

Retirement Benefits: Design and Accounting – Canada
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	<p>A copy of the case study will be provided with the examinations.</p> <p>Candidates will not be allowed to bring their copy of the case study into the examination room.</p>
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 how to analyze different types of registered/qualified retirement plans and retiree health plans.

Learning Outcomes

The Candidate will be able to:

Describe the structure of the following plans:

- a) Traditional defined benefit plans
- b) Hybrid plans
- c) Defined contribution plans
- d) Retiree Health Plans

Given a plan type, explain the relevance, risks and range of plan features including the following:

- a) Plan eligibility requirements
- b) Benefit eligibility requirements, accrual, vesting
- c) Benefit / contribution formula, including the methods of integration with government-provided benefits
- d) Payment options and associated adjustments to the amount of benefit
- e) Ancillary benefits
- f) Benefit subsidies and their value, vested or non-vested
- g) Participant investment options
- h) Required and optional employee contributions
- i) Phased retirement and DROP plans

Resources

- *Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches*, Allen, 10th Edition
 - Ch. 2, Ch. 3, Ch. 17 (pp. 313-319) & Ch. 29
- *Fundamentals of Private Pensions*, McGill, 9th Edition
 - Ch. 5 & Ch.9
- *Morneau Shepell Handbook of Canadian Pension and Benefit Plans*, 15th Edition
 - Ch. 1, Ch. 2, Ch. 5, Ch. 12, Ch. 14 (background only) & Ch. 18
- *Towers Watson Canadian Pensions and Retirement Income Planning*, 4th Edition
 - Ch. 1 (pp. 29-47), Ch. 16 (pp. 295-297, p. 313), Ch. 17 (pp. 376-378), Ch. 18 (pp. 390-393) & Ch. 23
- DA-100-13: Issues for Implementing Phased Retirement in Defined Benefit Plans

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- DA-101-13: Legal and Research Summary Sheet: Phased Retirement
- DA-102-13: Evaluating the Design of Private Pension Plans: Costs and Benefits of Risk Sharing
- DA-103-13: Risk Allocation in Retirement Plans: A Better Solution
- DA-104-13: Deferred Retirement Option Plans (“DROP” Plans)
- DA-105-13: Measuring Terminable Postretirement Obligations
- DA-106-13: The Use of Health Savings Accounts for Health Care in Retirement
- DA-107-13: Green DB: Eliminate Wasteful Practices and Make Your DB Plan Sustainable
- DA-108-13: Increasing Annuitization in 401(k) Plans with Automatic Trial Income, Hamilton Project Policy Brief
- DA-109-13: Seven Steps Toward Creating a Standout Retirement Savings Plan
- DA-110-13: Integration With Social Security
- DA-111-13: An Annuity that People Might Actually Buy
- DA-112-13: Converting Pension Plans From a DB to a DC design – Issues to Consider in Canada
- DA-113-13: Multi-Employer Plans
- DA-600-13: Towers Perrin Summary of Minimum Standards for Phased Retirement Under Registered Pension Plans
- DA-601-13: Tax-free Savings Accounts – New (Tax) Math That Works!
- DA-602-13: Not Just a Phase
- DA-603-13: CAPSA Guidelines Number 3: Guideline for Capital Accumulation Plans
- [New Retirement Plan Designs for the 21st Century](#), Pension Forum, December 2008, pp. 41-56 (including commentary and responses)
- [SOA Cash Balance Study](#), Pension Forum, Dec. 1, 2000 (sections 1,2,3,5, plus Appendix A for background only)

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2.
Learning Objectives
The candidate will understand the impact of the regulatory environment on plan design.
Learning Outcomes
The Candidate will be able to: <ul style="list-style-type: none">a) Explain and apply restrictions on plan design features to a proposed plan designb) Explain and test for limits on plan designs and features that protect participant rightsc) Test for plan design restrictions intended to control the use of tax incentivesd) Describe the process and apply the principles and rules governing the conversion from one type of plan to anothere) Understand conflicts between regulation and design objectives and recommend alternatives
Resources
<ul style="list-style-type: none">• <i>Towers Watson Canadian Pensions and Retirement Income Planning</i>, 4th Edition<ul style="list-style-type: none">○ Ch. 1 (pp. 29-47), Ch. 16 (pp. 295-297, p. 313), Ch. 17 (pp. 376-378), Ch. 18 (pp. 390-393) & Ch. 23• DA-106-13: The Use of Health Savings Accounts for Health Care in Retirement, EBRI, April 2010, pp.1-6• DA-112-13: Converting Pension Plans From a DB to a DC design – Issues to Consider in Canada• DA-604-13: Canadian Pension Plan Design• DA-605-13: FAQs About Actions Taken by OSFI in Connection With Air Canada’s Pension Plans

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3.

