

Corporate Finance, Module 1: “Present Value and the Opportunity Cost of Capital”

Readings for Ninth Edition

(The attached PDF file has better formatting.)

Updated: November 19, 2007

The page numbers here are for the *ninth* edition of Brealey and Myers. You may also use the seventh or eighth editions of this text. The page numbers for the seventh and eighth editions are in separate postings.

Module 1 deals with present values, which candidates use every day in their work. Read Chapter 2 of Brealey and Myers, sections 2.1 and 2.2 on pages 14-23. Brealey and Myers use a net present value (NPV) rule, which is equivalent to a rate of return rule; see the top of page 17. For investment courses, you must know compounding frequencies and the difference between a discount rate and an investment yield. For SOA Course FM (CAS Exam 2), you focus on compounding frequency, such as annual effective yield vs continuously compounded yield. We use these concepts in the corporate finance VEE course, but this is *not the focus* of the course.

For the opportunity cost of capital, read carefully the “Source of Confusion” on pages 18-19.

Illustration: Suppose a risk-free investment of \$1,000 gives a return of \$1,100 at the end of the year. A second investment has a 10% chance of defaulting and paying nothing at the end of the year. What is the appropriate return for the second investment if it does not default?

One is tempted to say: $90\% \times Z + 10\% \times \$0 = \$1,100 \Rightarrow Z = \$1,100 / 90\% = \$1,222$, or a 22.2% return. But this is not correct. A promised return on \$1,222 with a 10% chance of default is an expected return of 10%. If the investment has no systematic risk, the proper expected return is indeed 10%, or a return of 22.2% if the security does not default. If the investment does have systematic risk, the expected return must be greater than 10%, for a return in the no-default scenario higher than 22.2%.

We discuss these issues in later modules. For now, know that the expected return is *after* adjustment for expected defaults, and the expected return must be further adjusted for systematic risk.

The subsection “How capital markets reconcile preferences for current vs future consumption” on pages 20-22 is consistent with the discussions in Barro’s text on *Macroeconomics* and Landsburg’s text on *Microeconomics*. Brealey and Myers focus on the capital markets, whereas economists tend to focus on the individual actors. To avoid complexity, economists often assume that all consumers have the same preferences. This is not necessary; the capital markets construct a market preference based on the marginal

consumer. Barro follows the same theory, but the explanation is better in the Brealey and Myers text.

Section 2.3 on pages 23-29 is *not* tested on the final exam. It is worth reading, since it covers issues discussed in the *Wall Street Journal* and similar publications, but it is not needed for this course.

The Summary at the end of each chapter is a good review, particularly for the final exam. Read the Summary for this module on page 29-30.

The quiz at the end of each chapter is useful for checking that you understand the material. Review questions 1-4 on page 30. Of the practice questions, review question 11 on page 31. Look at question 20 of the challenge questions on page 34. This type of problem comes up frequently in later chapters, and the question gives you a preview of this course.

These textbook questions are *not* the illustrative test questions, practice problems, or homework assignments for this course, though they help you review the material. The illustrative test questions, practice problems, or homework assignments for this course are shown separately on the discussion forum and the emails.