note: Implementation of CICA 3855 (Life), September 2006: Appointed Actuaries Seminar <http://www.actuaries.ca/members/publications/proceedings/aa/vol17/206129-PD2.pdf>

Exam: ILA – CSP	TOPIC: <b><u>Principles of Valuation</u></b>
<b>Learning Objectives</b>	
<b>2. The candidate will be able to understand and apply valuation principles of individual life insurance and annuity products issued by Can Life Insurance companies.</b>	
<b>Learning Outcomes</b>	
The candidate will be able to:	
<p>A.</p> <ul style="list-style-type: none"> <li>i) Describe Valuation Methods</li> <li>ii) Select appropriate valuation assumptions</li> </ul> <p>B. Compute liabilities for the following products:</p> <ul style="list-style-type: none"> <li>i) Traditional life insurance</li> <li>ii) Term life insurance</li> <li>iii) Universal life insurance</li> <li>iv) Deferred annuity</li> <li>v) Payout annuity</li> <li>vi) Segregated Funds with guaranteed minimum death benefits</li> <li>vii) Segregated Funds with guaranteed living benefits</li> <li>viii) Riders</li> </ul> <p>C. Devise and use reserve audit methods</p>	
<b>Syllabus Resources</b>	
<ul style="list-style-type: none"> <li>• <i>Valuation of Life Insurance Liabilities</i>, Lombardi, Fourth Edition 2006, Chapter 1, Overview of Valuation Requirements</li> <li>• ILA-C102-07 (formerly 8I-303-00), Actuarial Review of Reserves and Other Annual Statement Liabilities</li> <li>• ILA-C104-07 (formerly 8IC-310-04), Valuation of Living and Death Benefit Guarantees for Variable Annuities</li> <li>• ILA-C602-07, CIA Report on the Task Force on Actuarial Liability Consistency: May 2003</li> <li>• ILA-C615-07, OSFI Guideline E-12: Inter-Segment Notes for Life Insurance Companies</li> <li>• CIA Consolidated Standards of Practice – Section 2100, 2300, 2500 – Oct 2006, <a href="http://www.actuaries.ca/members/publications/2006/206122e.pdf">http://www.actuaries.ca/members/publications/2006/206122e.pdf</a></li> <li>• CIA Guidance for the 2006 Valuation of Policy Liabilities of Life Insurers, <a href="http://www.actuaries.ca/members/publications/2006/206149e.pdf">http://www.actuaries.ca/members/publications/2006/206149e.pdf</a></li> <li>• CIA Educational Note: Best Estimates Assumptions for Expenses – November 2006, <a href="http://www.actuaries.ca/members/publications/2006/206134e.pdf">http://www.actuaries.ca/members/publications/2006/206134e.pdf</a></li> <li>• CIA Educational Note: Margins for Adverse Deviations (Mfad) – November 2006, <a href="http://www.actuaries.ca/members/publications/2006/206132e.pdf">http://www.actuaries.ca/members/publications/2006/206132e.pdf</a></li> <li>• CIA: Valuation of Segregated Fund Investment Guarantees (December 2003 and October 2005), <a href="http://www.actuaries.ca/members/publications/2003/203107e.pdf">http://www.actuaries.ca/members/publications/2003/203107e.pdf</a></li> </ul>	

