

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

### *Required reading:*

(The attached PDF file has better formatting.)

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{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 boxed introduction on page 221. It is always worth reading the boxed introduction and this one is especially good. Read section 9.1 on page 222-223, but *skip* section 9.2 on pages 224-227. Read section 9.3 on page 227-231 and focus on the relations among returns (pages 227 and 228), betas (pages 229 and 230), and the weighted average cost of capital (WACC) on page 231.

Skip section 9.4 on pages 232-234. Some U.S. businessmen and women believe that foreign investments are by definition riskier; this is not true, and Brealey and Myers point this out. Skip the first half of section 9.5 (pages 235 and 236), but read the subsection "what determines asset betas" on pages 237-238.

Skip section 9.6 on pages 239-245, but read the summary on pages 245-246. No final exam questions are drawn from the mini-case on pages 250-251 (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 holds 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.

But few U.S. insurers have diversified globally; AIG and Liberty Mutual are two international insurers, but there are few others. This makes sense. 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.

and they support global diversification