Learning Objectives

The candidate will understand how to analyze the risks faced by retirees and the participants of retirement plans and retiree health plans.

Learning Outcomes

The Candidate will be able to:

- a) Identify risks faced by retirees and the elderly
- b) Describe and contrast the risks faced by participants of
 - i. Government sponsored retirement plans
 - ii. Single employer sponsored retirement plans
 - iii. Multiemployer retirement plans, and
 - iv. Social insurance plans
- c) Evaluate benefit adequacy and measure replacement income for members of a particular plan given other sources of retirement income.
- d) Propose ways in which retirement plans and retiree health plans can manage the range of risks faced by plan participants and retirees

Resources

- *Fundamentals of Private Pensions*, McGill, 9th Edition
 - Ch. 5 & Ch.9
- DA-102-13: OECD paper, Evaluating the Design of Private Pension Plans: Costs and Benefits of Risk Sharing
- DA-103-13: Risk Allocation in Retirement Plans: A Better Solution
- DA-106-13: The Use of Health Savings Accounts for Health Care in Retirement, pp.1-6
- DA-108-13: Increasing Annuitization in 401(k) Plans with Automatic Trial Income, Hamilton Project Policy Brief
- DA-111-13: An Annuity that People Might Actually Buy, CRR
- DA-114-13: Risk Management and Public Plan Retirement Systems - Appendix only (pages 1-33 background only)
- DA-115-13: Private Pensions: Alternative Approaches Could Address Retirement Risks Faced by Workers but Pose Tradeoffs, pp.1-35 , GAO
- DA-116-13: Pension Issues in Corporate Sales, Mergers and Acquisitions
- DA-117-13: Sharing Risk: The Netherlands' New Approach to Pensions
- DA-118-13: What is the Distribution of Lifetime Health Care Cost From Age 65?
- DA-119-13: State and Local Pensions Are Different From Private Plans

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- DA-120-13: How Much Risk is Acceptable?
- DA-121-13: Are Retirement Savings Too Exposed to Market Risk? Center for Research 2008
- DA-122-13: Chapter 5 of *Private Pension Policies in Industrialized Countries*, pp 65-81
- DA-123-13: Replacement Ratio Study – A Measurement Tool for Retirement Planning
- [CIA Ed Note: Financial Risks Inherent in Multi-Employer Pension Plans and Target Benefit Pension Plans, CIA TF on MEPP/TBPP Funding](#), May 2011
- [Key Findings and Issues: Understanding and Managing the Risk of Retirement](#), 2011 Risks and Process of Retirement Survey Report, March 2012

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4.

Learning Objectives

The candidate will be able to evaluate plan design risks faced by sponsors of retirement plans and retiree health plans.

Learning Outcomes

The Candidate will be able to:

- a) Identify how plan features, temporary or permanent, can adversely affect the plan sponsor.
- b) Assess the risk from options offered, including:
 - i. Phased retirement
 - ii. Postponed retirement
 - iii. Early retirement
 - iv. Option factors
 - v. Embedded Options
 - vi. Portability Options
- c) Recommend ways to mitigate the risks identified with a particular plan feature
- d) Analyze the issues related to plan provisions that cannot be removed.
- e) In a given context, assess the effect that changes in plan design might have on collective bargaining agreements.
- f) Assess the impact of possible changes in plan design due to changes in legislation

Resources

- DA-100-13: Issues for Implementing Phased Retirement in Defined Benefit Plans
- DA-101-13: Legal and Research Summary Sheet: Phased Retirement
- DA-102-13: Evaluating the Design of Private Pension Plans: Costs and Benefits of Risk Sharing
- DA-103-13: Risk Allocation in Retirement Plans: A Better Solution
- DA-104-13: Deferred Retirement Option Plans (“DROP” Plans)
- DA-114-13: Risk Management and Public Plan Retirement Systems - Appendix only (pages 1-33 background only)
- DA-122-13: Turner & Watanabe, Private Pension Policies in Ind Countries, chap 5, “Pension Risk and Insurance,” pp 65-81
- DA-124-13: Funding Risks for Multi-Employer Pension Plans
- DA-126-13: Constructing New Ret Systems: Choosing between Insurance and Investments, Appendices 1 and 2 are background only
- DA-127-13: The Economics of State and Local Pensions

