Corporate Finance, Module 8, “Capital Budgeting and Risk”

*Readings for the Fourteenth Edition (2022) of the Brealey, Myers, Allen, and Edmans text*

(The attached PDF file has better formatting.)

The sections in this posting are for the *fourteenth* edition of the Brealey, Myers, Allen, and Edmans text. You may also use the seventh through thirteenth editions; final exam problems can be answered from any edition.

{The Brealey, Myers, Allen, and Edmans 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 248, which is especially good. Read section 9.1, “Company and project costs of capital”; *skip* Section 9.2 Estimating beta and the cost of capital. Systematic risk is hard to measure, and 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,” and focus on the subsection “1. The Determinants of Asset Betas.” 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. Their risk is primarily specific risk, not systematic risk.

Page 263 discusses international operations. Some U.S. investors believe that foreign investments are by definition riskier. This is not always true. Many insurers are expanding into developing countries; diversification lowers their overall risk.

Read Section 9.4 “Certainty equivalents”; focus on Example 9.5 “Certainty Equivalent Valuation” and the text on page 265: “You often hear it said that distant cash flows are more risky than nearby flows …” The textbook concludes that “When we valued the project, we used the same risk-adjusted discount rate for each year’s cash flow. Now you can see from the final column that this implies a larger deduction for risk from the later cash flows.”

The *key takeaways* on page 266 summarize this chapter well.

Review end of chapter problems 1, 4, 5, 6, 7, 11d,e, 13, 21, 22.

Illustrative test questions, problems, and homework assignments are shown separately on the discussion forum.

No final exam questions are drawn from the mini-case on pages 243-244 (but it is worth reading).

*Question:* 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?

*Answer:* Brealey, Myers, Allen, and Edmans 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 are 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 Muslim 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 Middle Eastern and Latin American countries, the risk of hostage taking may force an American firm to leave the country, forfeiting much of its investment.
- Even if 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.

*Question:* Does this create disagreement between managers and shareholders?

*Answer:* 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 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.

Few U.S. insurers have diversified globally; most compete for domestic business. Global diversification creates head-aches 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.