CASE 9

PERFORMANCE BOATING PRODUCTS, INC.

INTRODUCTION

Performance Boating Products, Inc. (PBP) is a producer of attachments for boat hulls and motors that aid watercraft in reducing drag and maintaining 'plane'. The attachments can be manufactured as a part of new boats, or retrofitted to older boats and motors. PBP's customers are usually boaters wanting an extra degree of performance from their boats, and boat manufacturers offering PBP products as options.

THE BOARDROOM

Sam Cutlowe sat in the plush boardroom chair, trying to mentally sift through the unorganized flow of information from the firm's different functional managers. Ultimately, it would become his responsibility to make financially sound recommendations to Mr. Slater, the CFO of Performance Boating Products, Inc. regarding the three potential investments the firm was considering funding.

"Are you listening to me, Sam?" It was K.K. Morgan, the marketing division manager. "I have a complete breakdown of our sales projections by region, for each project. Hope you appreciate the time and effort of putting that together!" Morgan was a large, domineering person, and seemed perturbed about Sam's presence. Morgan also seemed to have difficulty realizing that sales projections were really a common thing to deal with for most marketing people. "Yes, I can appreciate the effort," Sam responded. "A good sales forecast sure is essential for good decisions to result. Thanks." Morgan puffed up as he heard the subtle praise. In Sam's experience, it was good to have the favor of the other managers.

Mr. Goodson, the company's CEO, responded "Well, isn't that sweet. Let's get on with it. Do you have the cost estimates?" He was directing the question at Wetsel, a quiet, reserved man who headed up the firm's accounting department.

"Yes, sir." Wetsel pulled a two inch thick document from his briefcase. "Here are all of the figures, organized by project." He slid the papers to Sam.

A moment passed, and an awkward silence was broken by the roar of Goodson: "Well, Sam. Get to it!" Goodson used the phrase "get to it!" to indicate his expectation of activity, whether the task was immediately addressed or not. Sam excused himself and quickly exited the room. He was just as happy to get out of the meeting and "get to it." He always seemed to be called on the carpet in the meetings, and as far as he could tell, he was the one person who had additional work to do whenever the meetings ended.

ASSEMBLING PROJECTIONS

The paperwork Sam acquired at the board meeting mainly consisted of sales projections from the firm's sales force and cost projections from accounting, broken down into the three projects under consideration. All three were asset expansion projects that would produce products for which there appeared to be demand from PBP customers.

Sam had been surprised at the prices PBP products were able to command in the market. The markup was a considerable markup for products that, though protected by copyright, seemed to be fairly simple to duplicate in purpose. The attachments for boat hulls and motors were basic metal and fiberglass structures. The attachments could be manufactured into new products, or retrofitted to older boats and motors. They had commanded excellent prices in the past. Thus far, the firm had been able to sell all that they produced, and the demand appeared to exceed PBP's capability to produce.

The first project was called "Melville." It involved the construction of a new warehouse in a strategic location. It would not only increase sales in the geographic area, it would also reduce distribution costs. The second project, "Broadside," was another production facility where the same aluminum fins would be manufactured. From the feedback from the regional sales reps, one problem PBP faced was that the products were not readily available. There was always a backlog of orders. The new facility was expected to alleviate the problem. The other project was called "the turbine project" because of the new type of apparatus that would be produced, and because a site had not yet been decided upon. Sam was told by Slater to "just estimate a site cost, and have some justification for your estimate." Sam developed an estimate based on the large number of similar site costs available from the manager of the industrial park where the facility would locate.

Sam summarized the marketing and accounting estimates of projected sales and costs for each project (Exhibit 1). Since the projects appeared to be of average risk for the firm, Sam didn't see any reason for risk adjustments. All three were expected to have nearly equal lives, and they were not mutually exclusive, so no adjustment appeared necessary concerning unequal lives. They were all fairly large projects for the firm, though. Sam therefore

COST OF CAPITAL

PBP's cost of capital was well-documented, and it was a relatively small task for Sam to adjust the estimates for the expansion projects, taking into account expected changes in risk. Sam decided to use three methods for estimating the cost of equity: the Discounted Cash Flow (DCF) method, the Capital Asset Pricing Model (CAPM) method, and the Bond Yield + Risk Premium (BY+RP) method. He had learned all three during his MBA schooling, and figured he may as well cover all the bases just in case Mr. Goodson or one of the other managers was critical of one method or the other.

