COMM 221: Introduction to Finance

Section 1

Bombardier C Series Jets

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Cash Flow Table:

Year	0	1	2	3
Units sold		20	25	30
Bad Sales		15	18	22
Variable Costs	-$1,000,000.00	-$1,305,600.00	-$1,664,640.00	-$2,037,519.36
Sales	$0.00	$2,000,000.00	$2,550,000.00	$3,121,200.00
Working Capital Injection	-$400,000.00	-$300,000.00	-$382,500.00	-$468,180.00
Fixed Costs	$0.00	-$750,000.00	-$750,000.00	-$750,000.00
Total CF is ((Sales - Costs)*(1-T))+((1000000*((1-0.2)^Year)*T))	-$1,400,000.00	$66,500.80	$270,603.52	$381,470.23

Year	4	5	6	7	8
Units sold	45	60	40	40	40
Bad Sales	33	45	30	30	30
Variable Costs	-$3,117,404.62	-$4,239,670.28	-$2,882,975.79	-$2,940,635.31	-$2,999,448.02
Sales	$4,775,436.00	$6,494,593.20	$4,416,323.20	$4,504,649.60	$4,594,742.80
Working Capital Injection	-$716,315.40	-$974,188.98	-$662,448.48	-$675,697.44	-$689,211.42
Fixed Costs	-$750,000.00	-$750,000.00	-$750,000.00	-$750,000.00	-$750,000.00
Total CF	$774,451.77	$1,189,421.81	$643,664.89	$652,062.13	$663,718.72

1) What is the IRR for this project

Calculations:

I set the NPV equal to zero and solved for the discount rate using my financial calculator.

IRR = 28%

2) What is the NPV when WACC is 3.8%

Calculations:

I took the total cash flows for each year, and plugged them into my financial calculator to calculate the NPV of the project.

From the table above, NPV is $-285,199.88

3) What is the NPV if the Sales are 25% less than projected rounding half units down?

Calculations:

I recalculated sales using the bad sales # of units from the table above. Then I took the new OCF and inputted them into my financial calculator to calculate NPV. Adding in the $188,744.00 which is the salvage value of the equipment when it is sold.

-$307,439.26