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 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 from 2000-present are available on SOA web site.

Updates Candidates should be sure to check the Updates page on the exam home

page periodically for additional corrections or notices.

Exam Retirement CSP	Retirement CSP	
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Learning Objectives

1. The candidate will be able to analyze the risks faced by retirees and the participants of a defined benefit or defined contribution retirement plan, as well as retiree health plans.

Learning Outcomes

The candidate will be able to:

- a) Identify risks faced by retirees and the elderly.
- b) Propose ways in which retirement plans can manage the range of risks faced by retirees.
- c) Describe the risks faced by participants of a government sponsored retirement plan.
- d) Describe the risks faced by participants of single employer sponsored retirement plans.
- e) Describe the risks faced by participants of a multiemployer retirement plan.
- f) Evaluate benefit adequacy for members of a particular plan given other sources of retirement income.
- g) Construct a model for measuring replacement income adequacy under different scenarios.

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008 Chapter 1 pp 3-8,
- McGill, Fundamentals of Private Pensions, Ninth Edition, Chapters 4 and 7 pp. 232-245
- Mitchell and Hustead, Pensions in the Public Sector, 2001, Chapters 1, 4 pp.98-101 only and 12,
- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Chapter 1, pp 22-24
- R-C101-07: Slater, "Seven Steps Toward Creating a Standout Retirement Savings Plan," *Employee Benefit Plan Review*, Sep 2005, pp 13-16.
- R-C102-07: Turner & Watanabe, Private Pension Policies in Industrialized Countries, chap 5, "Pension Risk and Insurance," pp 65-81
- R-C104-09: Replacement Study A Measurement Tool for Retirement Planning
- R-C123-07: Funding Risks for Multi-Employer Pension Plans
- R-C141-10: What Will the Next 20 Years Bring?

- R-C600-07: FAQs About Actions Taken by OSFI in Connection With Air Canada's Pension Plans
- Key Findings and Issues: Understanding and Managing the Risks of Retirement http://www.soa.org/files/pdf/research-key-findings.pdf
- Managing Post-Retirement Risks: A Guide to Retirement Planning, http://www.soa.org/files/pdf/post-retirement-charts.pdf
- Protecting Participants and Beneficiaries in a Phased Retirement World from "Retirement Implications of Demographic and Family Change" symposium at the Spring '02 San Francisco SOA meeting
 http://www.soa.org/library/monographs/retirement-systems/retirement-implications-of-demographic-and-family-change-symposium/2002/january/m-rs02-2-01.pdf
- Retirement Plan Designs for the 21st Century, *Pension Forum*, December 2008 including commentary and authors' responses http://www.soa.org/library/newsletters/the-pension-forum/2008/pfn-2008-iss01.pdf

Exam

Learning Objectives

2. The candidate will be able to evaluate sponsor's goals for the retirement plan

Context:

Sponsor is the entity establishing the plan and operates in private sector, public sector, tax-exempt, and multiemployer environment

Retirement plans include qualified/registered, supplemental and deferred compensation retirement plans, and retiree health plans

Learning Outcomes

The candidate will be able to:

- a) Describe the agency relationship between management of the sponsor and its shareholders or taxpayers.
- b) Compare the, sometimes conflicting, interests of management, employees, shareholders or taxpayers (in the case of public sector).
- c) Describe ways to identify and prioritize the sponsor's goals related to the design of the retirement plan.
- d) Given a context, assess the feasibility of achieving the sponsor's goals for their retirement plan.
- e) Given a context, assess the tradeoffs between different goals and prioritize them.
- f) State relationship or recognize contradictions between management's and shareholders' goals and the retirement risks faced by retirees.
- g) Assess the appropriateness of the retirement plan features in relation to the sponsor's total compensation structure.
- h) Assess how retirement plan features create shareholder value.