For each of the three methods, Sam decided that he would present cost graphs for the marginal cost of capital, which would be useful later for overlaying the internal rate of return. The graphs appear in Figures 1-3.

PROJECT RETURNS

For the three projects under consideration, Sam decided that he would calculate internal rates of return (IRR) for each project. The three projects were fairly normal (i.e. a large cost up front and then positive cashflows thereafter) so the mathematical problems with IRR calculation, he reasoned, shouldn't make a big difference. He also preferred IRR because everyone seemed to understand it, especially with respect to the firm's cost of capital. Since there were alternative methods of calculating cost of capital, it would also be easy to see the effect that each method had on the capital budget, if any.

All of the projects were independent of one another, and all three required either full investment or none - no partial investment in any of the three projects was possible.

THE TASK

All the preliminary work had been done. Sam decided that he would allot a block of time to concentrate on the task at hand - analyzing the wealth of information that had been gathered. This was in addition to his normal duties at the firm, so Sam decided to dedicate the weekend to the task. There would be fewer distractions, he could work at home, and he felt he could have the task completed by Monday.

Exhibit 1. Summary of Project Characteristics.

	Melville Project	Broadside Project	Turbine Project
Initial Cost (net investment)	$10.1 million	$9.2 million	$16.9 million
Incremental Annual Sales	$4,398,000	$4,126,000	$7,620,000
Incremental Annual Cash Oper. Costs	$1,980,000	$1,830,000	$3,855,000
Estimated Project Life	30 years	30 years	28 years
MACRS Category	15 year	15 year	15 year

Exhibit 2. MACRS 15-Year Depreciation Schedule.

year	MACRS %	year	MACRS %	year	MACRS %
1	5	6	6.23	11	5.91
2	9.5	7	5.9	12	5.9
3	8.55	8	5.9	13	5.91
4	7.7	9	5.91	14	5.9
5	6.93	10	5.9	15	5.91
				16	2.95

Figure 1. Marginal Cost of Capital Schedule using Discounted Cash Flow.

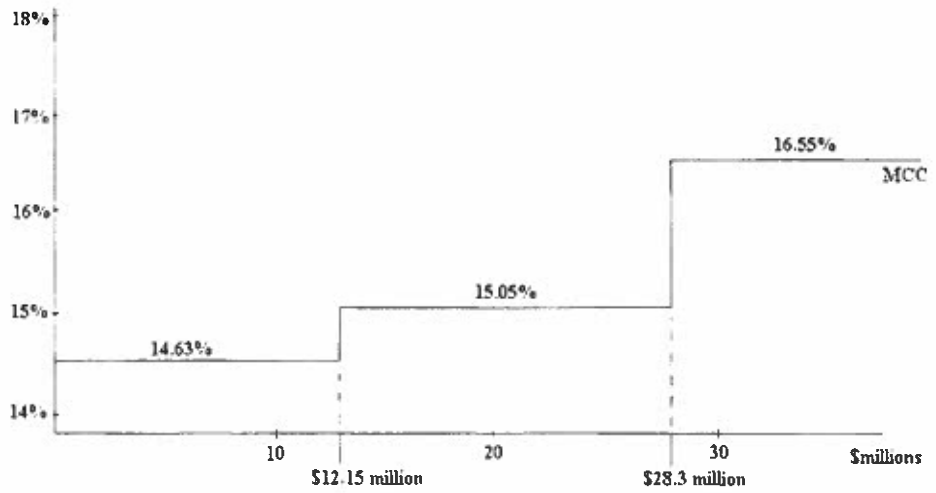


Figure 2. Marginal Cost of Capital Using CAPM for Cost of Equity.

