

Capital Budgeting: One Project - Accept/Reject Decision

Southwest Airlines

The airline industry is extremely cyclical. That is, when the economy does well, so too do airlines. In recent years, the airline industry has found itself with too many seats and too few passengers. Some experts point to the past deregulation of the industry while others argue that technological advances such as teleconferencing are responsible. Several airlines such as Continental, America West, Eastern, and Trans World Airlines, have filed for Chapter 11 Bankruptcy. Some have fully recovered, while others have been forced to liquidate (Chapter 7). Narrowing profit margins have prompted airlines to develop creative survival tactics. Southwest Airlines has successfully found its niche in the industry by providing direct flight service to less travelled routes such as those to and from smaller cities. Since these routes do not generate nearly as much revenue as major city routes, Southwest has found ways to reduce its costs. Costs are reduced by following a no frills policy that the travellers refer to as "peanut flights." This means that instead of serving costly meals (the quality of which passengers have historically complained about anyway), Southwest serves just a bag of peanuts and a soft drink. With the recent success of short, direct flights, Southwest is considering the purchase of one such additional route.

Before an airline applies to the federal government for a new route, a lengthy analysis is performed to determine the feasibility of the route. Expenses to consider include airport costs such as gate and landing fees and labour costs such as local baggage handlers and maintenance workers. Many times the airline will provide its own employees to load and unload luggage or to provide upkeep for their planes, but in the case of Southwest, they have so many small cities to service that the outsourcing of these jobs is not uncommon.

Table 1 provides a summary of the after-tax cash flows associated with the acquiring of an additional small route. All costs and revenues are reflected by the following numbers.

Table 1: Projected Net Cash flows (in Millions of Dollars)

| Year | Net Cash flow |
|------|---------------|
| 0 | -\$20.8 |
| 1 | \$4.5 |
| 2 | \$6.3 |
| 3 | \$5.2 |
| 4 | \$3.9 |
| 5 | \$2.1 |
| 6 | \$1.3 |
| 7 | \$0.5 |

Questions:

1. What is the project's NPV assuming Southwest has a discount rate of 10%? How do we interpret the NPV?
2. What is the project's IRR? How is this measure different from the NPV? What is the interpretation of this number?
3. Calculate the project's Payback Period.
4. Assuming that Southwest has a required payback period of 5 years and a hurdle rate of 10%, should Southwest accept the additional route? Based on the project's NPV, should it be accepted? If conflicting conclusions occur, which criteria would you follow?
5. When will conflicts likely occur among the three criteria?
6. Calculate the project's Modified Internal Rate of Return (MIRR). What critical assumption does the MIRR make that differentiates it from the IRR?
7. Where does the value of MIRR fall relative to the discount rate and IRR?