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<ul style="list-style-type: none"> <li>• <a href="http://www.actuaries.ca/members/publications/2005/205111e.pdf">http://www.actuaries.ca/members/publications/2005/205111e.pdf</a></li> <li>• CIA Educational Note: Approximations to the Canadian Asset Liability Method (CALM): November 2006, <a href="http://www.actuaries.ca/members/publications/2006/206133e.pdf">http://www.actuaries.ca/members/publications/2006/206133e.pdf</a></li> <li>• CIA Educational Note: Selection of Interest Rate Models: December 2003, <a href="http://www.actuaries.ca/members/publications/2003/203106e.pdf">http://www.actuaries.ca/members/publications/2003/203106e.pdf</a></li> <li>• CIA Educational Note: Aggregation and Allocation of Policy Liabilities: September 2003, <a href="http://www.actuaries.ca/members/publications/2003/203083e.pdf">http://www.actuaries.ca/members/publications/2003/203083e.pdf</a></li> <li>• CIA Educational Note: Future Income and Alternative Taxes: December 2002, <a href="http://www.actuaries.ca/members/publications/2002/202065e.pdf">http://www.actuaries.ca/members/publications/2002/202065e.pdf</a></li> <li>• CIA Educational Note: Expected Mortality: Fully Underwritten Canadian Individual Life Insurance Policies: July 2002, <a href="http://www.actuaries.ca/members/publications/2002/202037e.pdf">http://www.actuaries.ca/members/publications/2002/202037e.pdf</a></li> <li>• CIA Report: Use of Stochastic Techniques to Value Liabilities under Canadian GAAP: August 2001, <a href="http://www.actuaries.ca/members/publications/2001/20169e.pdf">http://www.actuaries.ca/members/publications/2001/20169e.pdf</a></li> <li>• CIA Task Force on Segregated Fund Investment Guarantees, March 2002 (Chapter 1-5), <a href="http://www.actuaries.ca/members/publications/2002/202012e.pdf">http://www.actuaries.ca/members/publications/2002/202012e.pdf</a></li> <li>• CIA: DCAT: Life and Property and Casualty: June 1999 (Omit Section IIIB), <a href="http://www.actuaries.ca/members/publications/1999/9930e.pdf">http://www.actuaries.ca/members/publications/1999/9930e.pdf</a></li> <li>• CIA Draft Educational Note: Valuation of Universal Life Policy Liabilities November, 2006, <a href="http://www.actuaries.ca/members/publications/2006/206148e.pdf">http://www.actuaries.ca/members/publications/2006/206148e.pdf</a></li> <li>• CIA Use of Actuarial Judgment in Setting Assumptions and Margins for Adverse Deviations, November 2006, <a href="http://www.actuaries.ca/members/publications/2006/206147e.pdf">http://www.actuaries.ca/members/publications/2006/206147e.pdf</a></li> </ul>
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Exam: ILA - CSP	TOPIC: <b><u>Reinsurance</u></b>
Learning Objectives	
<p><b>3. The candidate will be able to evaluate various forms of reinsurance, what the financial impact is of each form, and describe the circumstances that would make each type of reinsurance appropriate.</b></p>	
Learning Outcomes	
<p>The candidate will be able to:</p> <p>A. For traditional and financial reinsurance, explain the consequences and calculate the effect on both ceding and assuming companies with respect to:</p> <ul style="list-style-type: none"> <li>i) risk transfer</li> <li>ii) cash flow</li> <li>iii) financial statements</li> <li>iv) tax, and</li> <li>v) reserve credit requirements</li> </ul> <p>B. Describe what considerations would be examined to determine the appropriate reinsurance form from the ceding and assuming company perspectives</p>	
Syllabus Resources	
<ul style="list-style-type: none"> <li>• <i>Life, Health &amp; Annuity Reinsurance</i> , Tiller, Third Edition, 2005, Chapters 4, 5, 6, 11</li> <li>• <i>Canadian Insurance Taxation</i>, PriceWaterhouseCoopers , Second Edition, 2000, Chapter 31</li> </ul>	