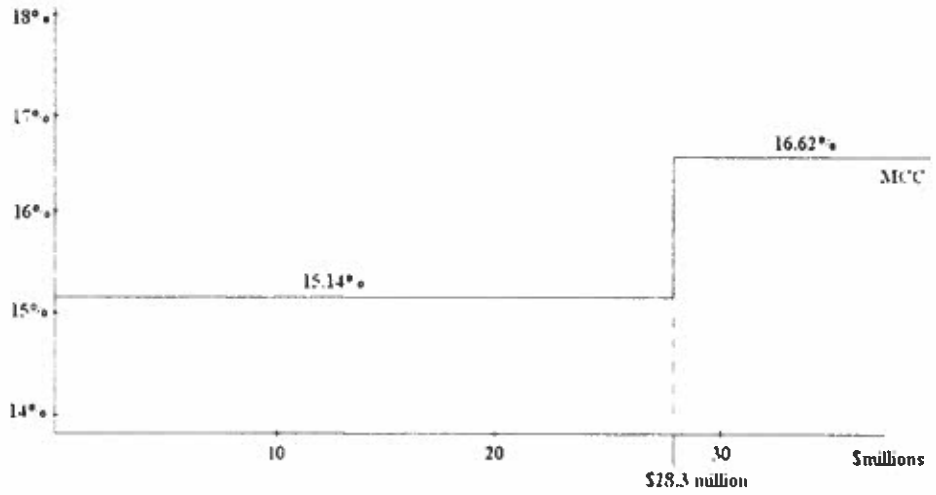
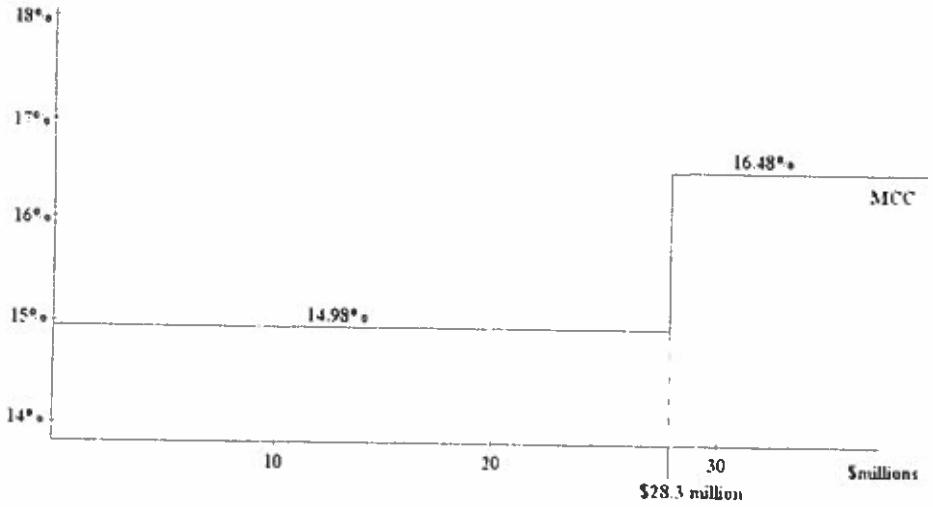


Figure 3. Marginal Cost of Capital Using BY+RP approach for Cost of Equity.



REQUIRED:

1. Using a spreadsheet program such as Excel, calculate incremental net cashflows for each year for the three projects (hint - use a different worksheet for each project).

2. Using your cashflow estimates from #1, use the spreadsheet to determine the internal rate of return (IRR) for each project using the trial-and-error method.

3. Plot the investment opportunity schedule on each of Sam's MCC graphs. Evaluate each project. For the marginal project, show the calculations from your evaluation.

4. Should the marginal project be accepted or not? Do the three cost of capital methods agree as to the accept/reject decision?

5. Discuss the relative strengths/weaknesses of the DCF, CAPM, and BY+RP methods for determining cost of capital.