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- DA-128-13: Phased Retirement: Problems and Prospects
- DA-600-13:Towers Perrin Summary of Minimum Standards for Phased Retirement Under Registered Pension Plans
- DA-602-13: Not Just a Phase
- [New Retirement Plan Designs for the 21st Century](#), Pension Forum, December 2008, pp. 41-56 (incl commentary and responses)
- [Practice Specific Standards for Pension Plans 3100-3500, CIA Consolidated Standards of Practice](#), December 2010
- [“Downsizing and Plan Design”](#), RSA 1995, Vol. 21 No. 3A
- [SOA Cash Balance Study](#), Pension Forum, Dec. 1, 2000 (sections 1,2,3,5, plus Appendix A for background only)
- [Embedded Options and Pension Plans](#), SOA Pension Section, pp.1-17

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5.

Learning Objectives

The candidate will be able to evaluate sponsor's goals for the retirement plan, evaluate alternative plan types and features, and recommend a plan design appropriate for the sponsor's goals.

Learning Outcomes

Given a context, the Candidate will be able to:

- a) Describe ways to identify and prioritize the sponsor's goals related to the design of the retirement plan.
- b) Assess the tradeoffs between different goals
- c) Assess the feasibility of achieving the sponsor's goals for their retirement plan
- d) State relationships or recognize contradictions between a sponsor's plan design goals and the retirement risks faced by retirees.
- e) Identify the ways that regulation impacts the sponsor's plan design goals
- f) Design retirement programs that manage retirement risk and are consistent with sponsor objectives.
- g) Design retirement programs that promote employee behavior consistent with sponsor objectives.
- h) Evaluate the pros and cons from both a sponsor and employee perspective of introducing options that impact the labor force demographics.
- i) Recommend a method to integrate government-provided benefits with retirement plan designs in order to meet the plan sponsor's particular goals and defend the recommendation.
- j) Advise a plan sponsor regarding the choice of design elements for their retiree health program
- k) Evaluate and incorporate, as appropriate, different social insurance and employer sponsored plan types and features that occur internationally in providing recommendations
- l) Give examples of plans that are appropriate for multinational companies and their employees including third country nationals and expatriates
- m) Recommend an appropriate plan type and plan design features for providing retirement benefits and defend the recommendations.

Resources

- *Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches*, Allen, 10th Edition
 - Ch. 2 & Ch. 3
- DA-100-13: Issues for Implementing Phased Retirement in Defined Benefit Plans
- DA-101-13: Legal and Research Summary Sheet: Phased Retirement
- DA-102-13: Evaluating the Design of Private Pension Plans: Costs and Benefits of Risk Sharing
- DA-103-13: Risk Allocation in Retirement Plans: A Better Solution
- DA-104-13: Deferred Retirement Option Plans ("DROP" Plans)
- DA-105-13: Measuring Terminable Postretirement Obligations

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- DA-107-13: Green DB Eliminate Wasteful Practices and Make Your DB Plan Sustainable
- DA-109-13: Seven Steps Toward Creating a Standout Retirement Savings Plan, pp 13-16
- DA-116-13: Pension Issues in Corporate Sales, Mergers and Acquisitions
- DA-117-13: Sharing Risk: The Netherlands' New Approach to Pensions
- DA-122-13: Private Pension Policies in Ind Countries, Chapter 5, pp 65-81
- DA-124-13: Funding Risks for Multi-Employer Pension Plans
- DA-125-13: Should Variable Pay Count Towards Benefits Calculations?
- DA-128-13: Phased Retirement: Problems and Prospects
- DA-129-13: Why are Healthy Employers Freezing their Pensions?
- DA-130-13: International (offshore) Pension Plans - A Growing Trend
- DA-131-13: How to Close the Funding Gap in Dutch Pension Plans? Impact on Generations
- DA-132-13: Turner, Pension Policy: The Search for Better Solutions, 2009, Ch. 1 p. 4-11, Ch 5
- DA-133-13: Chapter 34 of *The Handbook of Employee Benefits: Health and Group Benefits*
- DA-134-13: Pension Challenges and Pension Reforms in OECD Countries
- DA-600-13: Towers Perrin Summary of Minimum Standards for Phased Retirement Under Registered Pension Plans
- DA-601-13: Tax-free Savings Accounts – New (Tax) Math That Works!
- DA-602-13: Not Just a Phase
- [New Retirement Plan Designs for the 21st Century](#), Pension Forum, December 2008, pp. 41-56 (incl commentary and responses)
- [“Downsizing and Plan Design”](#), RSA 1995, Vol. 21 No. 3A

