

# QFI – Investment Risk Management Exam

Spring 2019/Fall 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 provided for this examination.

### [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.

Quantitative Finance and Investment – Investment Risk Management Exam  
Spring 2019/Fall 2019

QFI-IRM readings and exam questions assume familiarity with investment policy and asset allocation. Candidates who missed this material because of the exam transition are advised to read *Managing Investment Portfolios: A Dynamic Process*, by Maginn et. al., 3<sup>rd</sup> edition, chapters 1, 3, and 5.

**1. Topic: Governance**

**Learning Objectives**

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

**Learning Outcomes**

The Candidate will be able to:

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

**Resources**

- *Financial Enterprise Risk Management*, Sweeting, Paul, 2<sup>nd</sup> Edition, 2017
  - Ch. 1: An Introduction to ERM
- *Investment Ethics*, Peck, Sarah, 2011
  - Ch. 1-3, 7 and 9
- QFII-101-14: Chapter 11 of *Strategic Management: An Integrated Approach*, Hill & Jones, pp. 378-384 only, up to “Agency Theory” (including example 11.1 “Strategy in Action”)
- 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
- QFII-116-19: Chapter 45 of *Risk Management: Foundations for a Changing Financial World*, Haslett Jr., Walter V., 2010

Quantitative Finance and Investment – Investment Risk Management Exam  
Spring 2019/Fall 2019

**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**

- *Managing Investment Portfolios*, Maginn, John L. and Tuttle, Donald L., 3<sup>rd</sup> Edition, 2007
  - Ch. 9: Risk Management (sections 1-4 & 6)
- *Financial Enterprise Risk Management*, Sweeting, Paul, 2<sup>nd</sup> Edition, 2017
  - Ch. 8: Risk Identification
  - Ch. 20: Case Studies
- *The Top Ten Operational Risks: A Survival Guide for Investment Management Firms and Hedge Funds*, Miller and Lawton, 2010
- QFII-110-15: The Devil is in the Tails: Actuarial Mathematics and the Subprime Mortgage Crisis
- QFII-117-19: Chapter 7 of *Strategic Risk Management Practice: How to Deal Effectively with Major Corporate Exposures*, Andersen & Schroder
- QFII-118-19: Chapter 11 of *Investment Management for Insurers*, Babble, David F. and Fabozzi, Frank J., 1999

Quantitative Finance and Investment – Investment Risk Management Exam  
Spring 2019/Fall 2019

**3. Topic: Risk Measurement**

**Learning Objectives**

The candidate will understand how to apply different approaches to measuring risk exposures.

**Learning Outcomes**

The Candidate will be able to:

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

**Resources**

- *Managing Investment Portfolios*, Maginn, John L. and Tuttle, Donald L., 3<sup>rd</sup> Edition, 2007
  - Ch. 9: Risk Management (section 5)
- QFII-104-14: Correlation: Pitfalls and Alternatives
- QFII-107-14: Chapter 14 of *Value at Risk*, 3<sup>rd</sup> Edition, Jorion, 2006
- 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: Chapters 2 and 3 of *Liquidity Measurement and Management: A Practitioners Guide to Global Best Practices*
- QFII-119-19: Chapter 3 of *The Known, the Unknown, and the Unknowable in Financial Risk Management: Measurement and Theory Advancing Practice*