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Exam: ILA - CSP	TOPIC: <b><u>Financial and Capital Management</u></b>
Learning Objectives	
<b>4. The candidate will be able to explain and apply the basic methods, approaches and tools of financial management in a life insurance company context.</b>	
Learning Outcomes	
<p>The candidate will be able to:</p> <p>A. Describe and calculate basic performance measures</p> <p>B. Perform basic financial analysis by product line and total company</p> <p>C. Explain and create a product line “gains by source” analysis</p> <p>D. Apply methods of valuation to business and asset acquisitions and sales</p> <p>E. Explain and apply the basic methods and approaches of surplus management and earnings management</p> <p>F. Describe and apply the methods of capital allocation and investment decision analysis under a financial economics options pricing perspective</p> <p>G. Describe how securitization is used within capital management</p>	
Syllabus Resources	
<ul style="list-style-type: none"> <li>• <i>Real Options</i>, Trigeorgis, 1996, Chapters 1(omit Section 1.3), 2, 4 (Sections 4.1-4.5 only), 5 (Sections 5.1, 5.2 and 5.5 only)</li> <li>• <i>Life Insurance Products and Finance</i>, Atkinson and Dallas, 2000, Chapter 16</li> <li>• ILA-C105-07 (formerly 8IU-304-00), Value Based Financial Management</li> <li>• ILA-C106-07 <i>Mergers and Acquisitions</i> Chapter 4 (Sections 4.1-4.6 only)</li> <li>• ILA-C107-07 (formerly 8FE-414-05), Securitization of Life Insurance Assets and Liabilities</li> <li>• ILA-C603-07, OSFI Guideline D-9: Sources of Earnings Disclosure, December 2004</li> <li>• ILA-C604-07, Proceedings: PD#8: Sources of Earnings and Disclosure: Appointed Actuaries Seminar 2004</li> <li>• ILA-C605-07, Proceedings: D7: Earnings Volatility and Canadian GAAP: General Meeting 2004</li> <li>• “Strategic Management of Life Insurance Company Surplus,” TSA XXXVIII (pages 105-116), <a href="http://www.soa.org/library/research/transactions-of-society-of-actuaries/1986/january/tsa86v387.pdf">http://www.soa.org/library/research/transactions-of-society-of-actuaries/1986/january/tsa86v387.pdf</a></li> <li>• OSFI Guideline D-10: Accounting for Financial Instruments Designated as Fair Value Option, February 2007, <a href="http://www.osfi.gc.ca/app/DocRepository/1/eng/guidelines/accounting/guidelines/general/D10_e.pdf">http://www.osfi.gc.ca/app/DocRepository/1/eng/guidelines/accounting/guidelines/general/D10_e.pdf</a></li> <li>• CIA: Sources of Earnings: Determination and Disclose, August 2004, <a href="http://www.actuaries.ca/members/publications/2004/204047e.pdf">http://www.actuaries.ca/members/publications/2004/204047e.pdf</a></li> </ul>	

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Exam: ILA - CSP	TOPIC: <b><u>Financial and Capital Management</u></b>
Learning Objectives	
<b>5. The candidate will understand the Risk Based Capital (RBC) regulatory framework and the principles underlying the determination of Regulatory RBC.</b>	
Learning Outcomes	
The candidate will be able to:	
A. Describe the MCCSR/RBC regulatory framework and the principles underlying the determination of Regulatory RBC	
B. Compute MCCSR for a life insurance company, including	
i) Identification of significant risk components	
ii) Identification of specialized product MCCSR requirements	
iii) Interpreting results from a regulatory perspective	
Syllabus Resources	
<ul style="list-style-type: none"> <li>• <i>Valuation of Life Insurance Liabilities</i>, Lombardi , Fourth Edition, 2006, Chapters 1 and 16</li> <li>• ILA-C606-07, OSFI: Guideline Minimum Continuing Capital and Surplus Requirements for Life Insurance Companies, Sections 1-6, 9 (October 2005)</li> <li>• ILA-C609-07, CIA: OSFI Submission: Future Direction of Insurance Capital Rules: March 2005</li> <li>• ILA-C616-08, Proceedings: Enterprise Risk Management (PD-15), October 2006, General Meeting</li> <li>• ILA-C617-08, Proceedings: Economic and Regulatory Capital (GEN-6) June 2006, Annual Meeting</li> </ul>	

Exam: ILA - CSP	TOPIC: <b><u>Financial and Capital Management</u></b>
Learning Objectives	
<b>6. The candidate will understand the principles underlying the determination of Economic Capital.</b>	
Learning Outcomes	
A. The candidate will be able to explain and apply the concepts, approaches and methods for determining Economic Capital	
Syllabus Resources	
<ul style="list-style-type: none"> <li>• ILA-C108-07-07, <i>The New Corporate Finance: Where Theory Meets Practice</i>, Chew, Chapter 31</li> <li>• ILA-C109-07 (formerly 8E-706-04), Specialty Guide on Economic Capital (exclude appendix)</li> <li>• ILA-C121-08, Economic Capital Modeling: Practical Considerations, Milliman</li> <li>• ILA-C610-07 Proceedings: PD#4: Economic Capital: AA Seminar 2004</li> <li>• Economic Capital: The Controversy at the Watercooler, Risk Management Newsletter, December, 2006, <a href="http://www.soa.org/library/newsletters/risk-management-newsletter/2006/december/RMN0612.pdf">http://www.soa.org/library/newsletters/risk-management-newsletter/2006/december/RMN0612.pdf</a></li> </ul>	