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6.
Learning Objectives
The candidate will be able to analyze, synthesize and evaluate plans designed for executives or the highly paid.
Learning Outcomes
The Candidate will be able to: <ul style="list-style-type: none">a) Given a specific context, synthesize, evaluate and apply principles and features of executive deferred compensation retirement plans.b) Given a specific context, apply principles and features of supplemental retirement plansc) Integrate a plan for executives with the basic benefit plan
Resources
<ul style="list-style-type: none">• <i>Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches</i>, Allen, 10th Edition<ul style="list-style-type: none">○ Ch. 14, pp. 247-260• <i>Morneau Shepell Handbook of Canadian Pension and Benefit Plans</i>, 15th Edition<ul style="list-style-type: none">○ Ch. 11• <i>Towers Watson Canadian Pensions and Retirement Income Planning</i>, 4th Edition<ul style="list-style-type: none">○ Ch. 16 (pp. 295-297, p. 313), Ch. 17 (pp. 376-378), Ch. 18 (pp. 390-393) & Ch. 23• DA-135-13: Towers Perrin, The Handbook of Executive Benefits, Chapter 15 (Golden Parachutes) pp. 238-244 only• DA-150-13: Executive Retirement Benefits Practices• DA-606-13: Retirement Compensation Arrangements: Curmudgeonly Excursion• DA-607-13: Creative Compensation Arrangements for Corporations• DA-608-13: Funding Supplementary Pension Plans

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7.

Learning Objectives

The candidate will be able how to analyze/synthesize the factors that go into selection of actuarial assumptions.

Learning Outcomes

Given a context, the Candidate will be able to:

- a) Evaluate appropriateness of current assumptions
- b) Describe and explain the different perspectives on the selection of assumptions
- c) Describe and apply the techniques used in the development of economic assumptions
- d) Recommend appropriate assumptions for a particular type of valuation and defend the selection
- e) Select demographic and economic assumptions appropriate for a projection valuation

Resources

- *Fundamentals of Retiree Group Benefits*, Yamamoto
 - Ch. 9 (pp. 256-278 and pp. 287-294)
- DA-136-13: 2009 Selection of Actuarial Assumptions, Consultant Resource Manual, SOA Version, Mercer (excluding pp. 13-31, pp. 34-37 and pp. 63-64)
- DA-137-13: Pension Projections
- DA-138-13: Discounting State and Local Pension Liabilities
- DA-139-13: ASOP 35, Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations
- DA-140-13: ASOP 27 Selection of Economic Assumptions for Measuring Pension Obligations
- [CIA Standards of Practice for Post-Employment Benefit Plans 6000-6600](#)
- [Practice Specific Standards for Pension Plans 3100-3500, CIA Consolidated Standards of Practice](#), December 2010
- [Modeling Long Term Healthcare Cost Trends](#), Getzen
- [Accounting Discount Rate Assumption for Pension and Post-employment Benefit Plans](#), CIA Educational Note, September 2011 (Appendices background only)
- [SOA Long Term Healthcare Trends Resource Model](#), Practical Issues for Actuaries
- [Can pensions Be Valued as Marketed Securities](#), Bader, Pension Section News, June, 2009
- [What's Wrong with ASOP 27? Bad Measures, Bad Decisions](#) by Bader and Gold
- [Selecting and Documenting Mortality Assumptions for Pensions](#) (Appendix background only)

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8.

Learning Objectives

The candidate will be able to recommend and advise on the financial effects of funding policy and accounting standards in line with the sponsor's goals, given constraints.

