4311 Finance Lab

Project 5

Advanced Capital Budgeting

**Comment:** Project overviews are meant to layout the minimum requirements for a given project and to explain the motivation for a given project. Meeting the minimum requirements does not guarantee an A or even a passing grade. These projects are very rich, with many possible extensions to the analysis, various interpretations and recommendations from the results, and alternative methods of analysis that can be applied or discussed relative to the primary method introduced in the project. The finance faculty wishes to give students a chance to differentiate themselves to potential employers in the interview process and have left “meet on the bone” for the students to explore.

In industry, project overviews are rarely, if ever, created. Your boss will simply say “do this” and expect you to formulate the required aspects of the project. In addition, detailed written reports, as are required for this class, are also rarely done in industry. However, employers want to know that potential employees are not only technically capable, but also can communicate their findings effectively in written form. Proof read your papers. DO NOT write sentences that you do not understand but think that the professor will. Use proper grammar, spelling, and effective organization of the material presented. Do not think “what does the professor want”; rather think “what would impress my boss” or “what would get the customer to choose my company”. Bosses and customers are busy. They hate too much information more than to little information. Be clear and to the point. Look for ways to table or plot critical information so that readers can understand the results at a glance. Good Luck.

**Motivation:** Capital is a limited resource that must be used wisely if a company is to survive in the long term. This project combines the sales forecast and WACC projects to evaluate a capital budget. The project also incorporates goal seek so that key questions can be answered quickly and efficiently. The law of supply and demand is also incorporated into this project. As prices go up quantity goes down, but the margin on the product increases. We use excel to set the price for the product so that the net present value of the project is maximized. Each student will be given a unique set of parameters to use in their projects.

The capital budget project is broken into three applications. The first uses a onetime capital expense. This would equate to a simple project such as buying a machine tool, computer, or software system. The second uses capacity balancing, where the project requires an expansion at some point in the future. New plants or production lines are budgeted this way. The third method uses a demand curve to price the product while maximizing the NPV. This is used for plant sizing and capital requirements. True capital budgeting is an iterative process but this project will give you the basic skills required to conduct capital budgeting in a real world environment.

**Basic requirements of the report:**

1) A short description of the company assigned to the student is required. The description should be no longer that one page, double spaced, 11 point type, Garamond font. Give the reader key details of what the company does and how it performs, without boring them with details about the founding date, the address, and other needless information that can be quickly referenced but has no bearing on the sales forecast. You may copy this from the prior report, incorporating any feedback from the professor.

2) Table your input parameters and discuss the parameters. This includes the WACC.

3) Table and discuss the sales growth evaluation.

4) Plot the NPV, IRR, and MIRR for each capital budget method. Table the main results for each method. Discuss the results and plots. As always tables and plots should be correctly labeled.

5) Create a table of your results from the demand estimation and discuss.

6) Conduct and table, for each capital budget method, a goal seek analysis that answers the following questions. Achieve a NPV of 0 in year 5 by changing 1) Price, 2) Units, 3) Capital required, 4) SG&A, and 5)the tax rate. Discuss the results relative to management objectives.

7) All tables and plots, except the working tables, must be integrated in the text and labeled as Table 1, Table 2, or Figure 1, Figure 2 ect.

8) Working tables should be labeled and included in the appendix as indicated in the videos.

**Remember, you are building a portfolio of projects and work examples that can be used in the interview process, not just creating a report for a grade. While the projects will give you many marketable skills in Excel, the ability to clearly communicate your findings is another marketable skill that can only be demonstrated through the writing of your report.**