

# CFE – Foundations of CFE 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.

### [Overview Study Note](#)

Study Note F-20-20 is designed to provide an overview of the CFE Track and this exam. Candidates should read it prior to beginning preparation for the exam. While it can be a valuable aid in preparation, the material in this note will not be tested.

### [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 website.

### [Updates](#)

Candidates should be sure to check the Updates page on the exam home page periodically for additional corrections or notices.

Corporate Finance and ERM – Foundations Exam  
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**1. Topic: Corporate Finance**

**Learning Objectives**

The candidate will understand how a company optimizes its corporate finance decisions based on its business objectives.

**Learning Outcomes**

The Candidate will be able to:

- a) Recommend an optimal capital structure for given business objectives and the competitive environment
- b) Compare and contrast methods to determine the value of a business or project, including the impact on capital budgeting and allocation decisions
- c) Evaluate the impact of non-financial factors on capital structure or capital budgeting decisions
- d) Assess the impact of business strategies such as acquisitions, divestitures, and/or restructurings

**Resources**

- *Corporate Finance*, Berk, Jonathan and Demarzo, Peter, 4<sup>th</sup> Edition, 2017
  - Ch. 8: Fundamentals of Capital Budgeting (background only)
  - Ch. 18: Capital Budgeting and Valuation with Leverage
  - Ch. 22: Real Options
  - Ch. 25: Leasing
  - Ch. 27: Short-Term Financial Planning
  - Ch. 28: Mergers and Acquisitions
  - Ch. 31: International Corporate Finance
- F-132-17: Capital Structure, Executive Compensation, and Investment Efficiency
- F-133-19: Ch. 10 of the *Handbook of Corporate Finance: Empirical Corporate Finance*, Volume 2
- F-134-19: Ch. 15 of *Damodaran on Valuation*, Damodaran, 2<sup>nd</sup> Edition, 2006
- F-135-19: Why are the Parts Worth More than the Sum; “Chop Shop,” A Corporate Valuation Model, pp. 80-100
- F-136-19: Ch. 4 of *Corporate Value Creation, Governance and Privatisation*
- F-137-19: Hurdle Rates, Cost of Capital & Capital Structure: CFO Spotlight

<b>2. Topic: Financial Statement Analysis</b>
<b>Learning Objectives</b>
The candidate will understand how to gauge a company's performance through an evaluation of its financial reports.
<b>Learning Outcomes</b>
The Candidate will be able to: <ul style="list-style-type: none"><li>a) Analyze the reported financial statements and the interrelationships among them, in order to measure a corporation's financial performance</li><li>b) Identify and analyze the impact of unusual accounting practices on the quality of earnings and assets of a corporation, including analyzing the signs of questionable accounting</li><li>c) Analyze the impact of tax accounting and policies, local regulations, and foreign exchange rates</li></ul>
<b>Resources</b>
<ul style="list-style-type: none"><li>• <i>International Financial Statement Analysis</i>, Robinson et al, 4<sup>th</sup> Edition, 2020<ul style="list-style-type: none"><li>○ Ch. 6: Financial Analysis Techniques</li><li>○ Ch. 9: Income Taxes</li><li>○ Ch. 11: Financial Reporting Quality</li><li>○ Ch. 15: Multinational Operations</li><li>○ Ch. 17: Evaluating Quality of Financial Reports (sections 1-6)</li></ul></li></ul> <p><b>Note:</b> If you want to refresh your knowledge on Financial Statements, Ch. 1-5 of the <i>International Financial Statement Analysis</i> book may be useful.</p>

### 3. Topic: Enterprise Risk Management & Operational Excellence

#### Learning Objectives

The candidate will understand how to apply and recommend appropriate ERM framework, principles and strategies to manage, evaluate, analyze and mitigate risk exposures faced by an entity and to ensure operational excellence in any industry.

#### Learning Outcomes

The Candidate will be able to:

- a) Assess the potential impact of risks faced by an entity in any industry
- b) Recommend best practices in risk measurement, modeling, and management of various financial and non-financial risks
- c) Develop and evaluate an appropriate risk mitigation or risk transfer strategy for any given situation
- d) Recommend best practices to achieve operational excellence
- e) Design, analyze and develop ERM strategies for financial and non-financial companies

