Important Exam Information:

Exam Date and Time	A 15 minute read-through time will be given prior to the start of the exam.
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 web site.
<u>Updates</u>	Candidates should be sure to check the Updates page on the exam home page periodically for additional corrections or notices.

Exam	Retirement CSP				
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					
c) Describe the risks faced by participants of a government					
d) Describe the risks faced by participants of single employ	yer sponsored retirement plans				
e) Describe the risks faced by participants of a multiemplo	yer retirement plan				
f) Evaluate benefit adequacy for members of a particular p	lan given other sources of retirement income.				
g) Construct a model for measuring replacement income adequacy under different scenarios.					
Syllabus Resources					
• Allen, <i>Retirement Plans – 401(K)s, IRAs and other</i> Age"	Deferred Compensation Approaches, Tenth Edition, 2008, Chapter 1 pp 3-8, "Economic Problems of Old				
• McGill, Fundamentals of Private Pensions, Ninth E	Edition, 2010, Chapters 4 and 7 pp. 232-245				
• Mitchell and Hustead, Pensions in the Public Sector	r, Chapters 1, 4 (pp. 98-101 only) and 12				
• Morneau Sobeco, Handbook of Canadian Pension	and Benefit Plans, Fourteenth Edition, 2008, Ch. 1 pp 23-24				
• R-C101-07: Seven Steps Toward Creating a Stando	ut Retirement Savings Plan				
• R-C102-07: Turner & Watanabe, chap 5, "Pension 1	Risk and Insurance," pp 65-81				
• R-C104-09: Replacement Ratio Study – A Measure	ment Tool for Retirement Planning				
• R-C123-07: Funding Risks for Multi-Employer Pla	ns				
• R-C141-10: What will the Next 20 Years Bring?					

- 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, SOA http://www.soa.org/files/pdf/post-retirement-charts.pdf
- "Protecting Participants and Beneficiaries in a Phased Retirement World" by Patricia L. Scahill and Jonathan Barry Forman, from "Retirement Implications of Demographic and Family Change" symposium at the Spring '02 San Francisco SOA meeting <u>http://www.soa.org/library/monographs/retirement-systems/retirement-implications-of-demographic-and-family-change-symposium/2002/january/m-rs02-2-01.pdf</u>
- 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

aarning Objectives The candidate will be able to evaluate sponsor's goals for the retirement plan ontext: ponsor is the entity establishing the plan and operates in private sector, public sector, tax-exempt, and multiemployer environment etirement plans include qualified/registered, supplemental, deferred compensation retirement plans and retiree health plans arring Outcomes are candidate will be able to: Describe the agency relationship between management of the sponsor and its shareholders or taxpayers. Compare the, sometimes conflicting, interests of management, employees, shareholders or taxpayers (in the case of public sector). Describe ways to identify and prioritize the sponsor's goals related to the design of the retirement plan. Given a context, assess the feasibility of achieving the sponsor's goals and prioritize them. State relationship or recognize contradictions between management's and shareholders' goals and the retirement risks faced by retirees. Assess the appropriateness of the retirement plan features in relation to the sponsor's total compensation structure.
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Describe ways to identify and prioritize the sponsor's goals related to the design of the retirement plan. Given a context, assess the feasibility of achieving the sponsor's goals for their retirement plan. Given a context, assess the tradeoffs between different goals and prioritize them. State relationship or recognize contradictions between management's and shareholders' goals and the retirement risks faced by retirees.
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Assess the appropriateness of the retirement plan features in relation to the sponsor's total compensation structure
rissess are appropriateless of the reaction pain relation to the sponsor s total compensation structure.
Assess how retirement plan features create shareholder value.
/llabus Resources
• Allen, Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008, Chapter 1 pp 9-10 only, Chapter 2 pp. 28-45 only
• McGill, Fundamentals of Private Pensions, Ninth Edition, 2010, Chapters 1, 4, 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 and
Example Worksheet http://www.soa.org/professional-interests/pension/research-thinking-ahead/pen-finance-resources.aspx
R-C106-07: The 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, <i>Contingencies</i> , March/April 2008

- Exley & Mehta "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 by Jeremy Gold, NAAJ 1/05 <u>http://www.soa.org/library/journals/north-american-actuarial-journal/2005/january/naaj0501-6.pdf</u>

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 and 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	
Syllabus Resources	
 Allen, <i>Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches,</i> Tenth Edition, 2008, Chapter 3, pp 53-57, Chapter 17, pp. 313-319 McGill, <i>Fundamentals of Private Pensions</i>, Ninth Edition, 2010, Chapter 5 	

- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition 2008, Chapters 1, 2, 17 (with Chapter 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: Equities in DB Plans Is the Traditional 60/40 Mix a Dinosaur?
- 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.
- R-C800-07: United States Government Accountability Office, "Airline Plans' Underfunding Illustrates Broader Problems with the Defined Benefit Pension System," GAO-05-108T, October 7, 2004,
- R-C806-09: IRS Issues Final Regulations Relating to Phased Retirement
- 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
 <u>http://www.soa.org/library/monographs/retirement-systems/retirement-implications-of-demographic-and-family-change-symposium/2002/january/m-rs02-2-01.pdf</u>
- RSA 1995, Vol. 21 No. 3A "Downsizing and Plan Design" <u>http://www.soa.org/library/proceedings/record-of-the-society-of-actuaries/1990-99/1995/january/rsa95v21n3a13.pdf</u>
- RSA, Vol. 31, No. 2, New Orleans Meeting June 2005 session 56: Plan Design <u>http://www.soa.org/library/proceedings/record-of-the-society-of-actuaries/2000-09/2005/june/rsa05v31n256sem.pdf</u>

Ex	am
Le	arning Objectives
4.	The candidate will be able to evaluate and recommend a plan design appropriate for the sponsor's goals.
Co	ntext:
	ese recommendations will be appropriate for the sponsor's business and financial environment, workforce objectives and other HR programs. This would incorporate, example, application of the sponsor's general industry, philosophy, labor force objectives, financial situation/objectives and total compensation objectives.
Th	ese recommendations will be appropriate for a particular employee group including, salaried, hourly, unionized and executive employees.
Le	arning Outcomes
Th	e 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
Sy	llabus Resources
	• Allen, Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008, Chapter 2, pp 37-39, Chapter 3
	• McGill, et. al., Fundamentals of Private Pensions, Ninth Edition, 2010, Chapter 4
	• Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Chapters 1 and 2
	• 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 Pension Plans
- R-C807-09: The Long and Short of the Pension Protection Act of 2006, pp. 10–24, excluding p. 13 (pp.1–9 and Appendicies for background only)
- "Protecting Participants and Beneficiaries in a Phased Retirement World" by Patricia L. Scahill and Jonathan Barry Forman <u>http://www.soa.org/library/monographs/retirement-systems/retirement-implications-of-demographic-and-family-change-symposium/2002/january/m-rs02-2-01.pdf</u>
- 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 situations 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 for these plans and the options available.

Syllabus Resources

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Chap. 14 pp. 245–247; 250–251; 260–262;
- R-C801-07: Evaluating Financing Options for Nonqualified Benefit Plans
- R-C808-09: IRS Issues Final 409A Regulations, Deloitte
- R-C809-09: IRS Issues Final 409A Regulations Part II, Deloitte

• R-C810-09: IRS Issues Final 409A Regulations - Part III, Deloitte

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

Syllabus Resources

- Allen, Retirement Plans 401(k)s, IRAs and Other Deferred Compensation Approaches, Tenth Edition, 2008, Chapters 14 & 15
- R-C110-07: The Handbook of Executive Benefits, Chapter 15 (Golden Parachutes), pp. 238-244 only
- R-C124-07: Recent Issues in Corporate Financial Reporting, pp.11-14
- R-C802-07: Executive Compensation and Benefits, 2004 CCA meeting session 12
- R-C803-07: Executive Compensation 2005: Many Forces, One Direction
- R-C805-07: Taking Stock of Option Expensing
- R-C808-09: IRS Issues Final 409A Regulations, Deloitte
- R-C809-09: IRS Issues Final 409A Regulations Part II, Deloitte
- R-C810-09: IRS Issues Final 409A Regulation Part III, Deloitte

n	
ning Objectives	
The candidate will be able to evaluate the sponsors financial goals and risk management with respect to their plan	
ning Outcomes	
candidate will be able to:	
Describe ways to work with the sponsor on identifying and prioritizing the goals of management and shareholders related to the financial management of the retirement plan.	eir
Compare the, sometimes conflicting, interests of management, employees, shareholders or taxpayers (in the case of public sector).	
Define the retirement plan risks (financial and design) in a way that integrates with the sponsor's risk management strategy	
Analyze how the retirement plan integrates into the sponsor's overall financial position.	
Describe how retirement plan accounting impacts the sponsor's overall financial results.	
Demonstrate how the retirement plan's cash inflows and outflows can affect the plan sponsor.	
Recommend an appropriate funding policy in line with sponsor goals and professional standards. The candidate will be able to defend the recommendations	IS.
Describe how a plan's funded status can impact union negotiations and multiemployer plans.	
abus Resources	
• Allen, Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches, Ch 24 and 29	
• Mitchell/Hustead, Pensions in the Public Sector, 2001, Ch. 9	
• Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Ch. 5 and 6	
 R-C105-07: Pension Actuary's Guide to Financial Economics and Pension Arbitrage Example Worksheet, <u>http://www.soa.org/professional-interests/pension/research-thinking-ahead/pen-finance-resources.aspx</u> 	
• 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	
R-C123-07: Funding Risks for Multi-Employer Pension Plans	

