Accounting Coursework

7.8 Group Coursework: Capital Investment Appraisal

Question: Write a report of 300 words (max.) advising management in which projects they should invest in and why. Use Net Present Value Calculations to support your recommendations.

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Computer Products Ltd. should consider investing in the **ACRA I project** since it has the highest NPV out of all the projects for the three cases. The ACRA II has a negative and the least NPV for both the nominal and the ±3% variation of cash flows cases which makes this project, undesirable. In contrast to this, the ACRA III project has a negative NPV for the nominal case and the project with a reduction in cash flows of 3% which makes it undesirable compared to the investment in the ARCA I project.

The ARCA I project has a higher investment than the ARCA II project by £50 but they generate roughly the same sum of undiscounted cash flows for all three cases. But, the former has a higher NPV than the latter for all three cases, regardless of the discount rate. For higher discount rates (see Appendix II), the difference between the NPV of two projects increases significantly for all three cases. This is because the ARCA II project has larger cash flows generated in later years and the discount rates affect the cash flows that come in the future more heavily than the ones that come earlier.

Finally, the ARCA III project has a higher investment, and generates the largest amount of undiscounted cash flows. For a 7% discount rate, the NPV of the ARCA III project declines significantly from NPV values for lower discount rates, in all three cases. This demonstrates that since the cost of capital and the risk involved is high, the company should go for the ARCA I project which would give them less undiscounted cash but earlier compared to the ARCA III project that would give them more nominal cash but later.

Appendix I

Cost of Capital = 7%

	Project	Initial Investment (£)	Expected Cash Flows by Year (£)										Net Present Value (£)
			1	2	3	4	5	6	7	8	9	10	
	ACRA I	-25000	3000	3000	4000	5000	6000	5000	4500	4000	0	0	243.8
	ACRA II	-24950	1000	2000	3000	4000	6000	7000	6000	5000	0	0	-1179.2
	ACRA III	-35990	4000	5000	6000	6500	7500	6000	5000	4000	3000	2000	-592.1
+3%	ACRA I	-25000	3090	3090	4120	5150	6180	5150	4635	4120	0	0	1001.1
	ACRA II	-24950	1030	2060	3090	4120	6180	7210	6180	5150	0	0	-466.1
	ACRA III	-35990	4120	5150	6180	6695	7725	6180	5150	4120	3090	2060	469.8
-3%	ACRA I	-25000	2910	2910	3880	4850	5820	4850	4365	3880	0	0	-513.6
	ACRA II	-24950	970	1940	2910	3880	5820	6790	5820	4850	0	0	-1892.3
	ACRA III	-35990	3880	4850	5820	6305	7275	5820	4850	3880	2910	1940	-1654.1

For the no variation case:

- Sum of undiscounted cash flows of ARCA I project = £34,500
- Sum of undiscounted cash flows of ARCA II project = £34,000
- Sum of undiscounted cash flows of ARCA III project = £49,000

For +3% variation case (best-case scenario):

- Sum of undiscounted cash flows of ARCA I project = £35,535
- Sum of undiscounted cash flows of ARCA II project = £35,020
- Sum of undiscounted cash flows of ARCA III project = £50,470

For -3% variation case (worst-case scenario):

- Sum of undiscounted cash flows of ARCA I project = £33,465
- Sum of undiscounted cash flows of ARCA II project = £32,980
- Sum of undiscounted cash flows of ARCA III project = £47,530

Appendix II

Cost of Capital = 1%

	Project	Initial Investment (£)	Expected Cash Flows by Year (£)										Net Present Value (£)
			1	2	3	4	5	6	7	8	9	10	
	ACRA I	-25000	3000	3000	4000	5000	6000	5000	4500	4000	0	0	7908.6
	ACRA II	-24950	1000	2000	3000	4000	6000	7000	6000	5000	0	0	7273.2
	ACRA III	-35990	4000	5000	6000	6500	7500	6000	5000	4000	3000	2000	10641.2
+3%	ACRA I	-25000	3090	3090	4120	5150	6180	5150	4635	4120	0	0	8895.9
	ACRA II	-24950	1030	2060	3090	4120	6180	7210	6180	5150	0	0	8239.9
	ACRA III	-35990	4120	5150	6180	6695	7725	6180	5150	4120	3090	2060	12040.1
-3%	ACRA I	-25000	2910	2910	3880	4850	5820	4850	4365	3880	0	0	6921.4
	ACRA II	-24950	970	1940	2910	3880	5820	6790	5820	4850	0	0	6306.5
	ACRA III	-35990	3880	4850	5820	6305	7275	5820	4850	3880	2910	1940	9242.2

Cost of Capital = 4%

	Project	Initial Investment (£)	Expected Cash Flows by Year (£)										Net Present Value (£)
			1	2	3	4	5	6	7	8	9	10	
	ACRA I	-25000	3000	3000	4000	5000	6000	5000	4500	4000	0	0	3713.8
	ACRA II	-24950	1000	2000	3000	4000	6000	7000	6000	5000	0	0	2623.6
	ACRA III	-35990	4000	5000	6000	6500	7500	6000	5000	4000	3000	2000	4456.7
+3%	ACRA I	-25000	3090	3090	4120	5150	6180	5150	4635	4120	0	0	4575.2
	ACRA II	-24950	1030	2060	3090	4120	6180	7210	6180	5150	0	0	3450.8
	ACRA III	-35990	4120	5150	6180	6695	7725	6180	5150	4120	3090	2060	5670.1
-3%	ACRA I	-25000	2910	2910	3880	4850	5820	4850	4365	3880	0	0	2852.4
	ACRA II	-24950	970	1940	2910	3880	5820	6790	5820	4850	0	0	1796.4
	ACRA III	-35990	3880	4850	5820	6305	7275	5820	4850	3880	2910	1940	3243.3