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Exam: ILA - CSP	TOPIC: <b><u>Embedded Value, and Value Creation</u></b>
Learning Objectives	
<b>7. The candidate will understand embedded value, and value creation conceptual frameworks.</b>	
Learning Outcomes	
<p>The candidate will be able to:</p> <p>A. Explain and apply the methods and principles of embedded value</p> <p>B. Describe and apply the principles of how insurance companies create value from a financial economics perspective</p>	
Syllabus Resources	
<ul style="list-style-type: none"> <li>• ILA-C105-07, (formerly 8IU-304-00), Value-Based Financial Management</li> <li>• ILA-C110-07, The Economics of Insurance: How Insurers Create Value for Shareholders, Swiss Re</li> </ul>	

Exam: ILA - CSP	TOPIC: <b><u>Model Office and Asset/Liability Modeling</u></b>
Learning Objectives	
<b>8. The candidate will be able to integrate data from various sources into model office and asset/liability models</b>	
Learning Outcomes	
<p>The candidate will be able to:</p> <p>A. For an ALM model:</p> <ol style="list-style-type: none"> <li>i) Select appropriate assumptions and scenarios</li> <li>ii) Model dynamic behavior of both assets and liabilities</li> <li>iii) Model and explain various strategies, including hedging</li> <li>iv) Analyze and evaluate results</li> <li>v) Recommend appropriate strategies</li> </ol> <p>B. Apply a model office process and make appropriate recommendations</p> <p>C. Analyze and explain actual vs. projected differences</p> <p>D. Explain limitations of models and possible sources of error</p> <ol style="list-style-type: none"> <li>i) Quality of data</li> <li>ii) Granularity of the model</li> </ol>	
Syllabus Resources	
<ul style="list-style-type: none"> <li>• <i>Life Insurance Products and Finance</i>, Atkinson and Dallas, 2000, Chapters 14 and 15</li> <li>• ILA-C111-07 (formerly 8V-303-00) Asset Liability Management For A Going Concern</li> <li>• ILA-C112-07 (formerly 8V-316-02), Asset Liability Management for Insurers</li> <li>• ILA-C113-07 (formerly 8FE-316-03) Chapter 22 of <i>Life Insurance Accounting</i>, Asset/Liability Management</li> <li>• ILA-C114-07 (formerly 7P-43-04), Life Insurance Forecasting and Liability Models: An Examination of the Trade-offs Involved with Certain Modeling Decisions</li> </ul>	

## Individual Life and Annuity Company/Sponsor Perspective – Canada

Exam: ILA - CSP	TOPIC: <b><u>Risk Management And Mitigation</u></b>
Learning Objectives	
<b>9. The candidate will understand the sources of risk faced by the enterprise and evaluate the mitigation thereof.</b>	
Learning Outcomes	
<p>The candidate will be able to:</p> <p>A. Identify, categorize and evaluate potential sources of risk in products including but not limited to mortality, morbidity and lapse</p> <p>B. Identify, categorize and evaluate potential sources of risk in investments including but not limited to credit risk, liquidity and asset-liability matching</p> <p>C. Describe and evaluate the other risks an insurance company faces including operational, marketplace and expense risks</p> <p>D. Describe how risks (e.g. product, investments and operational) and opportunities interact and how they influence firm strategy</p> <p>E. Describe and apply methods of risk mitigation and hedging and to understand the limitations of such methods</p> <p>F. Evaluate methods for measuring and controlling equity-based exposure associated with embedded options</p> <p>G. Describe the roles of rating agencies, analysts and regulators together with their methods and impact on insurance companies</p>	
Syllabus Resources	
<ul style="list-style-type: none"> <li>• ILA-C104-07 (formerly 8IU-310-04), Valuation of Living and Death Benefit Guarantees for Variable Annuities</li> <li>• ILA-C115-07, <i>The New Corporate Finance: Where Theory Meets Practice</i>, Chew, Chapter 29</li> <li>• ILA-C116-07 (formerly 8E-704-04) Mapping of Life Insurance Risks</li> <li>• ILA-C117-07 (formerly 8E-705-04), Moody's Looks At Risk Management and the New Life Insurance Risks</li> <li>• ILA-C118-07 (formerly 8IC-308-00), Regulators' Perspective on Actuarial Opinions and Valuations</li> <li>• Standard and Poor's Enterprise Risk Management Evaluation of Insurers, David Ingram, Risk Mgmt Newsletter, March 06, <a href="http://www.soa.org/library/newsletters/risk-management-newsletter/2006/march/rmn0603.pdf">http://www.soa.org/library/newsletters/risk-management-newsletter/2006/march/rmn0603.pdf</a></li> <li>• Specialty Guide on ERM, <a href="http://www.soa.org/library/professional-actuarial-specialty-guides/enterprise-risk-management/2005/august/spg0605erm.pdf">http://www.soa.org/library/professional-actuarial-specialty-guides/enterprise-risk-management/2005/august/spg0605erm.pdf</a></li> </ul>	

