Imperial Business School

Corporate Finance

Assignment 1

This question is based on the Harvard Business School case study "Ocean Carriers". Please read the case study as well as the instructions below carefully before proceeding with your analysis. Clearly state any additional assumptions you think may be necessary in your analysis. Summarize your responses in a report of maximum 1,000 words and attach any accompanying excel spreadsheets. Your answers need to be succinct and to the point; your grade will depend on the quality of the analysis and the clarity of the report rather than its length.

Setting

In January 2001, Ocean Carriers, a shipping company, is evaluating a proposed lease of a ship beginning in 2003. The proposed leasing contract offers very attractive terms, but no ship in Ocean Carrier's current fleet meets the customer's requirements. The firm must decide if future expected cash flows warrant the considerable investment in a new ship.

Questions

Assume that Ocean Carriers uses a 9% discount rate.

1. Estimate the expected annual cash flows for the 25 years of the ship's useful life. Assume that Ocean Carriers is a U.S. firm subject to 35% taxation.
2. Do you think that the ship should be scrapped after 15 years as per the company's policy or continue to operate through the entire 25-year period? Assume that the company can dispose the ship for \$5 million in year 15 and \$3.5 million in year 25.
3. Should Ms Linn purchase the \$39 million capesize? What if Ocean Carriers is located in Hong Kong, where owners of Hong Kong ships are not required to pay any tax on profits made overseas and are also exempted from paying any tax on profit made on cargo uplifted from Hong Kong?

Suggestions

1. The new ship will be delivered in early 2003 and the contract will begin immediately, so the first operating cash flow will be in 2003. The first investment cash flow is in 2001. You may assume that cash flows arrive at the end of the year, except for the initial expenditure, which occurs immediately. Hence, cash flows occur in Jan 2001, Dec 2001, Dec 2002, Dec 2003, etc. up to Dec 2027.
2. Assume that the first investment in working capital is made in 2002 (e.g., due to supplies that need to be on board before the ship starts operating). The working capital is fully recovered in the final year of operation of the ship.
3. Note that periodic special survey costs are also considered as capital expenditures (see p.2 of the case), and are depreciated on a straight-line base over a five-year period beginning the year after the survey and ending the year of the next survey. Similarly, the ship itself is depreciated over the 25 years of its useful life. You may assume that the vessel does not undergo the special survey in year 25, so the final capital expenditure is not required.
4. Assume that depreciation is calculated by dividing the ship initial cost to its useful life. Of course, any cash received when the ship is scrapped that is in excess of (less than) the ship's carrying value at that time will be reported as a capital gain (loss) and will affect the cash flows.