
Exam
Financial Management of Innovative Enterprises
(201000059)

Instructors: H. Kroon,
Date: 22 January 2015
Time: 13.45 – 16.45
Location: NH 207

After the exam, hand in
- your answers

language:

Questions are in English, answers can be given in English, German or Dutch.

grading:

Problem 1: 20 points
Problem 2: 20 points
Problem 3: 30 points
Problem 4: 30 points

Problem 1

The characteristics of partnership (general or limited) and corporations from a legal, financial, organizational point of view are different.

Question 1

Give an example of an advantage of a general partnership above a corporation when you start up business and you have to make a decision for the legal form.

Question 2

Give an example of a disadvantage of a general partnership above a corporation when you start up business and you have to make a decision for the legal form.

Question 3

In which circumstances will you use the VOS Indicator

Question 4

Which parts of the VOS Indicator are less important if you use the indicator for mature organizations

Problem 2

Question 1

Why is debt capital, in general, cheaper than owner's equity

Question 2

Discuss if you agree with the statement: the more cash a corporation has, the healthier it is.

When you buy a small company you get as owner 50,000 euro's a year from cash flows from operations – cash flows of investments. The return on equity is 18% , the return on liabilities is 7%; corporate taxation is 35%; the amount of equity is 30% of the total assets; and the return on assets is 9.5%.

Question 3

Has this company created value? Show a calculation.

Problem 3

See the balance sheet and income statement of company Suerink

Consolidated Balance Sheet Suerink(in Euro '000)

	End year 10	End year 9		End year 10	End year 9
Property Plant & Equipment	10.744	6.488	Common stock	213	175
Investment in associates	17.116	17.002	Retained earnings	<u>77.013</u>	<u>67.209</u>
Loans and receivables	33.707	44.927		77.226	67.384
Deferred tax assets	<u>686</u>	<u>2.885</u>	Long term loans	23.415	20.370
	62.253	71.302	Long term provisions	<u>119</u>	<u>1.711</u>
Inventories	11.850	2.359		23.534	22.081
Trade and other receivables	21.860	18.967	Trade and other liabilities	6.784	7.588
Tax receivable	0	993	tax payable	<u>996</u>	<u>338</u>
Cash and cash equivalents	<u>12.577</u>	<u>3.770</u>		7.780	7.926
	46.287	26.089			
Total assets	<u>108.540</u>	<u>97.391</u>	Total liabilities	<u>108.540</u>	<u>97.391</u>

Income statement of Suerink

	Year 10	Year 9
Sales	20.396	27.211
Cost of sales	<u>-966</u>	<u>-4.433</u>
	19.430	22.778
Depreciation	-131	-5.269
Development costs	-1.147	-762
General and administrative expenses	<u>-3.090</u>	<u>-3.703</u>
	-4.368	-9.734
Interest income	1.337	503
Interest expense	-1.411	-1.268
Profit on sale of activities		13.768
Other financial income	<u>54</u>	
	-20	13.003
Taxes	15.042	26.047
	<u>-843</u>	<u>-1.076</u>
Net profit	<u>14.199</u>	<u>24.971</u>

Question 1

Calculate the solvency (leverage) ratios. What can you conclude from the outcomes of these ratios in the sense of what they mean and should be interpreted.

Questions 2

Calculate the Return on Assets (ROA) and the Return on Equity (ROE). Give based on these two ratio's comment on the margin and turnover Suerink is making.

Question 3

What ratio would you prefer to compare the operations of different companies in an industry.

Question 4

Calculate and interpret the Cash Conversion Cycle of Suerink. What can you conclude about this circle?

Question 5

What will happen to Suerink if all the accounts receivables will pay the invoices one week later than usual?

Problem 4

Roorda Systems has a major drug company as her parent company. Through an agreement with its pharmaceutical parent it will initially operate as an independent corporation but it will be merged into the parent at the end of its second year. At that time, Roorda Systems 'entrepreneurial team will be paid a lump sum of €2.5 million as the terminal value for the venture. Following are limited financial statement projections for the next two years for the Roorda Systems Corporation:

First year revenues:	€12,500
Second year revenues:	€16,000
Expenses (including depreciation):	€125,000 per year
Initial time-zero net fixed assets:	€50,000
Depreciation:	10% of beginning-of-year net fixed assets
Accounts payable (years 1 and 2):	€750
Inventories (years 1 and 2):	€0
Corporate marginal tax rate:	30%
Accounts receivable (years 1 and 2):	€0
Accrued expenses:	€300
Required cash:	€3,000
Debt (all years):	€0
Weighted average cost of capital (wacc)	10%

Question 1

Construct the venture's balance sheet at startup. Then construct financial statements for years 1 and 2. (Put initial fixed asset investments in year 0 and initial working capital investments in year 1. Assume the initial €50,000 is equity financed).

Question 2

Construct the enterprise valuation cash flows, including the terminal payment. Treat existing liabilities at the terminal time as though the mother company assumes them. (the €2.5 million is "free and clear"). Strip all non-required cash out of net working capital.

Question 3

What is the value of the enterprise at time zero.

Question 4

Discuss your idea about the influence of the terminal value on the value of the enterprise

Formula Sheet

Cash burn = inventory –related purchases + administrative expenses + marketing expenses + R&D expenses+ interest expenses + change in prepaid expenses- (change in accrued liabilities +change in payables) + capital expenses + taxes

Cash build =net sales - change in receivables

NWC = average current assets – average current liabilities

~~NWC~~

~~NWC~~ –to total assets ratio = average NWC / average total assets

Inventory-to-sale conversion period = average inventories / (cost of goods sold / 365)

Sales to cash conversion period = average receivables / (net Sales/365)

Purchase- to- payment conversion period = (average payments + average accrued liabilities / (cost of good sold/365)

Cash conversion cycle = inventory- to-sale cp + sales to cash cp –purchase-to-payment cp

Total debt to total assets ratio = total debt / total assets

Interest coverage ratio = EBIT / interest

Gross profit margin = (net sales – cost of goods sold)/ net sales

Operating profit margin = EBIT / net sales

Net profit margin = net profit / net sales

Nopat margin = EBIT (1-tax rate) / net sales

Sales to total assets ratio = net sales / average total assets

Operating return on assets = ebit / average total assets

Return on assets = net profit / average total assets

Asset turnover = net sales / average total assets (not in book)

Return on equity = net income / average owners'equity

G= ROA * FP

Additional funds needed = required increase in assets – spontaneously generated funds – increased in retained earnings

$R_{debt} = RR + IP + DRP + LP + MP$

$R_f = RR + IP$

$R_e = r_f + (r_m - r_f) \text{Beta}$

WACC = (1-tax rate) debt rate *(debt/ total assets) + equity rate *(equity/ total assets)

EVA = NOPAT- (WACC* capital used)

NOPAT = EBIT* (1-effective tax rate)

Formula's of the different valuation methods:

Net income / cost of equity

Net income / (cost of equity – growth)

Enterprise value = sum of (the discounted cash flows of operation – the discounted cash flows of investing). Discounted with the WACC as discount factor. Equity value is enterprise value - liabilities

Present value of a cash flow at t = cash flow / (1+i)^t

Where i = perunage (so i=0.1 at 10% and i=0.4 at 40%)

Net present value = sum of all the present values

If you have a constant cash flow over the years till infinity, the net present value of these cash flows will be : cash flow / i

If there is a growth factor in the cash flows of g, the net present value of these cash flows will be:

Cash flow / (i-g)

If i = 10%

1/1.1 = 0.909

1/1.1² = 0.826

1/1.1³ = 0.751

1/1.1⁴ = 0.683