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008, Chapters 1 pp.9-10, 2 pp.28-45
- McGill, Fundamentals of Private Pensions, Ninth Edition, 2010, Chapters 1, 4 and 5
- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Chapter 1
- R-C102-07: Turner & Watanabe, Private Pensions Policies in Industrialized Countries, chap 5, "Pension Risk and Insurance," pp 65-81
- R-C105-07: Pension Actuary's Guide to Financial Economics and Pension Arbitrage Example Worksheet, http://www.soa.org/professional-interests/pension/research-thinking-ahead/pen-finance-resources.aspx
- R-C106-07: Case Against Stock in Public Pension Plans
- R-C138-09: The Case for Stock in Pension Funds
- R-C142-10: Bader and Gold's Rebuttal to The Case for Stock in pension Funds, *Contingencies*, March/April 2008

- Pension Funds: Company Manager's View http://www.soa.org/library/unclassified/m-rs04-1-01.pdf
- Retirement Benefits, Economics and Accounting: Moral Hazard and Frail Benefit Designs http://www.soa.org/library/journals/north-american-actuarial-journal/2005/january/naaj0501-6.pdf

Exam

Learning Objectives

3. The candidate will be able to evaluate risks faced by sponsors of a retirement plan by virtue of the plan's design and be aware of methods to mitigate these risks.

Context:

Sponsor is the entity establishing the plan and operates in private sector, public sector, tax-exempt, and multiemployer environment.

Retirement plans include qualified/registered, supplemental, deferred compensation retirement plans, as well as 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. For example -An early retirement window offering or a lump sum payout option.
- b) Recommend ways to mitigate the risks identified with particular plan feature [e.g., cap an open-ended COLA].
- c) Analyze the issues related to plan provisions that cannot be removed.
- d) Describe plan design features to handle the changes in the demographics of the labor force.
- e) Compare the economic value of different plan designs for different stakeholders.
- f) In a given context, assess the effect that changes in plan design might have on collective bargaining agreements.
- g) Assess the impact of possible changes in plan design legislation.

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008, Chapter 17 p. 313-319 only
- McGill, Fundamentals of Private Pensions, Ninth Edition, 2010, Chapter 5
- Morneau Sobeco, *Handbook of Canadian Pension and Benefit Plans*, Fourteenth Edition, 2008, Chapters 1, 2, 8 pp.214 to end of chapter, Chapter 9 up to p. 231, Chapter 17 and (Ch. 13 for background only)
- R-C102-07: Turner & Watanabe, Private Pension Policies in Industrialized Countries, chap 5, "Pension Risk and Insurance," pp 65-81
- R-C107-07: Cassidy, "Equities in DB Plans Is the Traditional 60/40 Mix a Dinosaur?", Employee Benefit Plan Review, Sep 2005, pp. 30-33
- R-C108-07: Why are Healthy Employers Freezing their Pensions?

- R-C123-07 Funding Risks for Multi-Employer Pension Plans
- R-C143-10: Constructing New Retirement Systems: Choosing between Insurance and Investment, Choice and Default. Appendices 1 and 2 are background only.
- Pension Forum, Dec. 1, 2000 SOA Cash Balance Study, sections 1, 2, 3, 5, (Appendix A for background only) http://www.soa.org/library/newsletters/pension-forum/2000/december/pfn0012.pdf
- "Protecting Participants and Beneficiaries in a Phased Retirement World" by Patricia L. Scahill and Jonathan Barry Forman
 http://www.soa.org/library/monographs/retirement-systems/retirement-implications-of-demographic-and-family-change-symposium/2002/january/m-rs02-2-01.pdf
- RSA 1995, Vol. 21 No. 3A "Downsizing and Plan Design" http://www.soa.org/library/proceedings/record-of-the-society-of-actuaries/1990-99/1995/january/rsa95v21n3a13.pdf
- SOA Record, Vol 31, No. 2, New Orleans Meeting June 2005 session 56: Plan Design http://www.soa.org/library/proceedings/record-of-the-society-of-actuaries/2000-09/2005/june/rsa05v31n256sem.pdf

Exam

Learning Objectives

4. The candidate will be able to evaluate and recommend a plan design appropriate for the sponsor's goals.

Context:

These recommendations will be appropriate for the sponsor's business and financial environment, workforce objectives and other HR programs. This would incorporate, for example, application of the sponsor's general industry, philosophy, labor force objectives, financial situation/objectives and total compensation objectives.

These recommendations will be appropriate for a particular employee group including, salaried, hourly, unionized and executive employees.

