

ELECTIVE (Finance)

Elective examinations are 3 hours in length. Candidates are given 4 hours to complete the examination, which provides an extra hour for them to formulate their responses. The intention is to reduce the time constraint.

The examinations are made up of a mix of objective-format and medium- to large-sized, moderately complex cases. The split and length may vary across the Electives to adapt to the learning outcomes required.

Elective examinations contain larger and more complex cases than those used for Core 1 and Core 2, requiring a minimum of 60 and a maximum of 120 minutes to complete. The assessment of professional skill is in a multi-competency environment, building on prior learnings, but greater than 50% of assessment opportunities will relate to the Elective area being examined.*

Elective cases require candidates to simulate the “roles” they will play in real life, and, therefore, access is provided to the reference tools they would use, where practical to do so.

Currently capped at 90 minutes (see blueprint).

Case #2 – Holodeck**(Suggested time: 90 minutes)**

Today is April 25, 2015. You, CPA, are a senior analyst at Blue Ocean Equity Partners LLP (BOE), a mid-size private equity firm that invests in companies involved in the multimedia and video game industries. Your main responsibilities are to review investment proposals received by the firm and to present recommendations to the firm’s investment committee on how to proceed.

You are currently looking at an opportunity for BOE to invest in Holodeck Ventures Inc. (Holodeck), which is owned by entrepreneur Adrian Broody. Holodeck is an emerging leader in the video game industry, targeting science-fiction games for adults. While Holodeck has been profitable, most of its cash flows have been reinvested in developing new products. Adrian has provided you with the most recent financial statements for Holodeck (Appendix I).

BOE typically takes an equity stake of between 20% and 50% in its investee firms or subscribes to a subordinated debenture that is convertible into a comparable equity stake. Publicly listed entities can currently raise capital by issuing convertible subordinated debentures at yields ranging from 5% to 9%. BOE’s investment goal is to double the value of an investment within four years.

Alternative for Holodeck: Initial Public Offering (IPO)

As an alternative to a private equity investment, Holodeck is considering an IPO through an investment bank. The investment bank has showed great interest in Holodeck and believes that an IPO would be successful. The investment bank has provided Adrian with a draft plan for an

IPO (Appendix II), as well as some financial projections on the basis of their preliminary review (Appendix III).

Use of Funds

Holodeck would utilize the funds generated to buy Next Wave Games Inc. (Next) for \$25 million. Next develops and publishes a range of action/adventure and casual games. Currently Next does not generate any cash flow, but it is expected to begin generating cash over the next three years by reducing its research and development (R&D) investment to the industry average of 22% of sales versus the current 40% of sales.

Request

You have been asked by the head of the investment committee to complete the following:

- Discuss three significant advantages and three significant disadvantages for Holodeck to seek private equity financing from BOE rather than undertaking an IPO.
- Using the projections prepared by the investment bank (see Appendix III), develop a free cash flow forecast for Holodeck for the next five years.
- Discuss the reasonableness of the underlying assumptions used by the investment bank (see Appendix III).
- Estimate the weighted average cost of capital for Holodeck assuming an all-equity capital structure. Explain any risk premiums included in your calculations.
- Prepare a discounted cash flow (DCF) valuation for Holodeck as a stand-alone privately held entity.
- Assuming that BOE decides to invest in Holodeck, discuss the advantages and disadvantages of BOE utilizing either equity or a convertible subordinated debenture. Recommend a financing option for Holodeck.

APPENDIX I
HOLODECK'S FINANCIAL STATEMENTS

Income Statement
For the year ended March 31
(in millions of dollars)

	<u>2015</u>	<u>2014</u>	<u>2013</u>
Total revenue	\$ 61.5	\$ 54.6	\$ 47.4
Cost of goods sold	12.3	10.9	10.3
Gross profit	<u>49.2</u>	<u>43.7</u>	<u>37.1</u>
R&D expense	7.0	8.5	7.0
Selling and general admin. expense	21.4	20.2	16.3
EBITDA	<u>20.8</u>	<u>15.0</u>	<u>13.8</u>
Depreciation and amortization	6.2	1.6	1.2
Interest expense	<u>0.8</u>	<u>0.6</u>	<u>0</u>
Income before tax	<u>13.8</u>	<u>12.8</u>	<u>12.6</u>
Income tax	<u>4.2</u>	<u>3.9</u>	<u>4.0</u>
Net Income after tax	<u><u>\$ 9.6</u></u>	<u><u>\$ 8.9</u></u>	<u><u>\$ 8.6</u></u>

APPENDIX I (continued)
HOLODECK'S FINANCIAL STATEMENTS

Statement of Cash Flows
For the year ended March 31
(in millions of dollars)

