

Retirement Plan Investment and Risk Management Exam

Fall 2018/Spring 2019

Important Exam Information:

[Exam Registration](#)

Candidates may register online or with an application.

[Order Study Notes](#)

Study notes are part of the required syllabus and are not available electronically but may be purchased through the online store.

[Introductory Study Note](#)

The Introductory Study Note has a complete listing of all study notes as well as errata and other important information.

Case Study

A case study will not be used for this exam.

[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. Topic: Investments and Asset Allocation
Learning Objectives
The candidate will understand how to analyze the issues facing retirement plan sponsors regarding investment of fund assets and make recommendations.
Learning Outcomes
The Candidate will be able to: <ul style="list-style-type: none">a) Assess the different types and combinations of investment vehicles for providing retirement benefits given the particulars of the stakeholders' financial circumstances, philosophy, industry, work force and benefit packageb) Distinguish the various strategies, approaches and techniques used to manage retirement fund assetsc) Given a context, analyze a Statement of Investment Policyd) Assess the potential effects of various investments and investment policies on all of the stakeholders, including tax implicationse) Describe the regulatory restrictions on and guidelines for retirement plan assetsf) Identify and assess the sources of investment risk applicable to retirement fund assetsg) Solve for a measure of investment performance relevant to a given benchmark
Resources
<ul style="list-style-type: none">• <i>Modern Investment Management</i>, Litterman, Robert, 2003<ul style="list-style-type: none">○ Ch. 2, 17, 22, 23, 24, 27 (pp. 501-505) and Ch. 28 (pp. 516-520)• <i>Fundamentals of Private Pensions</i>, McGill, Dan, 9th Edition, 2010<ul style="list-style-type: none">○ Ch. 26, 27 and 28• <i>Morneau Shepell Handbook of Canadian Pension and Benefit Plans</i>, 16th Edition, 2016<ul style="list-style-type: none">○ Ch. 7• RPIRM-102-13: Equities in DB Plans – Is the Traditional 60/40 Mix a Dinosaur?• RPIRM-103-15: Fiduciary Liability Issues for Selection of Investments• RPIRM-104-15: Maginn and Tuttle, <i>Managing Investment Portfolios</i>, 3rd Edition, Ch. 12 (sections 1-6)• RPIRM-107-13: Reflections on the Efficient Market Hypotheses: 30 Years Later• RPIRM-108-13: Introduction and Overview of Retirement Plan Investments• RPIRM-132-14: CAPSA, Guideline No. 6, Pension Plan Prudent Investment Practices Guideline• RPIRM-133-14: CAPSA, Guideline No. 7, Pension Plan Funding Policy Guideline• RPIRM-134-14: Liability-Responsive Asset Allocation, Russell Research

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- RPIRM-143-17: Attracting Pension Plan Assets: What Alternative Investment Managers Need to Know
- RPIRM-144-17: Patient Capital, Private Opportunity: The Benefits and Challenges of Illiquid Alternatives
- RPIRM-145-17: An Introduction to Infrastructure as an Asset Class
- RPIRM-151-18: Designing the Future of Target-Date Funds

