Finance 1

Sunk Cost Exercise

[Sunk Cost Directions.pdf]

In the *Finance 1 Workbook.xlsx*, go to the worksheet tab "SunkCost", at the bottom of the Spreadsheet.

Intended Learnings

This exercise helps you learn:

1. The Basic Rule of Decision Making: Consider only "Future Cash Flows with Vary Between the Alternatives"
2. In financial decision making, to always disregard sunk cost.
3. Sunk costs are past costs.
4. Some types of cost are necessary for proper accounting because your Accounting Department needs to depreciate the entire cost of a project.
5. Some types of cost should NOT be included when making a financial decision.

Background

Conclackinflacker Meds, Inc. (CMI) develops, manufactures, and markets various pharmaceutical products. They have a world-wide list of clients, both retailers and wholesalers of their own one dozen pharmaceutical products and more than 100 off-brand products produced for a variety of labels.

At CMI's aging Rolfson Plant, there is a very small logistics room, for inspecting, packing, boxing, and shipping of their pharmaceutical products. It is small, has old technology, and costly compared with logistics rooms at other CMI plants. You are head of a management team to consider options to improve the cost of logistics.

General Instructions

a. Read the following three scenarios (A, B1, and B2).
b. Refer to the spreadsheet and do the three steps indicated by the PURPLE cells for Scenario A:
    a. Unhide the data by selecting Unhide in Cell F11.
    b. Inspect the data. What types of cost are involved? Understand the comments in Col G.
    c. Calculate the Payback

   d. Answer the four questions: Q1 through Q4.
c. Repeat for Scenario B1 and Scenario B2.
d. Return to the course software and answer the questions.

Scenario A

Your team has employed a logistics consultant who has determined that the vacant lot next to Rolfson Plant is a good candidate to build a new logistic facility. The vacant lot was purchased three years ago for a price of $450,000. The consultant estimates the architectural and engineering costs to be at $250,000. The equipment costs will run $1,250,000. The cost to construct the building itself is $900,000. It will take $220,000 to install the equipment. This means the entire project will cost $3,070,000 including the land.

If CMI builds the new facility, they will realize some savings. Compared to the current crowded logistics room at the back of the plant, the new facility is estimated to improve the total cost of logistics $1.24 per pound of throughput. Rolfson ships 1,000,000 pounds of products each year. This improvement is largely in reduced damage to products, reduced staffings, and reduced freight charges. A state-of-the-art facility will pack products in smaller, safer packages. Each staff member will be able to operate all the equipment. Currently, the older equipment is so difficult to use that people have to specialize.

[Assume, from a human cost standpoint, that CMI has a policy of placing displace employees somewhere in CMI and ramping down staff via attrition.]

Assignment:

1. Unhide the Scenario A by selecting “Unhide” from the pull down menu for Cell F11.
2. Inspect the costs and the total cost line (Row 20).
3. Inspect the Savings lines.
4. Calculate the Payback in Cell F26. [Divide Cell F20 by Cell F24.]
5. Answer Q1 through Q4.

Scenario B1

Based on the favorable payback in Scenario A, CMI has released the project for architectural and engineering on January 13, 20xx. It is now eight months later. The engineer has refined some thinking of the original consultant. Some of the logistical initiatives that are planned for the new facility can be incorporated into the existing facility with little or no cost. This drops the savings between the two alternatives substantially. The previous $1.24 per pound savings is now $0.95 per pound.

Also, the cost of the architechural and engineering is complete. The actual cost was $5,000 less than estimated. It is now $245,000.

How do you factor in these two changes?

Assignment:

a. Unhide Cell I11.
b. Inspect the revisions.
c. Calculate the payback
d. Answer the four questions.

Scenario B2

Based on the unfavorable payback in Scenario B1, CMI is considering cancelling the project. However, an new BBO grad comes to the rescue. He alerts the management team that good accounting is not always good finance. In this scenario, there are two items in the estimate that are in the past, i.e. sunk cost. The land purchase was three years ago and the architechural and engineering costs are recently completed. He convinces the management team that these cost should be dropped from the payback. Repeat the work for this scenario.

Assignment:

a. Unhide the Cell L11.
b. Inspect the differnences from Scenario B1 and read the comments column [Col. M].
c. Calculate the payback.
d. Answer the four questions.

Does it appear now to be an acceptable project?

[Some experienced BBO students will realize that there is one more principle to add to this situation. A Scenario B3 will be given later.]

Assumptions

1. Disregard PT/AT and DTS.
2. Even though Payback is a flawed valuation tool, this exercise uses it so you can arrive at an answer. Payback will be replaced in BBO Finance 2 with more appropriate tools. This exercise is intended to teach a key principle of cash flowing: In financial decision making, always disregard sunk cost. You will use this principle in Finance 2.

Conclusion

Keep these directions on your hard drive. This file is part of the tools you will keep as you complete the BBO course. This may be useful to you on the Final Exam for this course and the Capstone Case in the final BBO course.

Thank you for your work.