

Andrew West

Given Information

Spent \$750.00 to develop a prototype (or Model) for a new PDA

Spent an additional \$200,000 for marketing study to determine the expected sales.

Can manufacture the new PDA with variable cost for \$86.00 each.

Fixed Costs for the operation are estimated at \$3 million per year.

Unit Price \$250.00 each

Necessary equipment to produce the PDA will cost \$15 million, with depreciation for 7 years MACRS schedule.

It is believed that this equipment after 5 years will be worth \$3 million.

NWC will be 20% of Sales

Changes in NWC will occur in Year 1, with the first year sales.

There is no initial outlay for NWC.

Conch Republic Corporate Tax Rate is 35% and has a 12% required return.

Estimated Sales Volumes:

NWC 20%

Year Est.Sales of Sales

1 70,000 14,000

2 80,000 16,000

3 100,000 20,000

4 85,000 17,000

5 75,000 15,000

Project Requirements

Prepare pro forma financial statement and Project cash flows.

Calculate NPV, IRR, Payback period, PI

Results

Attached are several charts displaying the income and cash flow statements based on the information provided in the Conch Republic mini-case. The payback period was found based on the information regarding accumulated cash flows and when they become equal to the cost needed to begin the operation. We see that the change from negative to positive cumulative cash flow occurs sometime after the beginning of year 4 and before the beginning of year 5.

The profitability index was derived by dividing the present value of the future cash flows, which was obtained by inputting the cash flows into the CF function of the BA II plus calculator, by the amount of money put forth in the initial investment, which is the purchase of the \$15 million piece of equipment. The net present value and internal rate of return were both also obtained through the CF functions provided by Texas Instruments technology, after of course working through the individual cash flows, which can be seen in the attachments.

In order to find out how sensitive net present value is to the changes in the price of the product, the NPV was recalculated under 3 different conditions; one in which the price is held at a base rate, one in which the price is high, and one in which the price is low. All other variables were held constant. The sensitivity of the NPV to the quantity

sold was calculated in a similar manner. These results are shown in the sensitivity analysis (attachment).

This project seems to be a good investment, as NPV and IRR are both positive based on the Total Projected Cash Flows. However, there is a possibility that the introduction of these new PDA's may reduce the sales of the older versions produced by the same company, this is known as erosion. Some of the erosion could occur due to consumers purchasing the new PDA's created by this organization, but some of the erosion could occur due to consumers purchasing products from competitors.