Learning Outcomes

The candidate will be able to:

- a) Given a context, design retirement programs that manage retirement risk and are consistent with sponsor objectives.
- b) Given a context, design retirement programs that promote employee behavior consistent with sponsor objectives.
- c) Given a context and sponsor objectives, recommend an appropriate plan type for providing retirement benefits and defend the recommendations.
- d) Given a context and sponsor objectives, evaluate the pros and cons from both a sponsor and employee perspective of introducing options allowing for flexible retirement such as phased retirement, DROPs and flexible pension plans.
- e) Given a context and plan type, recommend appropriate plan design/features and defend the recommendations.
- f) Identify the ways that regulation impacts the sponsor's plan design goals.
- g) 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.
- h) Given a context and sponsor objectives, advise a plan sponsor regarding the choice of design elements for their retiree health program.

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008 Chapter 2, pp 37-39 "Compliance with Legal Requirements"
- McGill, et. at., Fundamentals of Private Pensions, Ninth Edition, 2010, Chapter 4
- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Chapters 1, 2, 7, 8, 9, 11, 12
- Towers Watson Canadian Pensions and Retirement Income Planning, Fourth Edition, 2010, Chapters 13, 14, 16-21, 23
- Yamamoto, Fundamentals of Retiree Group Benefits, 2006, Chapter 4, pp. 57-68 and pp. 90-112
- R-C101-07: Seven Steps Toward Creating a Standout Retirement Savings Plan
- R-C108-07: Why are Healthy Employers Freeze Their Pension Plans

- R-C109-07: Integration with Social Security
- R-C123-07: Funding Risks for Multi-Employer Plans
- R-C601-07: Canadian Pension Plan Design
- R-C614-09: Tax-free Savings Accounts New (Tax) Math That Works!
- "Protecting Participants and Beneficiaries in a Phased Retirement World" by Patricia L. Scahill and Jonathan Barry Forman http://www.soa.org/library/monographs/retirement-systems/retirement-implications-of-demographic-and-family-change-symposium/2002/january/mrs02-2-01.pdf
- Retirement Plan Designs for the 21st Century, *Pension Forum*, December 2008 http://www.soa.org/library/newsletters/the-pension-forum/2008/pfn-2008-iss01.pdf

Exam

Learning Objectives

5. The candidate will be able to synthesize and evaluate deferred compensation and supplemental retirement plans for the highly paid in a given context.

Learning Outcomes

The candidate will be able to, for a deferred compensation or supplemental executive retirement plan:

- a) Differentiate between situation where management and shareholders objectives for executive plans coincide and where they differ.
- b) Given a context, recommend a plan to meet the sponsor's objectives and defend the recommendation.
- c) Given a context, assess the plan from an executive's perspective.
- d) Analyze the options for securing the benefit promise.
- e) Assess the taxation issues.
- f) Identify and assess the impact of regulatory constraints.
- g) Describe accounting and the financial reporting for these plans and the options available.

- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008 Chapter 11
- Employee Future Benefits Additional disclosures, Background information and Basis for Conclusion, Appendix B only CICA 3461 Standard
- R-C602-07: Funding Supplementary Pension Plans
- R-C603-07: RCA: Curmudgeonly Excursion
- R-C604-07: Creative Compensation Arrangements for Corporations

Exam

Learning Objectives

6. The candidate will be able to understand the general applicability and design of long-term incentive plans

Learning Outcomes

- a) The candidate will be able to identify and describe the design of long-term incentive plans, including:
 - Bonus/performance plans
 - Stock options
- b) The candidate will be able to summarize the accounting treatment of these plans

- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Chapter 12
- R-C110-07: Towers Perrin, The Handbook of Executive Benefits, Chapter 15 (Golden Parachutes) pp. 238-244 only
- R-C124-07: "Recent Issues in Corporate Financial Reporting", PWC Financial Reporting Release, Feb. 2005 pp.11-14
- R-C613-07: "The Fair Value Method of Measuring Compensation for Employee Stock Options: Basic Principles and Illustrative Examples, MAY 2002, Deloitte and Touche

Exam

Learning Objectives

7. The candidate will be able to evaluate the sponsors financial goals and risk management with respect to their plan

Learning Outcomes

The candidate will be able to:

- a) Describe ways to work with the sponsor on identifying and prioritizing the goals of management and shareholders related to the financial management of their retirement plan.
- b) Compare the, sometimes conflicting, interests of management, employees, shareholders or taxpayers (in the case of public sector).
- c) Define the retirement plan risks (financial and design) in a way that integrates with the sponsor's risk management strategy
- d) Analyze how the retirement plan integrates into the sponsor's overall financial position.
- e) Describe how retirement plan accounting impacts the sponsor's overall financial results.
- f) Demonstrate how the retirement plan's cash inflows and outflows can affect the plan sponsor.
- g) Recommend an appropriate funding policy in line with sponsor goals and professional standards. The candidate will be able to defend the recommendations.
- h) Describe how a plan's funded status can impact union negotiations and multiemployer plans.