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2. Topic: Risk Management
Learning Objectives
The candidate will recognize and appropriately reflect the role of plan investments in retirement plan design and valuation.
Learning Outcomes
The Candidate will be able to: <ul style="list-style-type: none">a) Evaluate the interaction of plan investments with plan design, valuation, accounting and fundingb) Evaluate the interaction and relationship between plan investments and valuation assumptions/methodsc) Model the effect on setting investment strategy of factors including, cash flow requirements, various plan designs and various economic environmentsd) Apply and evaluate strategies and techniques for asset/liability management
Resources
<ul style="list-style-type: none">• <i>Fundamentals of Private Pensions</i>, McGill, Dan, 9th Edition, 2010<ul style="list-style-type: none">○ Ch. 27• RPIRM-110-13: Plan Sponsor Guide to Liability –Driven Investing• RPIRM-111-13: Mind the Gap: Using Derivatives Overlays to Hedge Pension Duration• RPIRM-112-13: Asset/Liability Modeling and Asset Allocation for Pension Plans• RPIRM-115-13: <i>Pensions in the Public Sector</i>, Ch. 9• RPIRM-116-13: Financial Economics and Actuarial Practice• RPIRM-134-14: Liability-Responsive Asset Allocation, Russell Research• RPIRM-136-15: Longevity Risk Management: New Tools for Defined Benefit Pension Plans• RPIRM-138-16: FSCO’s IGN 001 – Buy in Annuities for Defined Benefit Plans• RPIRM-139-16: FSCO’s IGN 002 – Prudent Investment Practices for Derivatives• RPIRM-140-16: OSFI’s Policy Advisory #2014-002- Longevity Insurance and Longevity Swaps• RPIRM-146-17: The Pension Risk Transfer Market at \$260 Billion• RPIRM-147-17: Charting the Course: a framework to evaluate pension de-risking strategies (excluding Appendices)• RPIRM-148-17: Key Rate Durations: Measures of Interest Rate Risks• RPIRM-149-17: Practical De-Risking Solutions: Asset Duration and Interest Rate Risk• RPIRM-150-17: De-risking in a Low Interest Rate Environment• RPIRM-152-18: Pension Plan Immunization Strategies: How Close Can You Get?

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- RPIRM-156-18: Practical De-Risking Solutions: Low Volatility Equity Strategies
- [Can Pensions Be Valued as Marketed Securities](#), Bader, Pension Section News, Jun 2009

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3. Topic: Financial Economics
Learning Objectives
The candidate will understand how to evaluate the stakeholders' financial goals and risk management with respect to their plan.
Learning Outcomes
The Candidate will be able to: <ul style="list-style-type: none">a) Compare the interests of plan sponsors, employees, shareholders, taxpayers and other stakeholders related to the financial management of a retirement planb) Describe how the retirement plan financial and design risks integrate with the sponsor's risk management strategyc) Analyze how the retirement plan integrates with the sponsor's overall financial positiond) Understand and apply the principles of financial economics with respect to pension plan investinge) Provide advice and analysis to stakeholders regarding the economic assumptions used in the valuation of their retirement plansf) Provide advice and analysis to plan sponsors and other stakeholders regarding the mitigation of pension plan risks
Resources
<ul style="list-style-type: none">• RPIRM-115-13: Pensions in the Public Sector, Ch. 9• RPIRM-120-13: The Case Against Stock in Public Pension Plans• RPIRM-121-13: The Case for Stock in Pension Funds• RPIRM-123-13: Risk Management and Public Plan Retirement Systems (Appendices background only)• RPIRM-124-13: Bader and Gold's Rebuttal to The Case for Stock in Pension Funds• RPIRM-128-13: The Impact of the Financial Crisis on Defined Benefit Plans and the Need for Counter-Cyclical Funding Regulations, excluding appendices• RPIRM-134-14: Liability-Responsive Asset Allocation, Russell Research• RPIRM-141-16: Evolving Roles for Pension Regulations: Toward better Risk Control, Recreating Sustainable Retirement• RPIRM-153-18: Strengthening the Security of Public Sector Defined Benefit Plans (Executive Summary, pp. vii-xiv)• RPIRM-154-18: Benefit Security Pension Fund Guarantee Schemes (pp. 4-13)• RPIRM-155-18: CAPSA Guideline No. 4, Pension Plan Governance Guideline and Frequently Asked Questions• Corporate Pension Risk Management and Corporate Finance, SOA Aug 2015

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- [Adequate Funding for a Pension Plan](#), Sze, Pension Forum (pp. 31-36)
- [Pension Funds: Company Manager's View](#), Exley & Mehta
- [Can Pensions Be Valued as Marketed Securities](#), Bader, Pension Section News, Jun 2009
- [Pension Actuary's Guide to Financial Economics](#) and [Pension Arbitrage Example](#)