

# Part IV

## Real-World Applications

### ...Capital Budgeting, Financial Statements and Valuation, and Comparables

You now know *all* the important cost of capital and present value concepts. But you cannot yet appreciate all the nuances and difficulties of their application in a corporate environment. In the real world, valuation can prove to be quite difficult because firms do not exist merely in order to provide clean and convenient illustrations of the theoretical constructs! Thus, the next issue on the agenda is for you to learn (better) how to apply what you have learned in previous chapters.

By necessity, this part consists of a variety of subjects. First, you will learn about the many difficulties in applying the seemingly-so-simple capital budgeting concepts. NPV and IRR can have sharp teeth! Chapter 13 covers the various pitfalls that you are likely to encounter when using net present value in practice. Next, you will learn how to read the financial information that publicly traded companies provide. Let me just state that the net income is not the cash flow that you need as your direct input into your NPV analysis. Finally, you will learn about an alternative (and distant cousin) to classical NPV analysis: comparables. Sometimes, they are better than NPV, sometimes they are worse. Comparables are dangerous, though: They are exceptionally easy to misuse.

#### What You Want to Learn in This Part

The primary goal of this part is to show you the breadth of issues and problems that arise in the application of the concepts from the previous chapters, and especially in the application of net present values.

- Chapter 13 goes over many important issues that you should pay attention to when you have to make investment decisions.

*Typical questions:* In valuing an acquisition target, should you use your own or the target's cost of capital? How should you think of projects that have side effects—for example, projects that pollute the air? How should you think of sunk costs? What is a “real option”? How do you value contingencies and your own flexibility to change course in the future? How should your assessment of investment value change if you know that someone else had to estimate the cash flows? Do people generally tend to misestimate future cash flows in systematically erroneous ways?

- Chapter 14 explains how you can extract cash flow estimates for a present value analysis from corporate financial statements. This is easiest to understand in the context of a hypothetical firm for which you construct the financials yourself. This makes it easy to translate them back into the economic cash flows that you need. At the end, you also get to extract the cash flows from a real financial statement.

*Typical question:* What are the economic cash flows in Intel's financial statements that you would use to estimate the present value of Intel's cash flows?

- Chapter 15 shows how you can learn more information about your own firm, using publicly-available information from comparable firms. It also explains a method of valuation that is both similar to, and different from, net present value.

*Typical questions:* How does “comparables-

based” valuation differ from NPV-based valuation? When is the P/E (price/earnings) ratio a good number to look at? What should the P/E ratio of your project be? How and when can you average P/E ratios? What can you learn from other financial ratios?