	<u>2015</u>	<u>2014</u>	<u>2013</u>
Operations			
Operating cash flow before working capital changes	\$ 15.8	\$ 10.6	\$ 9.2
Changes in non-cash working capital items	(7.2)	(2.2)	2.1
Cash flow from operating activities	<u>8.6</u>	<u>8.4</u>	<u>11.3</u>
Investing			
Capital expenditures	(0.4)	(0.5)	(1.6)
Investment in intangibles	(2.9)	(13.3)	(4.5)
Other investing items	0.3	0.1	0.1
Total cash flow from investing	<u>(3.0)</u>	<u>(13.7)</u>	<u>(6.0)</u>
Financing			
Increase/Decrease in stock	(0.9)	(0.2)	(0.6)
Increase/Decrease in debt	0	0	0.2
Other financing items	(2.1)	4.1	(6.0)
Total cash flow from financing	<u>(3.0)</u>	<u>3.9</u>	<u>(6.4)</u>
Other cash adjustments	<u>0.1</u>	<u>0.3</u>	<u>(0.6)</u>
Change in cash	2.7	(1.1)	(1.7)
Cash at beginning of period	<u>5.8</u>	<u>6.9</u>	<u>8.6</u>
Cash at end of period	<u>\$ 8.5</u>	<u>\$ 5.8</u>	<u>\$ 6.9</u>

APPENDIX I (continued)
HOLODECK'S FINANCIAL STATEMENTS

Balance Sheet
As at March 31
(in millions of dollars)

	2015	2014	2013
<u>Assets</u>			
Cash and short-term investments	\$ 8.5	\$ 5.8	\$ 6.9
Accounts receivable	10.2	7.6	5.1
Other receivables	4.4	4.2	3.6
Other current assets	2.8	0.7	1.7
Total current assets	<u>25.9</u>	<u>18.3</u>	<u>17.3</u>
Net property, plant and equipment	2.0	2.6	3.1
Net intangibles*	24.8	27.7	14.5
Other non-current assets	4.2	4.6	5.4
	<u>\$ 56.9</u>	<u>\$ 53.2</u>	<u>\$ 40.3</u>
<u>Liabilities</u>			
Accounts payable	\$ 5.8	\$ 8.4	\$ 9.0
Current debt	0.1	4.1	0.1
Other current liabilities	1.9	1.6	1.1
Total current liabilities	<u>7.8</u>	<u>14.1</u>	<u>10.2</u>
Long-term debt	0	0	0.2
Deferred liabilities	1.6	0.4	0
Total liabilities	<u>9.4</u>	<u>14.5</u>	<u>10.4</u>
<u>Shareholders' equity</u>			
Common stock	3.2	2.8	2.2
Other equity	2.1	3.4	4.2
Retained earnings	42.2	32.5	23.5
Total shareholders' equity	<u>47.5</u>	<u>38.7</u>	<u>29.9</u>
	<u>\$ 56.9</u>	<u>\$ 53.2</u>	<u>\$ 40.3</u>

*This account consists mostly of capitalized R&D expenditures.

APPENDIX II

INVESTMENT BANK'S DRAFT PLAN FOR AN IPO

We are pleased to have the opportunity to provide you with the tentative terms of an IPO. By becoming a publicly listed entity, Holodeck would gain an additional currency beyond cash: it could use its own shares to pursue acquisition opportunities.

From our experience, an IPO typically has the following features and implications:

- Minimum stock market capitalization (post-IPO) is \$150,000,000.
- Minimum size of share issue is around \$50,000,000 to ensure that there is enough liquidity for post-IPO trading and also to interest institutional investors, who typically invest at least \$500,000 each.
- Our IPO fees represent 6% of the gross proceeds from the IPO.
- Legal and accounting costs are \$500,000 up front.
- Ongoing costs to remain a publicly listed entity are \$1,500,000 per year.
- Holodeck's current internal financial reporting and control systems would require an upfront investment of \$1,000,000 to update them so that they could serve a publicly listed entity.
- The firm would need to appoint a formal board of directors and set up an audit committee consisting solely of independent directors.

We have used the following assumptions and parameters to estimate Holodeck's value as a publicly listed entity:

- Risk-free rate (current 10-year Government of Canada bond yield): 2%
- Estimated market risk premium: 5%
- Estimated systematic risk (beta) for the video game sector: 1.75
- Estimated firm-size risk premium: 4%

APPENDIX III
INVESTMENT BANK'S FINANCIAL PROJECTIONS FOR HOLODECK

The following are our financial projections for Holodeck, assuming financing is available and not taking into account incremental costs implied by an IPO.

Projections for Holodeck (in millions of dollars)

	2016	2017	2018	2019	2020
Sales	\$ 74	\$ 89	\$ 106	\$ 128	\$ 153
Gross profit	59	71	85	102	122
R&D expense	7	9	11	13	15
Selling and general admin. expense	25	30	35	42	51
EBITDA	27	32	39	47	56
Depreciation and amortization	7	9	11	13	15
Interest expense	1	1	0	0	0
Earnings before tax	19	22	28	34	41
Income tax	6	7	8	10	12
Earnings	<u>\$ 13</u>	<u>\$ 15</u>	<u>\$ 20</u>	<u>\$ 24</u>	<u>\$ 29</u>

Valuation based on 7 times forward EBITDA = \$27 × 7 + \$8.5 (cash) = \$197.5 million.

Assumptions

Growth	20%	per annum
Gross margin	80%	of sales
R&D expenses	10%	of sales
SG&A expenses	33%	of sales
Depreciation expense	20%	growth per annum
Income tax expense	30%	of income before tax
Capital expenditures and intangibles annual investment	6%	of sales
Working capital annual investment	30%	of change in sales