

Stryker corporation case study



**ASSIGN
BUSTER**

In 2003, the Stryker Corporation is contemplating a change in their sourcing strategy for printed circuit boards (PCBs), which are used in many of their instruments. Recently, Stryker's suppliers of PCBs have become less reliable. They want to eliminate this problem by building a PCB production facility and produce the boards in house. In other words, they want to in-source the production of PCBs. This would give the company a great control over the quality of their boards.

This proposal will require a total capital outlay of \$6, 287, 258. This includes \$3, 030, 000 for building construction, \$278, 000 for architectural and engineering fees, \$336, 000 for furnishings and IT infrastructure, and \$2, 643, 258 for equipment. Once this facility was up and running, Stryker would transition out of buying from suppliers into complete in house production. There will be savings from not having to pay suppliers, and an increase in manufacturing cost. In the long run, the savings will be greater than the increase in manufacturing costs. In order to figure out if this proposal makes financial sense, I calculated the Net Present Value, Internal Rate of Return, and the Payback Period for the years 2003 through 2009.

Analysis

From a business point of view, I think the proposal makes sense, and is a logical solution to their problem. If their suppliers are giving them a lower quality product, that would most likely hurt their profits in the end. Having complete control over the production of the PCBs would eliminate this problem. The money Stryker would save from not having to pay suppliers for the PCBs might also allow them to price their instruments lower than

competitors, giving them a competitive advantage in the market. In today's highly competitive markets, any advantage you can obtain over the competition should be exploited. Before looking over the calculations of NPV, IRR, and Payback Period, I would strongly advise the company to accept this proposal and in-source the production of PCBs.

In order to calculate this project's NPV, I had to first calculate the cash flows resulting from this investment from the years 2003 until 2009. The total capital outlay of \$6, 287, 258 would occur in 2003, and first PCB production would begin in Q3 2004. This means that depreciation calculations would not begin until Q3 2004.

Since there are no revenues resulting from this investment, the increase in cash flow is a result of the decrease in purchases from suppliers less the increase in manufacturing costs. When looking at the data provided in Exhibit 2, it isn't until 2006 that this investment provides a positive change in cash flow from operations. Before this point, the increase in manufacturing costs outweighs the reduction in supplier costs. After finding the cash that was freed up in years 2004 to 2009, I applied the 36% tax rate, then added back in depreciation and the change in accounts payable for each year. This gave me the change in cash flow from operations resulting from the investment. After finding each year's change in cash flow, I discounted them back to 2003 at a rate of 15%. This gave me a NPV of -\$880, 727. 81. I also calculated an IRR of 12. 01%, and a Payback Period of 4. 24 years.

From these calculations, this investment is not a good financial move for the company. Even though it seems like the best choice given their

circumstances with suppliers, they would be better off financially to continue to buy their PCBs from suppliers. I feel it is important to note that these calculations are only considering the data up until 2009. If I had access to data beyond 2009, my recommendation may be different. If this production facility was going to continue to notice positive changes in cash flow beyond 2009, it may actually hold a positive NPV when looking at the long run. Calculations located in Appendix.