

Retirement Benefits: Funding & Regulation Exam

Fall 2018/Spring 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 copy of the case study will be provided with the examinations. Candidates will not be allowed to bring their copy of the case study into the examination room.
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.

Canadian version of this exam is recognized by the Canadian Institute of Actuaries.

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1. Topic: Valuation Data
Learning Objectives
The candidate will understand how to analyze data for quality and appropriateness.
Learning Outcomes
The Candidate will be able to: a) Identify data needed b) Assess data quality c) Make and/or recommend appropriate assumptions where data cannot be provided d) Comply with regulatory and professional standards pertaining to data quality
Resources
<ul style="list-style-type: none">• ASOP 23: Data Quality• Experience Data Quality: How to Clean and Validate Your Data, Society of Actuaries (excluding introduction)• CIA Consolidated Standards of Practice – Sections 1530, 1610 and 1640

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2. Topic: Assumptions
Learning Objectives
The candidate will understand how to analyze/synthesize the factors that go into selection of actuarial assumptions for funding purposes.
Learning Outcomes
The Candidate will be able to: a) Describe and apply the techniques used in the development of assumptions for funding purposes b) Evaluate and recommend appropriate assumptions for funding purposes c) Evaluate actual experience, including comparisons to assumptions
Resources
<ul style="list-style-type: none">• FR-121-18: Assumptions for Hypothetical Wind-Up and Solvency Valuations with Effective Dates between December 31, 2016, and December 30, 2017• FR-125-17: Financial Services Commission of Ontario: Actuarial Guidance Note: Determination of the Solvency Liability Adjustment• FR-128-18: Educational Note Supplement: Guidance for Assumptions for Hypothetical Wind-Up and Solvency Valuations Update – Effective September 30, 2017, and Applicable to Valuations with Effective Dates Between September 30, 2017, and December 30, 2017• FR-132-17: A Problem-Solving Approach to Pension Funding and Valuation, 2nd Ed., Ch. 5• FR-138-18: Alternative Settlement Methods for Solvency Valuations• ASOP 25: Credibility Procedures• ASOP 27: Selection of Economic Assumptions for Measuring Pension Obligations• ASOP 35: Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations• Credibility Educational Resource for Pension Actuaries: Application of Credibility Theory to Mortality Assumption• Financial Economics and Canadian Pension Valuation, Sep 2006 paper by CIA Task Force on Financial Economics• Determination of best Estimate Discount Rates for Going Concern Funding Valuations, CIA Educational Note, Dec 2015• Selecting and Documenting Mortality Assumptions, AAA (Appendix background only)• Selection of Mortality Assumptions for Pension Plan Actuarial Valuations, CIA Educational Note, Dec 2017• Provisions for Adverse Deviations in Going Concern Actuarial Valuations, CIA Research Paper• CIA Revised Educational Note: Expenses in Funding Valuations for Pension Plans, Sep 2014• CIA Revised Educational Note: Reflecting Increasing Maximum Pensions Under the Income Tax Act in Solvency, Hypothetical Wind-up and Wind-up Valuations

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- [Task Force Report on Mortality Improvement](#)
- [Alternative Settlement Methods for Hypothetical Wind-Up and Solvency Valuations](#)

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3. Topic: Methods

Learning Objectives

The candidate will understand how to apply/synthesize the methods used to value pension benefits for various purposes.

Learning Outcomes

The Candidate will be able to:

- a) Differentiate between the various purposes for valuing pension plans:
 - i. Funding
 - ii. Solvency
 - iii. Termination/wind-up/conversion
- b) Perform periodic valuations of ongoing plans, calculating normal cost and actuarial liability, using a variety of cost methods
- c) Analyze and communicate the pattern of cost recognition that arises under a variety of funding methods
- d) Analyze and communicate the impact on cost stability of a variety of asset valuation methods
- e) Perform valuations for special purposes, including:
 - i. Plan termination/windup/conversion valuations
 - ii. Hypothetical wind-up and solvency valuations
 - iii. Open group valuations
 - iv. Shared risk pension plan valuations
- f) Calculate actuarially equivalent benefits