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008, Chapters 24 and 29
- Mitchell/Hustead, Pensions in the Public Sector, 2001, Chapter 9
- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Chapters 5 and 6
- R-C105-07: Pension Actuary's Guide to Financial Economics and Pension Arbitrage Example Worksheet, http://www.soa.org/professional-interests/pension/research-thinking-ahead/pen-finance-resources.aspx
- R-C108-07: Why are Healthy Employers are Freezing Their Pension Plans
- R-C112-07: Pension Investment and Corporate Risk Management
- R-C114-07: A Fresh Look at Pension Risks
- R-C116-07: Financing the Future: How Fit is Your Funding Policy
- R-C117-07: Pension Deficits: an Unnecessary Evil by Bader
- R-C123-07: Funding Risks for Multi-Employer Plans
- R-C125-07: Towers-Perrin "Pensions and Corporate Financial Performance" (p. 1-14 only)
- R-C126-07: Bank of Canada Review Summer 2005 Recent Trend in Canadian DB Pension Sector Investment and Risk Management
- R-C128-07: Turner/Watanabe Ch. 6

- R-C138-09: The Case for Stock in Pension Funds, *Contingencies*, Jan/Feb 2008
- R-C142-10: Bader and Gold's Rebuttal to The Case for Stock in Pension Funds, March/April 2008 Contingencies, pp. 12 and 14
- R-C147-10: How a Pension Plan's Funding Level Should Influence its Investment Strategy, Vanguard
- Pension Forum, June 1996 Funding Adequacy A Canadian Perspective, Hamilton http://www.soa.org/library/newsletters/pension-forum/1996/june/pfn9606.pdf
- Pension forum, June 1996, Adequate Funding for a Pension Plan, Sze http://www.soa.org/library/newsletters/pension-forum/1996/june/pfn9606.pdf
- Author's Response to Mr. Klieber's and Mr. Mindlin's Comments, Bader, Pension Forum, April 2005 http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf
- A Critique of "Pension Deficits: An Unnecessary Evil", Pension Forum, April 2005 http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf
- Comments on "Pension Deficits: An Unnecessary Evil", Klieber, Pension Forum, April 2005 http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf
- "Financial Economics and Actuarial Practice", Tony Day, NAAJ Jul 01, 2004 (Vol. 8, Nr. 3) http://www.soa.org/library/journals/north-american-actuarial-journal/2004/july/naaj0403-6.pdf
- "Improving Pension Funding and Disclosures: What's in it for Me?" by Stonewall& Moore from the July 2005 Funding Symposium
 http://www.soa.org/library/monographs/retirement-systems/the-future-of-pension-plan-funding-and-disclosure-monograph/2005/december/m-rs05-1-vii.pdf
- The Earnings Implications of Pension Expense: A Stochastic Analysis of Ten Canadian Companies (Joss) NAAJ October 2005 http://www.soa.org/library/journals/north-american-actuarial-journal/2005/october/naaj0504-3.pdf
- Can Pensions by Valued as Marketed Securities, Pension Section News, June 2009 http://newsletters.soa.org/soap/issues/2009-06-05/email.html

Exam

Learning Objectives

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

Context:

Private, industry, multiemployer, public, multinational companies

Learning Outcomes

The candidate will be able to:

- a) Compare the financial economics perspective to the traditional perspective on funding and accounting for retirement plans.
- b) Recommend an appropriate funding method and asset valuation method in line with the sponsor's investment policy and funding goals. The candidate will be able to defend the recommendation.
- c) Advise retirement plan sponsors on funding costs including tax deductibility, required contributions and other alternatives to meet the sponsor's goals. This would be consistent with government regulation.
- d) Advise plan sponsors on accounting costs and disclosures for their retirement plans. This would include restrictions imposed by applicable accounting authorities (FASB, CICA, IASC, FRS17).
- e) From a financial economics perspective, describe differences in economic value on the basis of the financial strength of the sponsoring company.
- Perform valuations for the following special purposes, and advise plan sponsors on their financial implications:
 - i. Plan Mergers and Acquisitions
 - ii. Spin-offs
 - iii. Conversions from one plan type to another
- g) Provide advice and analysis to plan sponsors regarding the actuarial assumptions used in valuation of their retirement plans, including:
 - i. The appropriateness of assumptions, given the purpose of the valuation
 - ii. The financial risks associated with a particular set of valuation assumptions
 - iii. Adherence of assumptions to applicable accounting standards
- h) Perform and interpret the results of projections for short and long range planning including the effect of proposed plan changes