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Exam: ILA - CSP	TOPIC: Professional Considerations
Learning Objectives	
<b>10. The candidate will understand the professional standards addressing financial reporting and valuation.</b>	
Learning Outcomes	
<p>The candidate will be able to:</p> <p>A. Explain the role and responsibilities of the appointed / valuation actuary</p> <p>B. Identify and apply relevant professional actuarial qualification standards</p> <p>C. Identify and apply actuarial standards of practice relevant to financial reporting and valuation</p> <p>D. Explain the actuary’s professional responsibilities to stakeholders including obligations under Sarbanes-Oxley</p>	
Syllabus Resources	
<ul style="list-style-type: none"> <li>• ILA-C119-07 (formerly 8I-309-01), Chapter 19 of <i>Life and Accident Health Insurance</i>, Management Reports and Reports to Regulatory Bodies</li> <li>• ILA-C120-07, (formerly 8E-703-04) SEC Implements Internal Control Provisions at Sarbanes-Oxley Act; Adopts Investment Company R&amp;D Safe Harbor</li> <li>• ILA-C612-07, Assurance and Related Services Guideline – AuG-43: Audit of Policy Liabilities of Insurance Companies</li> <li>• ILA-C613-07 Proceedings: PS#12: Role of the Appointed Actuary: AA seminar 2005</li> <li>• OSFI: Memorandum to the Appointed Actuary on the Report of the Valuation of Life Insurance Policy Liabilities – 2006 <a href="http://www.osfi-bsif.gc.ca/app/DocRepository/1/eng/returns/financial/aa_memo_2006_e.pdf">http://www.osfi-bsif.gc.ca/app/DocRepository/1/eng/returns/financial/aa_memo_2006_e.pdf</a></li> <li>• "Actuarial Aspects of SOX 404", 12/04 Financial Reporter #59, <a href="http://www.soa.org/library/newsletters/financial-reporter/2004/december/frn0412.pdf">http://www.soa.org/library/newsletters/financial-reporter/2004/december/frn0412.pdf</a></li> <li>• "Responsibilities of the Actuary for Communicating Sarbanes-Oxley Control: Effectiveness in Accordance with Actuarial Standards of Practice", 12/04 Financial Reporter #59, <a href="http://www.soa.org/library/newsletters/financial-reporter/2004/december/frn0412.pdf">http://www.soa.org/library/newsletters/financial-reporter/2004/december/frn0412.pdf</a></li> <li>• OSFI: Guideline E15: Sound Business and Financial Practices: Appointed Actuary: Legal Requirements, Qualification and External Review: November 2006, <a href="http://www.osfi.gc.ca/app/DocRepository/1/eng/guidelines/sound/guidelines/e15_final_e.pdf">http://www.osfi.gc.ca/app/DocRepository/1/eng/guidelines/sound/guidelines/e15_final_e.pdf</a></li> <li>• CIA: Consolidated Standards of Practice: (Section 2400) – October 2006, <a href="http://www.actuaries.ca/members/publications/2006/206070e.pdf">http://www.actuaries.ca/members/publications/2006/206070e.pdf</a></li> </ul>	