

Corporate Finance, Module 5, “Investment Decisions and Net Present Value”

Corporate finance module 5: Readings for Tenth Edition

(The attached PDF file has better formatting.)

Updated: October 11, 2010

The page numbers here are for the *tenth* edition of Brealey and Myers. You may also use the seventh, eighth, or ninth editions of this text. The page numbers for earlier editions are in separate postings. The substantive changes in the textbook are slight among these editions, but the final exam problems are based on the tenth edition.

{The Brealey and Myers textbook is excellent. We say to read certain sections and to skip others. This does not mean that certain sections are better; it means that the homework assignments and exam problems are based on the sections that you must read for this course. Some of the skipped sections are fascinating, but they are not tested.}

Read section 6.1 on pages 128-132; know especially “only cash flow is relevant” on pages 128-129, “do not forget working capital requirements,” (page 130), and “include opportunity costs” (page 130), and “treat inflation consistently” on pages 131-132. These topics are more complex for insurance products, which use

- distributable income as the proxy for cash flows
- reserves and risk-based capital requirements as working capital
- either the risk-free rate or a risk adjusted rate as the opportunity cost of capital

The Brealey and Myers text is an ideal scenario. Read it for the concepts; the application to insurance is not easy. All the items in this section are tested on the final exam, but the items listed have particular importance for insurance pricing. For example, sunk costs are less important for insurers than for manufacturers, but they are relevant to insurance pricing too.

Section 6.2 is *optional*: the final exam does *not* test this example, but the concepts are used in later modules, and they will be tested in these other modules. If you have no problem with the concepts, you can skip this section; if you are unsure whether you have grasped the concepts, review this section. In particular, the topics beginning on the bottom half of page 134 (investments vs financing decision, working capital, depreciation, and taxes) are all covered extensively in future modules. The final exam problems are taken from the later modules, not from this example.

Jacob: Many tables in this textbook use accounting terms, such as cost of goods sold, change in working capital, and depreciation. I don't have an accounting background, and these terms are not used for insurance. Must we know these items for the final exam?

Rachel: Module 24, the last module in this course, covers basic accounting measures which you will be tested on. Accounting is the language of business, and the textbook assumes that you know the terms. Understand EBIT (earnings before interest and taxes), tax depreciation, how debt and stockholder dividends are treated, and the components of equity (common capital, capital paid-in, Treasury stock, retained earnings).

Jacob: How well must we know these items?

Rachel: You must derive the market value of equity and debt from accounting statements, the return on book equity, the tax liability, and other determinants of cash flow. You are not being tested on accounting, but you must know accounting to understand the textbook.

The subsections “project analysis” (pages 138-139), and “calculating NPV in other countries and currencies” (page 139) are not used in this course.

Section 6.3 on investment timing (pages 140-141) is discussed more fully in the module on real options. The final exam tests real options; this brief introduction may be helpful.

Skip section 6.4 on “equivalent annual cash flows.” You are tested on equivalent annual costs on other actuarial exams; the VEE course focuses on the financial principles.

Read the summary on page 146. Review problem 1 on pages 146-147; the final exam uses similar scenarios. Review problem 2 on page 147 and problems 11, 12, 14, and 15 on page 148. Most problems use the Excel spread-sheets for this textbook; the final exam problems are all pencil and paper.

Skip the mini-case on pages 153-155. The mini-case is interesting and well worth reading, but no final exam questions are based on this case.

Jacob: These first five modules are not difficult; is the rest of the course similar?

Rachel: The modules on dividends, capital structure, and option pricing are difficult; the early modules are easier. If you are comfortable with present values, internal rate of return, common stock values, and capital markets, you should read ahead to the more difficult modules at the end of this course. Some candidates do not leave time for the modules on capital structure and option pricing. The on-line course has a tight structure; there are only a few days between the option pricing modules and the final exam.

Jacob: Does the final exam weight each module equally?

Rachel: The SOA recommended syllabus for VEE corporate finance places great weight on option pricing and capital structure. The SOA does not specify percentages, but only courses with rigorous treatment of these two subject meet the VEE requirements. This course covers these subjects in depth, and the final exam tests these subjects more comprehensively than other subjects. If you review the practice problems and do the homework assignments, you will be able to answer the final exam questions; you can't neglect these subjects.