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008 chap 19, "Budgeting Pension Costs," pp 335-341
- McGill, Fundamentals of Private Pensions, Ninth Edition, 2010, Chapter 22, pp. 608-615
- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Third Edition, 2006, Chapters 5, 7 pp 159-160 and Chapter 11, pp. 274-280
- Towers Watson Canadian Pensions and Retirement Income Planning, Fourth Edition, 2010, Chapter 16 pp. 295-297 and Chapter 18

- Yamamoto, Fundamentals of Retiree Group Benefits, 2006, Chapter 7
- Employee Future Benefits Additional Disclosures, Background Information and Basis for Conclusion, Includes Section 3461 from the CICA Handbook (omit pp. 1–21, 29–34, 111–115)
- R-C103-09:Comparison of IAS 19 with FAS 87/88/106/132(R)/158, CICA 3461 and FRS 17 Summary of Provisions Affecting Accounting for Post Retirement Benefits
- R-C105-07: Pension Actuary's Guide to Financial Economics and Pension Arbitrage Example Worksheet, http://www.soa.org/professional-interests/pension/research-thinking-ahead/pen-finance-resources.aspx
- R-C117-07: Bader Pension Deficits Unnecessary Evil
- R-C118-07: Paterson, Pension Issues in Corporate Sales, Mergers and Acquisitions
- R-C121-07: Converting Pension Plans From a Defined Benefit to a Defined Contribution Design Issues to Consider in Canada,/Genno
- R-C130-07: Bader/Gold Reinventing Pension Actuarial Science with discussion
- R-C131-07: "Plan Freezes: The New Ice Age," 2005 EA meeting
- R-C137-08: Pension Projections, sections I, II, V (sections III, IV,VI and Appendix background only)
- R-C138-09: The Case for Stock in Pension Funds
- R-C140-10:Acquiring a U.S. Operation, Watson Wyatt
- R-C142-10: Bader and Gold's Rebuttal to The Case for Stock in Pension Funds, March/April 2008 Contingencies, pp. 12 and 14.
- R-C144-10: Mergers and Acquisitions: Due Diligence of Retirement Plans, Watson Wyatt
- R-C145-10: Challenges for users of Actuarial Information Arising from Current Market Conditions
- R-C147-10: How a Pension Plan's Funding Level Should Influence its Investment Strategy
- R-C605-07: Asset Transfer Resulting From Sale of Business
- R-C615-10: Transition From Canadian GAAP to IFRS-Issues for Pension and Other Post-Retirement Benefit Plan Sponsors
- A Critique of "Pension Deficits: An Unnecessary Evil", Mindlin, Pension Forum, April 2005, http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf
- Author's Response to Mr. Klieber's and Mr. Mindlin's Comments, Bader, Pension Forum, April 2005, http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf
- Comments on "Pension Deficits: An Unnecessary Evil", Klieber, Pension Forum, April 2005 http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf
- FASB 158 no appendices http://www.fasb.org/pdf/fas158.pdf
- "Financial Economics and Actuarial Practice", Tony Day, NAAJ Jul 01, 2004 (Vol. 8, No. 3) http://www.soa.org/library/journals/north-american-actuarial-journal/2004/july/naaj0403-6.pdf

