

Ocean carriers essay sample



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In considering whether Ocean Carriers should purchase the new capsized carrier for the potential customer, we completed a NPV analysis of the new vessel as follows: We assumed the first payment would be made on December 31, 2000. For the revenue that could be expected we utilized the given expected daily hire rate, which best represents Ocean Carriers future cash flows. We came to the OPREVE multiplying the annual operating days (357 in years 1 to 5 ; 353 in years 6 to 10 etc.) by the expected daily hire rate. The daily operating costs for the vessel were provided for year 1 at \$4,000. For years 2-25, we first converted the real into the nominal growth rate of 4.03% and then used it to work out the daily operating costs. The OPEXP we calculated by multiplying the daily operating costs by 365 days (according to the case guidelines costs incurred 365 days a year). Survey costs were calculated using the data in the case. We assumed that the survey will be run at the end of 2007, 2012, 2017 and 2022 and therefore the depreciation of the survey costs would start the subsequent year. Also, we did not consider the survey costs for the last year in the amount of \$ 1,250,000, since this investment would be futile given the scrapping in the same year.

According to the instructions, the survey costs were depreciated using straight-line depreciation over the life of the survey. Depreciation of the vessel was also calculated using straight-line depreciation over 25 years. We calculated taxes at the given tax rate of 35% and 0% respectively. We assumed the initial outlay of networking capital would take place in year 2, thus at the same time of taking possession of the vessel. All net working capital will be liquidated at the end of year 25, just before scrapping the

vessel. The CAPEX after Tax Scrap Value was computed by deducting the applicable tax rate of 35% or 0% from the scrap value at year 26. Free cash flows were calculated using the recommended discount rate of 9%. Both, the sum of the PV and the NPV calculation lead to the same result, which is a negative NPV of (\$6, 872, 290. 61) at a tax rate of 35%, respectively a positive NPV of \$977, 267. 30 at a tax rate of 0%. However, with regard to the first scenario (tax rate of 35%), we also computed the NPV without considering taxes in the year 25. Technically, this is necessary because the EBIT in the year 25 is negative and no taxes are owed to the IRS. In this scenario, the NPV is slightly superior to the first one. In conclusion, at a tax rate of 35% Ocean Carriers' NPV is negative. Thus, Ocean Carriers should not acquire the vessel. On the contrary, using a tax rate of 0% results in a positive NPV, a fact which should incline Ocean Carriers to purchase the vessel. Summary Answer to Problem 2a

For answering the question whether Ocean Carriers should sell or scrap the vessel at year 15 at the price of \$5m we completed some additional NPV calculations. The answers were completed using a tax rate of 0% as instructed. Also, we held, *mutatis mutandis*, all assumptions in problem 1 to be still accurate. Additionally, we assumed that the buyer would purchase the vessel on December 31, 2017, bear the survey costs and provide the initial working capital. Finally, we also assumed that similar to problem 1 the depreciation of the CAPEX as well as of the survey cost would start the year following the acquisition. In order to figure out the maximum purchase price the buyer is willing to pay, we first computed the remaining maximum possible NPV of the vessel.

This we achieved by computing the buyer's NPV at a (fictional) sales price of \$0. We ended up with a maximum NPV of \$3,407,548.38. We then calculated the equivalent maximum purchase price at year 17 using the formula $\$3,407,548.38 * 1.0917 = \$14,746,620.22$. In a further step, we calculated the seller's NPV using the above maximum sales price of \$14,746,620.22, which resulted in \$977,267.30. Finally, we computed the NPV of the "scrapping-scenario" which was (\$1,274,915). In addition, we also calculated the seller's break-even point which was \$10,517,366. In conclusion, Ocean Carriers will maximize its value if it is able to sell the vessel after year 15 at a price of \$14,746,620.22. Even at a price of only \$10,517,366 its NPV will be \$0, meaning neither value creation nor destruction takes place. Both purchase prices prove to be more advantageous compared to the "scrapping-scenario" which results in a negative NPV of (\$1,274,915).

Summary Answer to Problem 2b

The NPV (as of time 0) of all cash flows to Ocean Carriers in case it decides to sell the carrier at the maximum price of \$14,746,620 after year 15 is identical with the calculated NPV in question 1 (at a tax rate of 0%). This is because the NPV of the vessel in the year 15 equals the value of the future cash flows of the years 14 to 25.