# QFI – Investment Risk Management Exam

**Spring/Fall 2018**

## Important Exam Information:

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<th>Section</th>
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<tr>
<td><strong>Exam Registration</strong></td>
<td>Candidates may register online or with an application.</td>
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<tr>
<td><strong>Order Study Notes</strong></td>
<td>Study notes are part of the required syllabus and are not available electronically but may be purchased through the online store.</td>
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<tr>
<td><strong>Introductory Study Note</strong></td>
<td>The Introductory Study Note has a complete listing of all study notes as well as errata and other important information.</td>
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<td><strong>Case Study</strong></td>
<td>There is no case study for this examination.</td>
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<td><strong>Past Exams</strong></td>
<td>Past Exams from 2000 - present are available on the SOA website.</td>
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<td><strong>Updates</strong></td>
<td>Candidates should be sure to check the Updates page on the exam home page periodically for additional corrections or notices.</td>
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*Recognized by the Canadian Institute of Actuaries*
1. **Topic: Governance**

### Learning Objectives

The candidate will understand the needs and methods of governing investments.

### Learning Outcomes

The Candidate will be able to:

- a) Compare the interest of key stakeholders.
- b) Explain principal versus agent conflict.
- c) Identify sources of unethical conduct and explain the role of a fiduciary.
- d) Describe governance mechanisms that attempt to address these conflicts.
- e) Understand the importance of an organization’s culture in effectuating governance.
- f) Explain how governance may be structured to gain competitive advantages and efficiencies.
- g) Demonstrate understanding of how ethics relates to business decision-making, and relate ethics in business to personal ethics.

### Resources

  - Ch. 1: An Introduction to ERM
  - Ch. 45: The Ten Commandments of Operational Due Diligence
  - Ch. 1-3, 7 and 9
- QFII-101-14: Ch. 11 of *Strategic Management: An Integrated Approach*, Hill & Jones
- QFII-103-14: Advances in Risk Management and Risk Governance
- QFII-111-17: Tracing the True Origins of Bad Behavior: New Ways to Predict Conduct Risk Exposure, Dr. Roger Miles
## 2. Topic: Investment Risk Management

### Learning Objectives

The candidate will understand and be able to apply the components of an effective risk management system.

### Learning Outcomes

The Candidate will be able to:

a) Explain the importance of risk culture in an investment firm.

b) Identify and describe the various kinds of risks, including market, credit, operational, etc.

c) Identify and describe various approaches for managing risks including risk budgeting, position limits, etc.

d) Explain the features of a best practices enterprise risk management system.

e) Evaluate a company’s risk management process.

f) Examine examples of risk management failure.

### Resources

  - Ch. 9: Risk Management (sections 1-4 and 6)

  - Ch. 18: The Sense and Nonsense of Risk Budgeting
  - Ch. 33: Risk Management Programs

  - Ch. 7: Definitions of Risk
  - Ch. 8: Risk Identification
  - Ch. 20: Case Studies


- QFII-101-14: Ch. 11 of *Strategic Management: An Integrated Approach*

- QFII-110-15: The Devil is in the Tails: Actuarial Mathematics and the Subprime Mortgage Crisis


- QFII-113-17: Revisiting the Role of Insurance Company ALM Within a Risk Management Framework

- QFII-114-17: Ch. 10 of *Modern Investment Management: An Equilibrium Approach*
### 3. Topic: Risk Measurement

**Learning Objectives**

Understand and be able to apply different approaches to risk measurement.

**Learning Outcomes**

The Candidate will be able to:

- a) Evaluate a company's or a portfolio's exposures to various risks.
- b) Explain the advantages and limitations of different risk metrics.
- c) Explain how different approaches and tests form a set of complementary investment risk metrics.
- d) Analyze and evaluate risk aggregation techniques, including the use and misuse of correlation, integrated risk distributions and copulas.

**Resources**

  - Ch. 9: Risk Management (section 5)
  - Ch. 2: Practical Issue in Choosing and Applying Risk Management Tools
  - Ch. 14: Merging the Risk Management Objectives of the Client and Investment Manager
- QFII-104-14: Correlation: Pitfalls and Alternatives
- QFII-105-14: Risk²: Measuring the Risk in Value at Risk
- QFII-107-14: Ch. 14 of *Value at Risk*, Third Edition, Jorion
- QFII-108-14: Developments in Modelling Risk Aggregation, pp. 76-87
- QFII-110-15: The Devil is in the Tails: Actuarial Mathematics and the Subprime Mortgage Crisis
- QFII-115-17: Ch. 2 and 3 of *Liquidity Measurement and Management: A Practitioners Guide to Global Best Practices*