- Mindlin, "Reaffirming" and Counter papers, Pension Forum, April 2005, Vol. 16 No.2, http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf
- Pension Forum, June 1996, Funding Adequacy A Canadian Perspective, Hamilton" http://www.soa.org/library/newsletters/pension-forum/1996/june/pfn9606.pdf
- Pension Forum, June 1996, Adequate Funding for a Pension Plan, Sze"
 http://www.soa.org/library/newsletters/pension-forum/1996/june/pfn9606.pdf
- Can Pensions be Valued as Marketed Securities, *Pension Section News*, June 2009 http://newsletters.soa.org/soap/issues/2009-06-05/email.html
- ASOP 27 http://www.actuarialstandardsboard.org/pdf/asops/asop027_109.pdf
- Pension Forum January 2005 -, "A Reevaluation of ASOP 27, Post-Enron: Is It an Adequate Standard of Professionalism?" by Todisco –
 Discussions of above article by North and Turpin plus author's response http://www.soa.org/library/newsletters/the-pension-forum/2005/january/pfn0501.pdf
- What's Wrong with ASOP 27? Bad Measures, Bad Decisions by Bader and Gold http://www.soa.org/library/newsletters/the-pension-forum/2005/january/pfn0501.pdf
- R-C116-11: International Accounting Standard 19, Employee Benefits (IAS 19)
- R-C117-11: IFRIC Interpretation 14, IAS 19 The Limit on a Defined Benefit Asset, Minimum Funding Requirement and their Interaction (includes Amendment regarding Pre-Payments of a Minimum Funding Requirement)

Exam

Learning Objectives

9. The candidate will be able to synthesize plan design and funding/accounting/economic value

Learning Outcomes

The candidate will be able to:

- a) Explain the interplay between plan design and plan funding/accounting/economic value
- b) Given the sponsor's goals, recommend an integrated plan (design and funding/accounting/economic value) and defend the recommendation
- c) Demonstrate the sensitivity of cost and economic value to given changes in plan design

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008, Chapter 18
- R-C105-07: Pension Actuary's Guide to Financial Economics and Pension Arbitrage Example Worksheet, http://www.soa.org/professional-interests/pension/research-thinking-ahead/pen-finance-resources.aspx
- R-C108-07: Why are Healthy Employers Freezing their Pensions?
- Gold, "Ret. Benefits, Economics and Accounting, January 2005 NAAJ http://www.soa.org/library/journals/north-american-actuarial-journal/2005/january/naaj0501-6.pdf
- NAAJ July 2001, Macroeconomic Aspects of Private Pensions Programs, Krzysztof M. Ostaszewski http://www.soa.org/library/journals/north-american-actuarial-journal/2001/july/naaj0107-4.pdf
- NAAJ Oct. 2005, Earnings Implications of Pension Expenses: A Stochastic Analysis of Ten Canadian Companies, Paul Joss http://www.soa.org/library/pdftest/journals/north-american-actuarial-journal/2005/october/naaj0504-3.pdf
- Pension Forum, April 2005 http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf
- Shift to DC pension plans, why did it not happen in Canada? Rob Brown in NAAJ, 7/2001 http://www.soa.org/library/journals/north-american-actuarial-journal/2001/july/naaj0107-5.pdf

Exam

Learning Objectives

10. The candidate will be able to analyze the regulatory environment as it effects retirement plans

Learning Outcomes

The candidate will be able to:

- a) Evaluate the effect of regulatory policies and restrictions, for all retirement plans, associated with:
 - Plan design
 - Plan establishment
 - Plan amendment
 - Plan termination/windup
 - Plan merger or spin-off
 - Reporting requirements
 - Members' rights
 - Plan funding
 - Contributions and benefits
 - Individual savings plans
 - Coordination of individual and employer sponsored retirement plans.
 - Economic value to shareholders
- b) Evaluate the tax implications of retirement plan designs and funding alternatives for the plan sponsor, shareholders and the participants.
- c) Where regulations for tax-assisted retirement plans conflict with sponsor's and shareholders' goals, the candidate will be able to describe and recommend alternatives.
- d) Explain the moral hazard that arises from the existence of outside (government) guarantees on the plan benefits.
- e) Describe and recommend proper plan governance practices and the sponsor's fiduciary responsibility.

- Mitchell,/Hustead, *Pensions in the Public Sector*, 2001, Chapter 2 pp 33–35
- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Chapters 2, 4, 7, 8, 11, 12, 27
- Towers Watson Canadian Pensions and Retirement Income Planning, Fourth Edition, 2010, Chapters 5, 13, 16-20, 23
- R-C102-07: Turner/Watanabe, Private Pension Policies in Industrialized Countries, Ch. 5 pp 65-91
- R-C117-07: Bader, "Pension Deficits Unnecessary Evil" and discussions
- R-C119-07: Fiduciary Liability Issues for Selection of Investments
- R-C126-07: Bank of Canada Review Summer 2005 Recent Trend in Canadian DB Pension Sector Investment and Risk Management

