F M eek ssi nment Q uestion and ns er

Robust Cellnets Co makes handheld communication devices for use in dangerous environments. The company's main customers are organisations like mining companies and the military that require communication devices that can survive rough handling in transport to a site and can be made to their unique requirements. You are a senior financial management advisor employed by the company to review its capital investment appraisal procedures and to provide advice on the acceptability of a significant new capital project – the Rolacom.

The Rolacom project information:

The project is a domestic project entailing immediate capital expenditure of $1,000,000 with projected volumes over five years as follows:

Year	1	2	3	4	5
Sales (units)	10,000	10,500	10,200	10,100	9,000

The initial selling price is estimated to be $80 per handset in year 1 rising by 5% per annum thereafter. The unit variable cost is currently estimated at $40 and expected to rise by 4% per annum. Fixed cost associated with the project is expected to be are $60,000 in year 1 increasing by 4% per year thereafter.

At the beginning of each year the company will need to provide working capital of 20% of the anticipated sales revenue for the year. Any remaining working capital will be released at the end of the project.

Robust Cellnets Co depreciates plant and equipment on a reducing balance basis and in this case, tax allowable depreciation is available on the initial investment at 25% per year. The equipment is expected to have a resale value of $100,000 at the end of the fifth year.

The company uses a nominal post-tax cost of capital of 10% to evaluate all its projects and pays tax at 30% per year on its profits payable in the same year as profits are earned.

The company's finance director has indicated that he needs the net present value (NPV), the internal rate of return (IRR) and modified internal rate of return (MIRR) calculations based on this data for the next board meeting in order to help them assess the financial viability of the project. He also thinks that given how competitive the business environment is, they may be forced to reduce prices if the need arises. He is therefore requesting that in addition to the above, you perform further calculations to enable him assess the sensitivity of the Rolacom project to changes in selling price as well as the project's duration to indicate to the board how returns from the project will be spread over time.

Required:

a. Evaluate the financial acceptability of the Rolacom project and, calculate and comment on the investment's duration. **(11 marks)**

b. Calculate the % change in the selling price required for the investment to have a zero net present value, and discuss the significance of your results. **(4 marks)**

Total (15 marks)

Robust Cellnets

Years	**0**	**1**	**2**	**3**	**4**	**5**
	$	**$**	**$**	**$**	**$**	**$**
Sales revenue (w1)		800,000.00	882,000.00	899,640.00	935,361.00	875,164.50
		-		-	-	-
Variable cost (w2)		416,000.00	-454,272.00	458,944.51	472,622.86	437,995.04
Fixed cost		-60,000.00	-62,400.00	-64,896.00	-67,491.84	-70,191.51
		-		-	-	-
TAD		250,000.00	-187,500.00	140,625.00	105,468.75	216,406.25
Taxable profit		74,000.00	177,828.00	235,174.49	289,777.55	150,571.69
Tax @ 30%		-22,200.00	-53,348.40	-70,552.35	-86,933.27	-45,171.51
Add TAD		250,000.00	187,500.00	140,625.00	105,468.75	216,406.25
Initial Capital	1,000,000.00					
Resale value						100,000.00
Working capital (w3)	160,000.00	16,400.00	3,528.00	7,144.20	-12,039.30	175,032.90
	-					
Net Cashflow	**1,160,000.00**	**318,200.00**	**315,507.60**	**312,391.34**	**296,273.74**	**596,839.33**
DF @ 10%	1.000	0.909	0.826	0.751	0.683	0.621
PV	-1,160,000.00	289,272.73	260,750.08	234,704.24	202,358.95	370,590.27
NPV			**197,676.27**			
PV (1-5)			1,357,676.27	**MIRR**	**14%**	
Initial Capital			-1,160,000.00			
NPV			**197,676.27**	**IRR**	**16%**	
Workings (Years)	**0**	**1**	**2**	**3**	**4**	**5**
Sales units		**10000**	**10500**	**10200**	**10100**	**9000**
Sales (w1)		800000.00	882000.00	899640.00	935361.00	875164.50
variable cost (w2)		416000.00	454272.00	458944.51	472622.86	437995.04
Work. Cap. (w3)		160000.00	176400.00	179928.00	187072.20	175032.90
	160000.00	16400.00	3528.00	7144.20	-12039.30	175032.90
TAD		250000.00	187500.00	140625.00	105468.75	216406.25
Weighted PV		289272.73	521500.17	704112.72	809435.79	1852951.34
Duration			**3.08**	**years**		
PV of sales revenue		727272.73	728925.62	675912.85	638864.15	543408.30
Sensitivity margin			**6%**	without tax	allowance	
			4.2%	with tax	allowance	

WORD PROCESSOR RESPONSE OPTION:

Financial acceptability of the project:

The NPV is positive, which indicates the project should be undertaken. This is further justified by both the IRR and MIRR being more than the cost of capital

Duration:

The result indicates that it will take approximately 3·08 years to recover half the present value of the project. Duration considers the time value of money and all of the cash flows of a project.

Reduction in selling price:

Robust Cellnets Co appears to have very little scope to reduce the price in order to guarantee the success of the Rolacom project. It will only take about 6% drop in selling price for the project for the company to be indifferent as to accepting or rejecting the project.