Corporate Finance, Module 6, “Risk, Return, and the Opportunity Cost of Capital”

Readings for Eighth Edition

(The attached PDF file has better formatting.)

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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.

{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.}

Section 7.1 on pages 147-154 is a quick review of modern portfolio theory, which is needed for the discussions of stock values, dividends, and capital structure. This is not a course on investment theory; we use the investment concepts for financial theory.

When you use concepts like market risk premiums, your audience wants to know how you chose the assumptions. Section 7.1 gives you the background for these concepts.

Modules 1-5 are mathematical tools (present value, NPV, IRR, stock values). Modules 6 - 23 are theory; they posit relations that explain how firms act.

We use the material in Module 6 when setting rates of return for insurance products. You need not memorize the details on page 148, but you should know the *relative* returns of different investments; see Table 7.1 on page 149, with the 7.6% risk premium for common stocks. The relative returns are important for the modules on beta and capital structure.

Read the subsection on “arithmetic averages and compound annual returns” on page 150. Know the moral on page 151: “… use arithmetic averages, not compound annual rates of return.” This moral is correct, but many analysts make this mistake repeatedly.

Read the subsection on “using historical evidence to evaluate today’s cost of capital,” and know the three reasons on pages 152-154.

Section 7.2 explains how to calculate a variance and a standard deviation, which you already know. The subsection *measuring variability* is similar. This is background reading; if you are unfamiliar with these topics, read the sections. We use the tools to measure betas in later modules.

Read the subsection on “how diversification reduces risk” on pages 160-162. This section is mostly pictures; there is no math here.

Read section 7.3 on pages 163-167. You must know the relation between the covariance and the correlation on page 164 and the formula for the portfolio variance on page 165. Know the section “limits to diversification” on page 166; the final exam tests the formula for the portfolio variance on page 167.

The CAPM beta is the covariance of the stock return with the market return divided by the variance of the market return. This is the beta (slope parameter) of the regression of the stock return on the market return. The final exam may give the correlation and standard deviations and ask you to derive the beta.

The final exam may give the average variances and covariances among stocks in a well-diversified portfolio and ask you to calculate the standard deviation of the portfolio.

Read section 7.4 on pages 167-171. Brealey and Myers are strong advocates of NPV, the CAPM, and real options. Most financial analysts agree with their general views, but not all share their zeal on these subjects. This course emphasizes these subjects, since we are using the Brealey and Myers textbook. Your company may prefer IRR to NPV, use market averages instead of the CAPM, and disregard real options. These views may reflect well-thought out opinions, not ignorance; you should understand all sides of these subjects.

Know the third paragraph on page 196: “The general point is this: … is driven by security betas.”

Focus on the equation for beta as the covariance divided by the market variance. This relation comes us frequently, and it is tested on the final exam. Know also the equation at the bottom of page 196, footnote 31: “relative market value = …” The formula for beta is repeated in subsequent modules.

Read section 8.5 on pages 197-198, and focus on the second paragraph in this section: “Diversification is … But investors can diversify.”

Read the summary on pages 198-199.