Resources

- *Canadian Pensions and Retirement Income Planning*, Willis Towers Watson, 6th Edition, 2017
 - Ch. 15 (excluding section 1525)
- *Morneau Shepell, Handbook of Canadian Pension and Benefit Plans*, 16th Edition, 2016
 - Ch. 2 (background only)
 - Ch. 5 (background only)
 - Ch. 6 (excluding pp. 188-196)
- *Pension Mathematics for Actuaries*, Anderson, Arthur W., 3rd Edition, 2006
 - Ch. 1-4 and 7
- FR-104-13: Pension Projections (Appendix background only)
- FR-108-13: Pension Funding Exercises (background only)
- FR-126-15: Asset Smoothing for Solvency Valuations, FSCO Q1 and A1

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- FR-133-17: Actuarial Equivalence Calculations
- FR-138-18: Alternative Settlement Methods for Solvency Valuations
- [ASOP 4: Measuring Pension Obligations and Determining Pension Plan Costs or Contributions](#)
- [Guidance on Asset Valuation Methods](#), CIA Educational Note, Sep 2014
- [Calculation of Incremental Cost on a Hypothetical Wind-Up or Solvency basis](#), CIA Educational Note
- [Asset Valuation Methods under ERISA](#), Pension Forum 9/2002, Ch. 1, 3, 4 and 5
- [Survey of Asset Valuation Methods for Defined Benefit Plans](#) (section 2 only)
- [CIA Consolidated Standards of Practice - Pension Plans 3100-3500](#)
- [CIA Consolidated Standards of Practice – Section 1400](#)
- [Use of Models](#)
- [Alternative Settlement Methods for Hypothetical Wind-Up and Solvency Valuations](#)
- [An Actuarial Balance Sheet Approach to Assessing Sustainability of Target Benefit Plans](#)

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4. Topic: Regulations - Principles and Rationale
Learning Objectives
The candidate will understand the principles and rationale behind regulation.
Learning Outcomes
The Candidate will be able to: <ul style="list-style-type: none">a) Describe the principles and motivations behind pension legislation and regulationb) Describe sources and framework of government regulation
Resources
<ul style="list-style-type: none">• <i>Canadian Pensions and Retirement Income Planning</i>, Willis Towers Watson, 6th Edition, 2017<ul style="list-style-type: none">○ Ch. 1: section 105○ Ch. 1: section 110 (background only)○ Ch. 3• <i>Morneau Shepell Handbook of Canadian Pension and Benefit Plans</i>, 16th Edition, 2016<ul style="list-style-type: none">○ Ch. 9• FR-127-15: Rebuilding New Brunswick: The Case for Pension Reform (Appendices C, D and E only)• FR-139-18: OECD Core Principles of Private Pension Regulation (Parts I and II, pp. 11-75)

5. Topic: Regulations - Evaluation and Application

Learning Objectives

The candidate will understand how to evaluate and apply regulatory policies and restrictions for registered retirement plans.

Learning Outcomes

The Candidate will be able to describe and apply regulation pertaining to:

- a) Plan design
- b) Plan establishment
- c) Plan amendment
- d) Plan termination/windup
- e) Plan conversion
- f) Plan merger or spin-off
- g) Reporting requirements
- h) Members' rights
- i) Contributions and benefits
- j) Individual savings plans
- k) Coordination of individual and employer sponsored retirement plans

Resources

- *Canadian Pensions and Retirement Income Planning*, Willis Towers Watson, 6th Edition, 2017
 - Ch. 2
 - Ch. 5-12
 - Ch. 14
 - Ch. 16-22
- *Morneau Shepell, Handbook of Canadian Pension and Benefit Plans*, 16th Edition, 2016
 - Ch. 8
 - Ch. 9
 - Ch. 10
 - Ch. 13 (pp. 409-410)
 - Ch. 30 (pp. 709-719)
- FR-111-13: OSFI Guidelines for Converting DB to DC
- FR-112-16: Filing Requirements and Procedure on Full or Partial Wind up of a Pension Plan