- R-C132-07: 20 Questions Directors Should Ask About Their Role in Pension Governance
- R-C606-07: OSFI Guidelines for converting DB to DC
- R-C607-07: Filing Requirements and Procedure on Full or Partial Wind up of a Pension Plan, Ontario Guideline

Exam

Learning Objectives

11. The candidate will be able to analyze the issues facing retirement plan sponsors regarding investment of fund assets and make recommendations on the actuarial issues*

*Note: the candidate is not expected to provide advice on investment of plan assets

Learning Outcomes

The candidate will be able to:

- a) Assess the different types and combinations of investment vehicles for providing retirement benefits given the particulars of the sponsor's financial circumstances, philosophy, industry, workforce and benefit package.
- b) Distinguish the various ways that retirement fund assets are managed.
- c) Given a context, evaluate a Statement Of Investment Policy.
- d) Assess the potential effects of various investments and investment policies on plan funding (short and long-range), accounting, design and administration.
- e) Assess the potential effects of various investments and investment policies on all of the stakeholders, including tax implications.
- f) Model the effect on setting investment strategy of factors including, cash flow requirements, various plan designs and various economic environments.
- g) Describe the regulatory restrictions on retirement plan assets.
- h) Identify the sources of investment risk and assess risk facing retirement funds.
- i) Evaluate immunization strategies and other hedging techniques for asset/liability management.

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2007, Chapters 24, 29
- Litterman, Modern Investment Management, Chapters 2, 3, 9, 10, 21, 22, 23, 24, 27(pp. 501-505 only), 28 (pp. 516-520 only)
- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Chapter 6
- R-C105-07: Pension Actuary's Guide to Financial Economics and Pension Arbitrage Example Worksheet, http://www.soa.org/professional-interests/pension/research-thinking-ahead/pen-finance-resources.aspx
- R-C120-11: Introduction & Overview of Retirement Plan Investments
- R-C122-07: Statement of Investment Policies for DB and DC Plans
- R-C133-07: Back to the Future
- R-C139-09: The Place for Lifestyle Funds in a 401(K) Plan, Farley

- R-C147-10: How a Pension Plan's Funding Level Should Influence its Investment Strategy
- R-C148-10: Jim Moore Discusses Liability Driven Investment Strategies and Concepts
- R-C149-10: Plan Sponsor Guide to Liability-Driven Investing
- R-C150-10: Mind the Gap: Using Derivatives Overlays to Hedge Pension Duration
- R-C608-07: PPPD Investment Policy Guideline, OSFI
- R-C609-07: Canadian Association of Pension Supervisory Authorities Guideline no. 3 for Capital Accumulations Plans
- "Full Circle, Purchasing Annuities in DB Plans", Ruloff http://www.soa.org/library/monographs/retirement-systems/managing-retirement-assets-symposium/2004/march/m-rs04-2-05.pdf
- Pension Forum, April, 2005, entire issue, http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf

Exam

Learning Objectives

12. 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 legal requirements regarding the actuaries 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.

- Yamamoto, Fundamentals of Retiree Group Benefits, 2006, Appendix F, pp. 1-27
- R-C119-07: Fiduciary Liability Issues for Selection of Investments
- R-C610-10: CIA General Standards 1000-1800
- R-C611-11: CIA Consolidated Standards of Practice Practice Specific Standards for Pension Plans 3000-3800
- R-C612-10: CIA Standards of Practice for Post-Employment Benefit Plans 6000-6600
- ASOP 27, 35: http://www.actuarialstandardsboard.org/pdf/asops/asop027_109.pdf
 http://www.actuarialstandardsboard.org/pdf/asops/asop035_110.pdf
- Pension Forum January 2005 "A Reevaluation of ASOP 27, Post-Enron: Is It an Adequate Standard of Professionalism?" by Todisco Discussions of above article by North and Turpin plus author's response http://www.soa.org/library/newsletters/the-pension-forum/2005/january/pfn0501.pdf
- What's Wrong with ASOP 27? Bad Measures, Bad Decisions by Bader and Gold http://www.soa.org/library/newsletters/the-pension-forum/2005/january/pfn0501.pdf
- SOA Code of Professional Conduct http://www.soa.org/about/membership/about-code-of-professional-conduct.aspx
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- SOA Qualification Standards http://www.soa.org/about/membership/about-req-admission.aspx
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