

# RET – Retirement Plan Investment Risk Management Exam

Fall 2020/Spring 2021

## 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.

### Syllabus Readings

Readings listed in this syllabus may include study notes, online readings and textbooks. Candidates are responsible for all readings in their entirety, including sections such as Appendices, unless it is stated otherwise in the syllabus.

### [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.

## 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:

- 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 package
- b) Distinguish the various strategies, approaches and techniques used to manage retirement fund assets
- c) Given a context, analyze a Statement of Investment Policy
- d) Assess the potential effects of various investments and investment policies on all of the stakeholders, including tax implications
- e) Describe the regulatory restrictions on and guidelines for retirement plan assets
- f) Identify and assess the sources of investment risk applicable to retirement fund assets
- g) Solve for a measure of investment performance relevant to a given benchmark

### Resources

- *Modern Investment Management*, Litterman, Robert, 2003
  - o Ch. 2, 17, 22, 23, 24, 27 (pp. 501-505) & Ch. 28 (pp. 516-520)
- *Fundamentals of Private Pensions*, McGill, Dan, 9<sup>th</sup> Edition, 2010
  - o Ch. 26, 27 & 28
- *Morneau Shepell Handbook of Canadian Pension and Benefit Plans*, 16<sup>th</sup> Edition, 2016
  - o 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, *Managing Investment Portfolios*, 3<sup>rd</sup> Edition, Ch. 12 (sections 1-6)
- RPIRM-108-13: Introduction and Overview of Retirement Plan Investments
- RPIRM-132-14: CAPSA, Guideline No. 6, Pension Plan Prudent Investment Practices Guideline
- RPIRM-134-14: Liability-Responsive Asset Allocation, Russell Research
- 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
- RPIRM-157-19: Sharpening the Arithmetic of Active Management

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- RPIRM-158-19: Your Guide to Investing in Commodities
- RPIRM-159-19: Is Paper Gold a Safe Investment?
- RPIRM-160-19: Factor Investing and Adaptive Skill: 10 Observations on Rules-Based Equity Strategies

<b>2. Topic: Investment Risk Management</b>
<b>Learning Objectives</b>
The candidate will recognize and appropriately reflect the role of plan investments in managing plan sponsor risk.
<b>Learning Outcomes</b>
The Candidate will be able to: <ul style="list-style-type: none"><li>a) Evaluate the interaction of plan investments with plan design, valuation, accounting and funding</li><li>b) Evaluate the interaction and relationship between plan investments and valuation assumptions/methods</li><li>c) Evaluate how factors including cash flow requirements, various plan designs and various economic environments affect setting investment strategy</li><li>d) Apply and evaluate strategies and techniques for asset/liability management</li><li>e) Provide advice and analysis to plan sponsors regarding the mitigation of pension plan risks</li></ul>
<b>Resources</b>
<ul style="list-style-type: none"><li>• <i>Fundamentals of Private Pensions</i>, McGill, Dan, 9<sup>th</sup> Edition, 2010<ul style="list-style-type: none"><li>o Ch. 27</li></ul></li><li>• RPIRM-110-13: Plan Sponsor Guide to Liability – Driven Investing</li><li>• RPIRM-111-13: Mind the Gap: Using Derivatives Overlays to Hedge Pension Duration</li><li>• RPIRM-112-13: Asset/Liability Modeling and Asset Allocation for Pension Plans</li><li>• RPIRM-115-13: <i>Pensions in the Public Sector</i>, Ch. 9</li><li>• RPIRM-134-14: Liability-Responsive Asset Allocation, Russell Research</li><li>• RPIRM-136-15: Longevity Risk Management: New Tools for Defined Benefit Pension Plans</li><li>• RPIRM-138-16: FSCO’s IGN 001 – Buy in Annuities for Defined Benefit Plans</li><li>• RPIRM-139-16: FSCO’s IGN 002 – Prudent Investment Practices for Derivatives</li><li>• RPIRM-140-16: OSFI’s Policy Advisory #2014-002- Longevity Insurance and Longevity Swaps</li><li>• RPIRM-147-17: Charting the Course: a framework to evaluate pension de-risking strategies (excluding Appendices)</li><li>• RPIRM-148-17: Key Rate Durations: Measures of Interest Rate Risks</li><li>• RPIRM-149-17: Practical De-Risking Solutions: Asset Duration and Interest Rate Risk</li><li>• RPIRM-150-17: De-risking in a Low Interest Rate Environment</li><li>• RPIRM-152-18: Pension Plan Immunization Strategies: How Close Can You Get?</li><li>• RPIRM-156-18: Practical De-Risking Solutions: Low Volatility Equity Strategies</li><li>• <a href="#">Can Pensions Be Valued as Marketed Securities</a>, Pension Section News, Jun 2009</li><li>• <a href="#">New Solutions to an Age-Old Problem: Innovative Strategies for Managing Pension and Longevity Risk</a></li></ul>

### 3. Topic: Risk Management and 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:

- a) Compare the interests of plan sponsors, employees, shareholders, taxpayers and other stakeholders related to the financial management of a retirement plan
- b) Describe how the retirement plan financial and design risks integrate with the sponsor's risk management strategy
- c) Analyze how the retirement plan integrates with the sponsor's overall financial position
- d) Understand and apply the principles of financial economics with respect to pension plan investing
- e) Provide advice and analysis to stakeholders regarding the economic assumptions used in the valuation of their retirement plans
- f) Provide advice and analysis to various stakeholders regarding the mitigation of pension plan risks

#### Resources

- 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-133-14: CAPSA, Guideline No. 7, Pension Plan Funding Policy Guideline
- 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-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
- RPIRM-162-19: Use of Financial Economics in Pension Actuarial and Investment Practice
- [Corporate Pension Risk Management and Corporate Finance](#), SOA, Aug 2015
- [Can Pensions Be Valued as Marketed Securities](#), Bader, Pension Section News, Jun 2009
- [Pension Actuary's Guide to Financial Economics](#) and [Pension Arbitrage Example](#)