

# CFE – Foundations of CFE Exam

Fall 2021/Spring 2022

## 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-20-21 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.

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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 including acquisitions, divestitures, and/or restructurings

**Resources**

- *Corporate Finance*, Berk, Jonathan and Demarzo, Peter, 5<sup>th</sup> Edition, 2020
  - 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 company's financial performance</li><li>b) Identify and analyze the impact of unusual accounting practices on the quality of earnings and assets of a company, including analyzing the signs of questionable accounting</li><li>c) Analyze the impact of accounting policies, including tax accounting, 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>

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**3. Topic: Managerial Accounting**

**Learning Objectives**

The candidate will understand how managerial accounting impacts performance evaluation and decision making.

**Learning Outcomes**

The Candidate will be able to:

- a) Assess how managerial accounting can impact decision making and organizational architecture
- b) Assess and recommend methods a company may use to allocate its costs and how these methods impact the perceived performance of a company or its component lines of business
- c) Assess how managerial accounting can impact behavior and performance evaluation in organizations

**Resources**

- *Accounting for Decision Making and Control*, Zimmerman, Jerold, 10<sup>th</sup> Edition, 2020
  - Ch. 4: Organizational Architecture
  - Ch. 5: Responsibility Accounting and Transfer Pricing
  - Ch. 7: Cost Allocation: Theory
  - Ch. 9: Absorption Cost Systems
  - Ch. 10: Criticisms of Absorption Cost Systems: Incentive to Overproduce
  - Ch. 11: Criticisms of Absorption Cost Systems: Inaccurate Product Costs
  - Ch. 12: Standard Costs: Direct Labor and Materials
  - Ch. 13: Overhead and Marketing Variances
- F-155-21: Product Costing in Service Organizations
- F-156-21: Activity-Based Costing (ABC) and the Life Insurance industry

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

##### Learning Objectives

The candidate will understand how to apply and recommend appropriate ERM frameworks, 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, including the extent to which risks are hedgeable or non-hedgeable
- b) Evaluate risk measurement, modeling, and management of financial and non-financial risks
- c) Develop and evaluate an appropriate risk mitigation or risk transfer strategy for any given situation
- d) Design, analyze and develop ERM strategies for financial and non-financial companies
- e) Recommend best practices in business and ERM processes to achieve operational excellence

##### Resources

- *Implementing Enterprise Risk Management from Methods to Applications*, Lam, James, 2017
  - Ch. 3: Performance-Based Continuous ERM (pp. 43-59)
  - Ch. 5: The ERM Project (excluding Appendices)
  - Ch. 9: Role of the Board
  - Ch. 16: Risk-Based Performance Management
  - Ch. 17: Integration of KPIs and KRIs
  - Ch. 18: ERM Dashboard Reporting
  - Ch. 19: Feedback Loops (pp. 366-371)
- *Financial Enterprise Risk Management* Sweeting, Paul, 2<sup>nd</sup> Edition, 2011
  - Ch. 19: Risk Frameworks
  - Ch. 20: Case Studies
- *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-113-14: Securitization, Insurance and Reinsurance
- F-142:19: An Analysis of Delta Air Lines' Oil Refinery Acquisition
- F-143-19: Managing Supply Chain Disruptions, sections 2-5
- F-150-20: A Fundamental Approach to Cyber Risk Analysis

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- F-151-20: Ch. 11 of *Foundations of Airline Finance: Methodology and Practice*, 3<sup>rd</sup> Edition, 2019, pp. 482-510
- F-154-20: Is Longevity an Insurable Risk? Hedging the Unhedgeable

## 5. Topic: Quantitative Methods

### Learning Objectives

The candidate will understand the application of quantitative methods and techniques with a risk management focus to business problems for financial and non-financial companies.

### Learning Outcomes

The Candidate will be able to:

- a) Assess and apply methods and processes for quantifying and managing hedgeable and non-hedgeable risks 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
- d) Assess techniques to measure risks given limited information

### 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. 14: A Universal Measurement Method: Applied Information Economics
- *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, 2<sup>nd</sup> Edition, 2020
  - Ch. 2: Data to Insights to Decisions (background only)
  - Ch. 3: Data Exploration (background only)
  - Ch. 9: Evaluation
  - Ch. 12: Case Study: Customer Churn
  - Ch. 14: 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)

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- F-147-20: Chapter 11 of *Modelling in Life Insurance a Management Perspective*
- F-148-20: A Guide to Risk Measures, Capital Allocation & Related Decision Support Issues
- F-150-20: A Fundamental Approach to Cyber Risk Analysis
- F-154-20: Is Longevity an Insurable Risk? Hedging the Unhedgeable
- [ASOP 56: Modeling](#), Dec 2019 (excluding Appendices)