• R-C125-07: Pensions and Corporate Financial Performance (p. 1-14 only)

- R-C126-07: Recent Trends in Canadian DB Pension Sector Investment and Risk Management
- R-C128-07: Turner/Watanabe, Private Pension Policies in Industrialized Countries, Ch. 6
- R-C138-09: The Case for Stock in Pension Funds, Contingencies, Jan/Feb 08
- R-C142-10: Bader and Gold's Rebuttal to The Case for Stock in Pension Funds, March/April 2008Contingencies, pp. 12 and 14.
- R-C147-10: How a pension Plan's Funding Level Should Influence Investment Strategy, Vanguard
- A Critique of "Pension Deficits: An Unnecessary Evil", Mindlin, Pension Forum, April 2005, <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf</u>
- Author's Response to Mr. Klieber's and Mr. Mindlin's Comments, Bader, Pension Forum, April 2005 <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf</u>
- Bader "Pension Deficits Unnecessary Evil" April 2005 Pension Forum, up to Burrows article http://www.soa.org/library/newsletters/the-pensionforum/2005/april/pfn0504.pdf
- Comments on "Pension Deficits: An Unnecessary Evil", Kllieber, Pension Forum, April 2005 <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf</u>
- "Financial Economics and Actuarial Practice", Tony Day, NAAJ Jul 01, 2004 (Vol. 8, Nr. 3) <u>http://www.soa.org/library/journals/north-american-actuarial-journal/2004/july/naaj0403-6.pdf</u>
- *Pension Forum*, June 1996, Funding Adequacy A Canadian Perspective, Hamilton <u>http://www.soa.org/library/newsletters/pension-forum/1996/june/pfn9606.pdf</u>
- Adequate Funding for a Pension Plan, Sze <u>http://www.soa.org/library/newsletters/pension-forum/1996/june/pfn9606.pdf</u>
- "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 <u>http://newsletters.soa.org/soap/issues/2009-06-05/email.html</u>

Ex	am
Lea	arning Objectives
Co	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 ntext:
Pri	vate, industry, multiemployer, public, multinational companies
Lea	arning Outcomes
Th	e 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.
f)	Perform valuations for the following special purposes, and advise plan sponsors on their financial implications:
	 Plan Mergers and Acquisitions
	 Spin-offs
	 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
Syl	labus Resources
	• Allen, <i>Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches</i> , Tenth Edition, 2008, Chapter 19, "Budgeting Pension Costs," pp. 335-341
	• McGill Fundamentals of Private Pensions, Ninth Edition, 2010, Chapters 17 and 18 pp. 520-526, Chapter 22, pp. 608-615

- Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Ch. 5
- Yamamoto, Fundamentals of Retiree Group Benefits, 2006, Chapter 7 and Chapter 8, pp. 211-230
- 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, <u>http://www.soa.org/professional-interests/pension/research-thinking-ahead/pen-finance-resources.aspx</u>
- R-C117-07: Bader "Pension Deficits Unnecessary Evil, Pension Forum, 2005
- R-C118-07: Pension Issues in Corporate Sales, Mergers and Acquisitions
- R-C121-07: Converting Pensions Plans From a Defined Benefit to a Defined Contribution design Issues to Consider in Canada, Exclude section on Federal Tax Legislation
- R-C130-07: Reinventing Pension Actuarial Science with discussion
- R-C131-07:"Plan Freezes: The New Ice Age," 2005 EA meeting, first half of session
- 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, Vanguard
- A Critique of "Pension Deficits: An Unnecessary Evil", Mindlin, Pension Forum, April 2005 <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf</u>
- "Actuarial Aspects of Cash Balance Plans" by Lowman, Pension Forum, Dec. 2000 (excl. appendices) http://www.soa.org/files/pdf/actuarial_aspects.pdf
- Author's Response to Mr. Klieber's and mr. Mindlin's Comments, Bader, Pension Forum, April 2005 <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf</u>
- Comments on "Pension Deficits: An Unnecessary Evil", Kllieber, Pension Forum, April 2005 <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf</u>
- Pension Forum, June 1996, Funding Adequacy A Canadian Perspective by 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
- FAS 87 (Exclude paragraphs 54, 57-62, 76-77, Appendix A, Appendix B illustration 2 and 6, Appendix C), Appendix D is for background only http://www.fasb.org/pdf/fas87.pdf
- FAS 88 (exclude paragraphs 19-21, Appendix A, Appendix B illustration 6) http://www.fasb.org/pdf/fas88.pdf
- FAS 132 (excluding paragraphs 12-13, Appendices A,B, and D) Appendix E for background http://www.fasb.org/pdf/fas132.pdf
- FAS 106 (exclude paragraphs 74, 79-84, 86-89, 108-115, appendix A, appendix C illustrations 3 and 7, appendix D) http://www.fasb.org/pdf/fas106.pdf
- FASB 158 through Appendix A <u>http://www.fasb.org/pdf/fas158.pdf</u>
- "Financial Economics and Actuarial Practice", Tony Day, NAAJ Jul 01, 2004 (Vol. 8, Nr. 3) <u>http://www.soa.org/library/journals/north-american-actuarial-journal/2004/july/naaj0403-6.pdf</u>
- Mindlin "Reaffirming" and counter papers Pension Forum April 2005, Vol. 16 No. 2, <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf</u>
- Can Pensions be Valued as Marketed Securities, *Pension Section News*, June 2009 <u>http://newsletters.soa.org/soap/issues/2009-06-05/email.html</u>
- ASOP 27 <u>http://www.actuarialstandardsboard.org/pdf/asops/asop027_109.pdf</u>
- 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 <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/january/pfn0501.pdf</u>

