

7. You are a manager at Percolated Fiber, which is considering expanding its operations in synthetic fiber manufacturing. Your boss comes into your office, drops a consultant's report on your desk, and complains, "We owe these consultants \$1 million for this report, and I am not sure their analysis makes sense. Before we spend the \$25 million on new equipment needed for this project, look it over and give me your opinion." You open the report and find the following estimates (in thousands of dollars):

	Project Year				
	1	2	...	9	10
Sales revenue	30,000	30,000		30,000	30,000
– Cost of goods sold	18,000	18,000		18,000	18,000
= Gross profit	12,000	12,000		12,000	12,000
– General, sales, and administrative expenses	2,000	2,000		2,000	2,000
– Depreciation	2,500	2,500		2,500	2,500
= Net operating income	7,500	7,500		7,500	7,500
– Income tax	2,625	2,625		2,625	2,625
= Net income	4,875	4,875		4,875	4,875

All of the estimates in the report seem correct. You note that the consultants used straight-line depreciation for the new equipment that will be purchased today (year 0), which is what the accounting department recommended. The report concludes that because the project will increase earnings by \$4.875 million per year for ten years, the project is worth \$48.75 million. You think back to your halcyon days in finance class and realize there is more work to be done!

First, you note that the consultants have not factored in the fact that the project will require \$10 million in working capital upfront (year 0), which will be fully recovered in year 10. Next, you see they have attributed \$2 million of selling, general and administrative expenses to the project, but you know that \$1 million of this amount is overhead that will be incurred even

if the project is not accepted. Finally, you know that accounting earnings are not the right thing to focus on!

- Given the available information, what are the free cash flows in years 0 through 10 that should be used to evaluate the proposed project?
- If the cost of capital for this project is 14%, what is your estimate of the value of the new project?