#### Resources

- *Enterprise Risk Management Models*, Olson, David L. and Wu, Desheng Dash, 3<sup>rd</sup> Edition, 2020
  - Ch. 1: Enterprise Risk Management in Supply Chain
  - Ch. 3: Value-Focused Supply Chain Risk Analysis
  - Ch. 4: Examples of Supply Chain Decisions Trading Off Criteria
  - Ch. 5: Simulation of Supply Chain Risk
  - Ch. 6: Value at Risk Models
  - Ch. 7: Chance Constrained Models
  - Ch. 8: Data Envelopment Analysis in Enterprise Risk Management
  - Ch. 9: Data Mining Models and Enterprise Risk Management
  - Ch. 10: Balanced Scorecards to Measure Enterprise Risk Performance
- *Managing Business Process Flows*, Anupindi, R., Chopra, S. and Deshmukh, S., 3<sup>rd</sup> Edition, 2012
  - Ch. 1: Products, Processes and Performance
  - Ch. 2: Operations Strategy and Management
- F-138-20: [A Framework for Board Oversight of Enterprise Risk, CPA Canada](#), pp. 1-112
- F-140-19: The Costs and Benefits of Reinsurance, pp. 4-22
- F-142:19: An Analysis of Delta Air Lines' Oil Refinery Acquisition
- F-146-20: 2012 Fuel Hedging at Jetblue Airways
- F-151-20: Ch. 11 of *Foundations of Airline Finance: Methodology and Practice*, 3<sup>rd</sup> Edition, 2019, pp. 482-510

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**4. Topic: Quantitative Methods**

**Learning Objectives**

The candidate will understand the application of quantitative methods with a risk management focus to business problems.

**Learning Outcomes**

The Candidate will be able to:

- a) Assess methods and processes for quantifying and managing risk within any business enterprise
- b) Evaluate model risks and processes
  - i. Assess model tradeoffs among usefulness, resource constraints, timeliness, fidelity, and accuracy
  - ii. Assess processes for vetting models
- c) Evaluate results of deterministic, stress-testing, stochastic and simulation methods and models

**Resources**

- *Measuring Market Risk*, Dowd, Kevin, 2<sup>nd</sup> Edition, 2005
  - Ch. 9: Applications of Stochastic Risk Measurement Methods
  - Ch. 13: Stress Testing
  - Ch. 15: Backtesting Market Risk Models
  - Ch. 16: Model Risk
- *Fundamentals of Machine Learning for Predictive Data Analytics*, Kelleher, John D., Mac Namee, Brian and D'Arcy, Aoife, 2015
  - Ch. 2: Data to Insights to Decisions (background only)
  - Ch. 3: Data Exploration (background only)
  - Ch. 8: Evaluation
  - Ch. 9: Case Study: Customer Churn
  - Ch. 10: Case Study: Galaxy Classification
  - Ch. 11: The Art of Machine Learning for Predictive Data Analytics
- F-131-16: Heavy Models, Light Models and Proxy Models, sections 1-5 & 7 (excluding Appendices)
- F-139-19: How to Improve Quality of Stress Tests Through Backtesting (excluding Appendices)
- F-147-20: Chapter 11 of *Modelling in Life Insurance a Management Perspective*
- F-148-20: A Guide to Risk Measures, Capitol Allocation & Related Decision Support Issues
- [ASOP 56: Modeling](#), Dec 2019 (excluding Appendices)

**5. Topic: Advanced Techniques for Non-hedgeable Risks**

**Learning Objectives**

The candidate will understand advanced techniques to identify, evaluate and manage complex and not easily transferrable (non-hedgeable) risks in financial and non-financial organizations.

**Learning Outcomes**

The Candidate will be able to:

- a) Evaluate the extent to which risks are hedgeable or non-hedgeable
- b) Apply frameworks or methods to evaluate non-hedgeable risks
- c) Assess strengths and biases of techniques to measure risks given limited information for a range of business situations
- d) Evaluate the efficacy of different approaches to managing non-hedgeable risks, including risk capital positions, operational risk management practices, risk mitigation and transfer strategies
- e) Assess drawbacks and other costs to risk transfer solutions versus other internal risk management approaches for non-hedgeable risks

**Resources**

- *How to Measure Anything*, Hubbard, Douglas W., 3<sup>rd</sup> Edition, 2014
  - Ch. 9: Sampling Reality: How Observing Some Things Tells Us about All Things
  - Ch. 11: Preference and Attitudes: The Softer Side of Measurement
  - Ch. 13: New Measurement Instruments for Management
  - Ch. 14: A Universal Measurement Method: Applied Information Economics
- F-113-14: Securitization, Insurance and Reinsurance
- F-140-19: The Costs and Benefits of Reinsurance, pp. 4-22
- F-143-19: Managing Supply Chain Disruptions, sections 2-5
- F-149-20: Catastrophe Bonds: An Important New Financial Instrument
- F-150-20: A Fundamental Approach to Cyber Risk Analysis
- F-152-20: Demystifying the Risk Margin: Theory, Practice and Regulation (excluding section 3)
- F-153-20: Commodity Hedging – The Advent of a New Paradigm
- F-154-20: Is Longevity an Insurable Risk? Hedging the Unhedgeable