

## 5.Tutorium

**Übungsaufgaben  
Investition & Finanzierung  
Sommersemester 2011**

35) CALCULATING PAYBACK PERIOD AND NPV Hideoshi  
Software has the following mutually exclusive projects. (6 A9)

Year	Project A (¥)	Project B (¥)
0	- 5.500	- 4.000
1	4.000	2.500
2	5.500	1.200
3	500	3.000

- Suppose Hideoshi's payback period cut-off is two years. Which of these two projects should be chosen?
- Suppose Hideoshi uses the NPV rule to rank these two projects. Which project should be chosen if the appropriate discount rate is 10 per cent?

36) CALCULATING DISCOUNTED PAYBACK An Investment project has annual cash inflows of € 7.000, € 7.500, € 8.000 and € 8.500, and a discount rate of 10 per cent. What is the discounted payback period for these cash flows if the initial cost is € 8.000? What if the initial cost is € 13.000? What if it is € 18.000? (6 A11)

37) AVERAGE ACCOUNTING RETURN Bluerock Group has invested € 8.000 in a high-tech project lasting three years. Depreciation is € 4.000, € 2.500 and € 1.500 in year 1, 2 and 3, respectively. The project generates pre-tax income of € 2.000 each year. The pre-tax income already includes the depreciation expense. If the tax rate is 25 per cent, what is the project's average accounting return (AAR)? (6 A13)

38) CALCULATING IRR Calculate the NPV of the following project for discount rates of 0, 50 and 100 per cent. What is the IRR of the project? (6 A14)

Year	0	1	2
Cash flow	- £ 7.000	£ 5.000	£ 20.000

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39) PROBLEMS WITH IRR                      Review the main problems that arise when one uses only IRR to evaluate potential projects. (6 A6)

40 ) CALCULATING PROFITABILITY INDEX                      Suppose the following two independent investment opportunities are available to Greenplain Ltd. The appropriate discount rate is 10 per cent. (6 A17)

Year	Project Alpha (€)	Project Beta (€)
0	- 500	- 2000
1	300	300
2	700	1.800
3	600	1.700

- Compute the profitability index for each of the two projects.
- Which project(s) should Greenplain accept, based on the profitability index rule?