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- FR-114-18: Ontario Pension Benefits Act R.R.O. 1990, Reg 909 (excluding sections 5.5.1 and 5.5.2 - Funding and Funding Relief for Specified Pension Plans and 5.5.3, 5.6, 5.6.1, 5.6.2, 5.7, 5.8, 5.9, 5.10 - Solvency Funding Relief))
- FR-115-18: Ontario Pension Benefits Act, R.S.O. 1990, Ch. P.8
- FR-116-17: FSCO Q&A on Agreement Respecting Multi-jurisdictional Pension Plans
- FR-117-15: FSCO overview and Q&A on Letters of Credit
- FR-118-15: FSCO overview and Q&A on Letters of Credit – FAQs
- FR-123-17: Pension Benefits Act–Ontario Regulation 310/13
- FR-129-16: Pension Asset Transfers made easier, Pension Benefits and Executive Compensation, February 2014
- FR-131-16: FSCO Q&A on Asset Transfers for Plan Administrators and Actuaries
- FR-134-17: CIA Revised Educational Note: Transfer Values – Ontario Reporting Requirements
- [FSCO Policy T800-402, Commuted Value Transfers](#)
- [FSCO Policy on Actuarial Filing for Plan Amendments](#)
- [FSCO Policy on Conversion of a Plan from Defined Benefit to Defined Contribution](#)
- [FSCO Policy : Application by Employer for Payment of Surplus on Full Wind Up of a Pension Plan](#)
- [FSCO Actuarial Guidance Note on Determination of Interest Payments Where Solvency Special Payments are covered by Letters of Credit](#)
- [Canada Revenue Agency PA Guide](#)
- [Canada Revenue Agency PSPA Guide](#)
- [Canada Revenue Agency PAR Guide](#)

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6. Topic: Funding
Learning Objectives
The candidate will understand how to apply the regulatory framework in the context of plan funding.
Learning Outcomes
The Candidate will be able to: <ul style="list-style-type: none">a) Evaluate retirement funding alternatives for the plan sponsor, shareholders, participants, and, for public pension plans, taxpayersb) Evaluate funding restrictions imposed by regulations
Resources
<ul style="list-style-type: none">• <i>Canadian Pensions and Retirement Income Planning</i>, Willis Towers Watson, 6th Edition, 2017<ul style="list-style-type: none">○ Ch. 15 (excluding section 1525)• <i>Morneau Shepell Handbook of Canadian Pension and Benefit Plans</i>, 16th Edition, 2016<ul style="list-style-type: none">○ Ch. 6 (excluding pp. 188-196)○ Ch. 9○ Ch. 11 (pp. 364-374)○ Ch. 12 (pp. 379-396)○ Ch. 13 (pp. 409-410)• FR-114-18: Ontario Pension Benefits Act R.R.O. 1990, Reg 909 (excluding sections 5.5.1 and 5.5.2 - Funding and Funding Relief for Specified Pension Plans and 5.5.3, 5.6, 5.6.1, 5.6.2, 5.7, 5.8, 5.9, 5.10 - Solvency Funding Relief)• FR-115-18: Ontario Pension Benefits Act, R.S.O. 1990, Ch. P.8• FR-119-14: CAPSA Guideline No. 7: Pension Plan Funding Policy Guideline• FR-131-16: FSCO Q&A on Asset Transfers for Plan Administrators and Actuaries• FR-135-17: Quebec: Adoption of Bill 57 to amend pension plan funding• FR-136-17: Quebec: Regulation respecting the stabilization provision for private sector pension plans• FR-137-17: Québec: Retraite Québec provides details about the new rules• FR-140-18: Quebec: Final Regulation on the Stabilization Provision for Private Sector Pension Plans• FR-141-18: Alberta Interpretive Guideline #07: Solvency Reserve Account• An Actuarial Balance Sheet Approach to Assessing Sustainability of Target Benefit Plans

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7. Topic: Professionalism
Learning Objectives
The candidate will understand how to apply the standards of practice and professional conduct guidelines.
Learning Outcomes
The Candidate will be able to: <ul style="list-style-type: none">a) Apply the standards related to communications to plan sponsors and others with an interest in an actuary's results (i.e., participants, auditors, etc.)b) Explain and apply the Professional Conduct Guidelinesc) Explain and apply relevant qualification standardsd) Demonstrate compliance with requirements regarding the actuary's responsibilities to the participants, plan sponsors, etc.e) Explain and apply all of the applicable standards of practice related to valuing pension benefitsf) Recognize situations and actions that violate or compromise Standards or Professional Conduct Guidelinesg) Recommend a course of action to repair a violation of the Standards or Professional Conduct Guidelines
Resources
<ul style="list-style-type: none">• CIA Consolidated Standards of Practice - 1000-1800• CIA Consolidated Standards of Practice - Pension Plans 3100-3500• CIA Qualification Standards• CIA Rules of Professional Conduct• SOA Code of Professional Conduct• SOA Qualification Standards• CIA Guidance Document: General Advice on the Application of Rule 13• CIA Revised Educational Note: Events Occurring After the Calculation Date of an Actuarial Opinion for a Pension Plan