Foundations of CFE Exam

Fall 2016/Spring 2017

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 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.

1. **Topic: Corporate Finance**
Learning Objective
The candidate will understand how a business funds its activities with considerations for its business model, and the cost and constraints of the sources of capital.
Learning Outcomes
The Candidate will be able to: a. Identify and critique the available funding sources to start or grow a business entity b. Evaluate capital budgeting approaches and capital structure policy for insurance and non-insurance organizations
Resources
Corporate Finance, Berk, Jonathan and Demarzo, Peter, 3nd Edition   - Ch**.** 8 (Fundamentals of Capital Budgeting), 18 (Capital Budgeting and Valuation with Leverage), 22(Real Options), 23 (Raising Equity Capital) & 24 (Debt Financing)   - F-113-14: Securitization, Insurance and Reinsurance   - F-119-15: Capital Management, Banking's New Imperative, McKinsey   - F-120-15: Creating Value Through Best-In-Class Capital Allocation, JP Morgan, October 2009   - F-121-15: Is the Company Using Its Capital Wisely? KPMG   - F-122-15: The Cross-Section of Hurdle Rates for Capital Budgeting: An Empirical Analysis of Survey Data, National Bureau of Economic Research   - F-123-15: How Do CFOs Make Capital Budgeting and Capital Structure Decisions?, Journal of Applied Corporate Finance , Vol 15, #1   - F-124-15: The Modigliani-Miller Theorems: A Cornerstone of Finance, Centre for Studies in Economics and Finance, May 2005   - F-125-15: Risk Management, Capital Budgeting and Capital Structure Policy for Insurers and Reinsurers, Froot, National Bureau of Economic Research

2. **Topic: Capital Management - Decision-Making**

Learning Objective

The candidate will understand how an enterprise's structure and policies allow its management to prioritize and select among projects or business activities that are competing for scarce capital resources especially when opposing factors are key decision criteria.

Learning Outcomes

The Candidate will be able to:

a. Evaluate how the legal form of an organization, corporate governance and/or compensation dynamics impact business decisions
b. Recommend an optimal capital structure and how to implement the structure for a business strategy
c. Design a risk management plan to optimize the risk reward trade-off of employed capital
d. Assess the impact of behavioral factors in capital budgeting methods and capital structure policies

Resources

- *Corporate Finance,* Berk, Jonathan and Demarzo, Peter, 3rd Edition

   Ch. 1 (Corporation) background only, 2 (Financial Statement Analysis) background only, 3 (Law of one Price and Financial Decision Making) background only, 17 (Payout Policy), 25 (Leasing), 26 (Working Capital), 27 (Short Term Financing), 28 (Mergers & Acquisition), 29 (Corporate Governance), and 30 (Risk Management)

- *Handbook of the Economics of Finance,* Vol 2 Part A, 2013, Chapter 5, pp.357-424

- F-113-14: Securitization, Insurance and Reinsurance

- F-120-15: Creating Value Through Best-In-Class Capital Allocation, JP Morgan, October 2009

- F-123-15: How Do CFOs Make Capital Budgeting and Capital Structure Decisions?, Journal of Applied Corporate Finance , Vol 15, #1

- F-124-15: The Modigliani-Miller Theorems: A Cornerstone of Finance, Centre for Studies in Economics and Finance, May 2005

- F-126-15: An International Comparison of Capital Structure and Debt Maturity Choices, National Bureau of Economic Research

- F-128-15: A Dynamic Theory of Optimal Capital Structure and Executive Compensation, National Bureau of Economic Research

- F-129-15: The Modigliani-Miller Theorem, The New Palgrave Dictionary of Economics

3. **Topic: Stochastic Modelling**

Learning Objective

The candidate will understand how and when to apply various stochastic techniques to situations which have uncertain financial outcomes.

Learning Outcomes

The Candidate will be able to:

a.   Assess the appropriateness of a given stochastic technique to quantify market and non-market risk exposures.

b.   Recommend the use of techniques that balance the reduction of computational demand versus model accuracy when applying stochastic methodology

c.   Assess the results of a given application of stochastic modelling and calibration processes

d.   Explain the differences and implications of the use of P-measure and Q-measure for risk assessment.

e.   Explain what risk exposures are or are not identified with a given risk metric, assess implications, and recommend further action.

Resources

- *Market Consistency*, Kemp, Ch. 1 (background), Ch. 4 and Ch. 7

- *Monte Carlo Methods and Models in Finance and Insurance,* Korn, Ch. 2.1, 2.4-to-2.7, 3.1, 3.2, 3.3.1, 3.3.2-to-pg.72, 3.4, 4.4.3, (5.1-to-5.6 background), 5.7-to-5.9, 5.11, 5.14-to-5.19, 8

- *How to Measure Anything,* Hubbard, Third Edition, Ch. 5

- F-131-16: Heavy Models, Light Models and Proxy Models

- Interest Rate Swap – Exposed

- Layering Your Own Views into a Stochastic Simulation–Without a Recalibration by T. Dardis, L. Grandchamp and D. Antonio *Risk & Rewards,* August 2013

4. **Topic: Advanced Risk Assessment Techniques**

Learning Objective

The candidate will understand how and when to apply various advanced techniques to evaluate risk or uncertainty in any business enterprise especially non-insurance organizations.

Learning Outcomes

The Candidate will be able to:

    a.   Critique methods for determining long term discount rates

    b.   Evaluate the use of cost of capital frameworks for micro and macro level risk assessment

    c.   Apply Applied Information Economics (AIE) concepts to` Enterprise Risk Management (ERM)

Resources

- *How to Measure Anything*, Hubbard, Ch. 1-3 background only, Ch. 4-10

- F-107-13: A Market Cost of Capital Approach to Market Value Margins

- F-130-15: Yield Curve Extrapolation: Work in Progress, Moody's Analytics

- [Down but not Out: A cost of Capital Approach to Fair Value Risk Margins](#)

- [A Risk Management Tool for Long Liabilities: The Static Control Model,](#) 2009 Enterprise Risk Management Monograph

5. **Topic: Financial Risk Management**

Learning Objective

The candidate will understand how to identify and recommend appropriate risk assessment and monitoring techniques for financial risk management.

Learning Outcomes

The Candidate will be able to:

    a.   Evaluate methods and processes for managing market risk positions.

    b.   Assess methods and processes for quantifying and managing model risk within any business enterprise.

    c.   Design and evaluate stress-testing and back-testing processes

    d.   Interpret stress-testing and back-testing results.

Resources

- *Monte Carlo Methods and Models in Finance and Insurance,* Korn, Korn and Kroisandt, Ch. 5, sections 5.1-5.6 (background), 5.7-5.9, 5.11, 5.14-5.19

- *How to Measure Anything,* Hubbard, Ch. 7

- *Measuring Market Risk,* Dowd, Kevin , 2nd Edition

  - Ch. 10 Option Risk measures

  - Ch. 12 Mapping Positions to Risk Factors

  - Ch. 13 Stress Testing Risk

  - Ch. 15 Back Testing Risk

  - Ch. 16 Model Risk