

Corporate Finance, Module 8, "Capital Budgeting and Risk"

Corporate finance module 8: Readings for Tenth Edition

(The attached PDF file has better formatting.)

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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 the introduction on page 213. This introduction is especially good. Read section 9.1, "company and project costs of capital," on page 214-216, but *skip* section 9.2 on pages 217-221. We don't have good measures of systematic risk, and our estimates of betas are uncertain. The final exam problems assume the CAPM beta for a project is known or can be estimated from covariances of returns.

Read section 9.3, "Analyzing project risk," on pages 221-227 and focus on the subsection "what determines asset betas" on pages 222-224. Operating leverage influences the risk of insurers. Many actuarial candidates presume that insurers are risky firms, since they assume risks from policyholders and are exposed to future uncertainties. But insurers have low operating leverage and relatively low CAPM betas.

Page 227 discusses international operations. Some U.S. businessmen and women believe that foreign investments are by definition riskier. This is not necessarily true. Many insurers are expanding into developing countries; diversification lowers their overall risk.

Skip the first half of section 9.4 on pages 227-228, but read the subsections on pages 229-230 ("When to use a single risk adjusted discount rate," "a common mistake," and "when you cannot use a single risk adjusted discount rate").

Read the summary on pages 232-233.

Review problems 2 and 5 on page 233, problems 8, 10, 11, and 12 on page 234, problems 13, 14, and 18 on page 235, and problems 22 and 23 on page 236.

No final exam questions are drawn from the mini-case on pages 237-239 (but it is worth reading).

Jacob: My company requires a return of 12% on U.S. investments and 15% on foreign investments. Why does my company have this rule? Are foreign investments riskier?

Rachel: Brealey and Myers say that diversifying across countries reduces overall risk. If the firm requires a 12% return on U.S. investments, diversifying globally should reduce its overall risk, so it should accept a lower than 12% return on foreign investments.

But for two reasons, the firm's policy may not be unreasonable.

- Many foreign investments have additional risks that may not be fully considered. U.S. investments are unlikely to be nationalized or to be destroyed by civil war. Investments in Latin America, Africa, the Moslem Middle East, and parts of Asia may be nationalized, destroyed in civil wars, or frozen by government decrees. The expected cost of these scenarios may add 3% or 4% to the required return.
- Anti-American sentiment in some parts of the world create additional risks. The investments themselves may not be riskier, but American ownership may add risks. In some countries, such as Saudi Arabia and Argentina, the risk of hostage taking may force an American firm to leave the country, forfeiting much of its investment.
- Even if the systematic risk is reduced by global diversification, the unique risk may increase. Shareholders are concerned with systematic risk; managers are concerned with unique risks as well.

Jacob: Does this create disagreement between managers and shareholders?

Rachel: Sometimes it does, but not always. Shareholders can diversify more easily than firms can. The shareholders spread their capital among firms in different countries.

Illustration: Insurance is an ideal industry for global expansion. An insurer can market its products in different countries without building factories and warehouses in each one. It need hold little or no capital in foreign countries, so it is not subject to nationalization risk. It is a knowledge industry: American underwriters and actuaries can live temporarily in a foreign country and out-perform native workers.

Few U.S. insurers have diversified globally; AIG and Liberty Mutual are international insurers, though AIG has since sold much of its foreign (Asia) operations to Prudential and Met Life. Most U.S. insurers compete for domestic business. Global diversification creates headaches for management and (sometimes) high initial costs. The shareholders can gain all the benefits of global diversification with none of the drawbacks by buying share in foreign insurers.

Global diversification is best when synergies between countries raise returns. A manufacturer can produce goods in a low-cost country and sell them in a high cost country; textiles, running shoes, and clothing are examples. A manufacturer can design a product in a developed country and sell it in less developed countries: automobiles, computers, and high-tech equipment are examples. But insurance has few of these synergies.