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

Syllabus Resources

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

n
ning Objectives
The candidate will be able to analyze the regulatory environment as it effects retirement plans
ning Outcomes
candidate will be able to:
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
Evaluate the tax implications of retirement plan designs and funding alternatives for the plan sponsor, shareholders and the participants. Where regulations for tax-assisted retirement plans conflict with sponsor's and shareholders' goals, the candidate will be able to describe and recommend alternatives.
Explain the moral hazard that arises from the existence of outside (government) guarantees on the plan benefits.
Describe and recommend proper plan governance practices and the sponsor's fiduciary responsibility
abus Resources
 Allen, <i>Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches</i>, Tenth Edition, 2008, Chapter 3 pp 53-55 and Chapter 14 McGill, <i>Fundamentals of Private Pensions</i>, Ninth Edition, 2010, Chapters 15 and 17
• Mitchell/Hustead, <i>Pensions in the Public Sector</i> , 2001, Chapter 2 pp 33-35
• Morneau Sobeco, Handbook of Canadian Pension and Benefit Plans, Fourteenth Edition, 2008, Chapters 2, 4, 7

• 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-C132-07: 20 Questions Directors Should Ask About Their Role in Pension Governance

Ex	am		
Le	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*		
*N	ote: the candidate is not expected to provide advice on investment of plan assets		
Le	arning Outcomes		
Th	e 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.		
Sy	llabus Resources		
	• Allen, Retirement Plans - 401(k)s, IRAs and Other Deferred Compensation Approaches, 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)		
	 R-C105-07: Actuary's Guide to Financial Economics and Pension Arbitrage Example Worksheet, <u>http://www.soa.org/professional-interests/pension/research-thinking-ahead/pen-finance-resources.aspx</u> 		
	 R-C120-07: Introduction and Overview of Retirement Plan Investments 		
	 R-C122-07: Introduction and Overview of Retirement Final investments R-C122-07: Statement of Investment Policies for DB and DC Plans 		
	 R-C132-07: Statement of investment roncies for DB and DC Flans 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
- Full Circle, Purchasing Annuities in DB Plans, Ruloff <u>http://www.soa.org/library/monographs/retirement-systems/managing-retirement-assets-symposium/2004/march/m-rs04-2-05.pdf</u>
- Pension Forum: April, 2005, entire issue. <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/april/pfn0504.pdf</u>

Exa	lm
Lea	arning Objectives
12.	The candidate will be able to apply the standards of practice and guides to professional conduct
Lea	urning Outcomes
In g	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, <i>Fundamentals of Retiree Group Benefits</i> , 2006, Appendix F pp. 1-27 only
	 R-C119-07: Fiduciary Liability Issues for Selection of Investments AAA Code of Professional Conduct <u>http://www.actuary.org/pdf/prof/code_of_conduct.pdf</u>
	SOA Code of Professional Conduct http://www.soa.org/about/membership/about-code-of-professional-conduct.aspx
	 AAA Qualification Standards <u>http://www.actuary.org/pdf/prof/qualif_stnds.pdf</u>
	SOA Qualification Standards http://www.soa.org/about/membership/about-req-admission.aspx
	 ASOPs 2, 4, 23, 27, 35, 41 <u>http://www.actuarialstandardsboard.org/pdf/asops/asop002_004.pdf</u> <u>http://www.actuarialstandardsboard.org/pdf/asops/asop004_107.pdf</u> <u>http://www.actuarialstandardsboard.org/pdf/asops/asop023_097.pdf</u>
	http://www.actuarialstandardsboard.org/pdf/asops/asop027_109.pdf
	http://www.actuarialstandardsboard.org/pdf/asops/asop035_110.pdf http://www.actuarialstandardsboard.org/pdf/asops/asop041_086.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 <u>http://www.soa.org/library/newsletters/the-pension-forum/2005/january/pfn0501.pdf</u>