Learning Outcomes

The Candidate will be able to:

- a) Perform valuations for special purposes, including:
 - Plan termination/windup
 - Accounting valuations
 - Open group valuations
 - Plan mergers, acquisitions and spinoffs
- b) Analyze, recommend, and defend an appropriate funding method and asset valuation method in line with the sponsor's investment policy and funding goals.
- c) Demonstrate how the retirement plan's cash inflows and outflows can affect the plan sponsor.
- d) Advise retirement plan sponsors on funding costs including tax deductibility, required contributions and other alternatives to meet the sponsor's goals, consistent with government regulation.
- e) Advise plan sponsors on accounting costs and disclosures for their retirement plans.
- f) Demonstrate the sensitivity of financial measures to given changes in plan design
- g) Describe how a plan's funded status can impact union negotiations and multiemployer plans.
- h) Perform and interpret the results of projections for short and long range planning including the effect of proposed plan changes.

Resources

- *Morneau Shepell Handbook of Canadian Pension and Benefit Plans*, 15th Edition
 - Ch. 5 & Ch. 11 (pp. 304-310)
- *Fundamentals of Retiree Group Benefits*, Yamamoto
 - Ch. 7, Ch. 9 (pp. 256-278 and pp. 287-294)
- DA-105-13: Measuring Terminable Postretirement Obligations
- DA-113-13: Multi-Employer Plans
- DA-114-13: Risk Management and Public Plan Retirement Systems - Appendix only (pages 1-33 background only)
- DA-124-13: Funding Risks for Multi-Employer Pension Plans
- DA-137-13: Pension Projections
- DA-141-13: An Introduction to Duration for Pension Actuaries

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- DA-142-13: ASOP 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions
- DA-143-13: Comp of IAS 19, Rev. 2011 with FASB ASC 715 Summary of Provisions Affecting Accounting for Postretirement
- DA-144-13: Accounting for Pension Buy-In Arrangements
- DA-145-13: Acquiring a U.S. Operation—A Primer
- DA-146-13: ASOP 6, Measuring Retiree Group Benefit Obligations
- DA-147-13: Intricately Linked: Pensions and Corporate Financial Performance
- DA-148-13: Mergers and Acquisitions: Due Diligence of Retirement Plans
- DA-149-13: The Funding of State and Local Pensions: 2009-2013, Boston Center for Research – Appendices for background only
- DA-611-13: Introduction (A58), IFRS1, paragraphs 1-40, Appendix A, Appendix D, D10 and D11 only, IAS19, IFRIC14
- DA-612-13: CICA Handbook 3461
- DA-613-13: CICA Handbook, Sec1000, 1100, 1400, 1500 prg. 01-.09, .14-.16, .35-.37, Sect 1505, Sect 1506 .01-.18, .26-.29, .30-.35, .37
- [Practice Specific Standards for Pension Plans 3100-3500, CIA Consolidated Standards of Practice](#), December 2010
- [“A Look at Dynamic Pension Plan Valuation”](#), Pension Forum, 8/2001, pp. 71-82
- [SOA Cash Balance Study](#), Pension Forum, Dec. 1, 2000, Sections 1,2,3 & 5 (Appendix A background only)
- [CIA Ed Note: Financial Risks Inherent in Multi-Employer Pension Plans and Target Benefit Pension Plans, CIA TF on MEPP/TBPP Funding](#), May 2011
- [Embedded Options and Pension Plans](#), SOA Pension Section, pp.1-17

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9.

Learning Objectives

The candidate will be able to apply the standards of practice and guides to professional conduct.

Learning Outcomes

In general or given a context, the Candidate will be able to:

- 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 Guides to Professional Conduct.
- c) Explain and apply relevant qualification standards
- d) 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 retirement obligations.
- f) Recognize situations and actions that violate or compromise Standards or the Guides to Professional Conduct.
- g) Recommend a course of action to repair a violation of the Standards or the Guides to Professional Conduct.

Resources

- DA-139-13: ASOP 35, Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations
- DA-140-13: ASOP 27, Selection of Economic Assumptions for Measuring Pension Obligations
- DA-142-13: ASOP 4, Measuring Pension Obligations
- DA-146-13: ASOP 6, Measuring Retiree Group Benefit Obligations
- [CIA Standards of Practice for Post-Employment Benefit Plans 6000-6600, April 2009](#)
- [Practice Specific Standards for Pension Plans 3100-3500, CIA Consolidated Standards of Practice, December 2010](#)
- ["A Reevaluation of ASOP 27, Post-Enron: Is It an Adequate Standard of Professionalism?"](#) by Todisco, Pension Forum, January 2005
- [CIA Rules of Professional Conduct](#)
- [SOA Code of Professional Conduct](#)
- [SOA Qualification Standards](#)
- [CIA Qualification Standards](#)