

Lockheed tri star

[Finance](#), [Investment](#)



Investment Analysis and Lockheed Tri Star Problem

- a. The results of NPV, payback, and IRR calculations are the following. For the payback method, Rainbow Product will pay back the original investment costs after 7 years. Net Present Value is -\$946 and IRR is 11.49%. Rainbow Products should not purchase the machine according to the results of NPV and IRR calculations. The net present value of purchasing this new equipment is negative, and the internal rate of return is less than the cost of capital; thus both calculations confirm that the investment will not provide additional value to the company. Of course, the payback method shows that the instrument will have paid back the cost in 7 years but does not take into consideration discounting present values.
- b. If Rainbow accepts the “ Good As New” service plan, the net present value will be a positive \$2,500 and IRR will be 12.86%, greater than the cost of capital. The investment would also pay back the cost in 8 years. Rainbow should purchase the machine under this service plan as it results in a positive net value and the internal rate of return is greater than the cost of capital.
- c. If Rainbow chooses the reinvestment option, the net present value is \$15,000 and IRR is 15.43%. Therefore, the best investment decision is to accept option C, where engineers reinvest 20% of the savings that help cash flows grow 4% in perpetuity.

Figure 1

Using the IRR rule, I recommend renting a larger stand as it yields the greatest rate of return. Using the NPV rule, I recommend building a larger stand. IRR rule can be misleading in this case as this problem is comparing 4 mutually exclusive projects and given the stats, IRR for one out of four of these projects yields a much higher value, but none of these IRR values take the discounting rate into consideration. Therefore, NPV is a better method.

Figure 2

The NPV of this project is \$100, 000. 1, 100 shares of common stock should be issued at the current price of \$100. Issuing new stocks will increase shares of the stock in the market and therefore reduce the value of the stock of existing shareholders.

Lockheed Tri Star Case Questions

At 210 unit production levels, the true value of the Tri-Star program is negative \$584. 04 million. At break-even production of 300 units, Lockheed actually lost roughly \$274 million. At around 400 production units, Lockheed would achieve economic break-even. The decision to pursue the Tri Star program was unreasonable due to a miscalculated break-even point. At 210 unit production, the net present value was roughly negative \$182 million referring that Lockheed would have needed to produce somewhere between 210 units to 300 units to achieve true break even. In addition, given the overly optimistic 10% growth rate that calculated double the total of true aircraft market, Lockheed would have needed to either capture more than 50% of the market for aircraft to breakeven. Between 1967 and 1971, the

price of Lockheed's common stock dropped about \$50. With 11.3 million shares outstanding, this comes to about -\$565 million. We see that the original NPV with 210 unit production results in about similar value as the drop in the total value of the common stocks outstanding.