

Exam CFESDM

AFTERNOON SESSION

Date: Thursday, May 2, 2019

Time: 1:30 p.m. – 3:45 p.m.

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This afternoon session consists of 3 questions numbered 7 through 9 for a total of 40 points. The points for each question are indicated at the beginning of the question. Questions 7 - 9 pertain to the Case Study, which is enclosed inside the front cover of this exam booklet.
2. Failure to stop writing after time is called will result in the disqualification of your answers or further disciplinary action.
3. While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions on the exam booklet.

Written-Answer Instructions

1. Write your candidate number at the top of each sheet. Your name must not appear.
2. Write on only one side of a sheet. Start each question on a fresh sheet. On each sheet, write the number of the question that you are answering. Do not answer more than one question on a single sheet.
3. The answer should be confined to the question as set.
4. When you are asked to calculate, show all your work including any applicable formulas.
5. When you finish, insert all your written-answer sheets into the Essay Answer Envelope. Be sure to hand in all your answer sheets because they cannot be accepted later. Seal the envelope and write your candidate number in the space provided on the outside of the envelope. Check the appropriate box to indicate morning or afternoon session for Exam CFESDM.
6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

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Tournez le cahier d'examen pour la version française.

CASE STUDY INSTRUCTIONS

The case study will be used as a basis for some examination questions. Be sure to answer the question asked by referring to the case study. For example, when asked for advantages of a particular plan design to a company referenced in the case study, your response should be limited to that company. Other advantages should not be listed, as they are extraneous to the question and will result in no additional credit. Further, if they conflict with the applicable advantages, no credit will be given.

****BEGINNING OF EXAMINATION****

**Afternoon Session
Beginning with Question 7**

*Question 7 pertains to the Case Study.
Each question should be answered independently.*

7. (13 points)

- (a) (1 point) List four criteria of a sustainable competitive advantage.

Information on Blue Jay Air (BJA) and Blue Jay Tire (BJT) can be found in Section 2 and 3 of the Case Study respectively.

- (b) (1 point) Identify one core competency for Blue Jay Tire Corporation (BJT). Justify your answer.
- (c) (1 point) Explain how vertical complementary alliances help a company improve its performance in individual product markets.

BJA would like to evaluate expanding BJT’s product line to include commercial plane tires, and enter into a vertical complimentary alliance with BJT as its tire supplier.

Preliminary analysis indicates the following:

- BJT’s marginal monthly production costs for commercial plane tires is \$500K.
- BJT will produce 300 tires per month.
- BJA’s demand for tires is 50 per month. They have negotiated a discounted fixed price of \$3000/tire with BJT. BJT would need to sell its remaining tires to other commercial airlines.
- The monthly demand for tires by other commercial airlines is uncertain and follows the discrete probability distribution in the table below:

Demand for Commercial Plane Tires (number per month)	Probability
0	0.1
100	0.2
200	0.3
400	0.4

- BJT has unlimited capacity for unsold tires. There is no additional inventory cost for storing unsold tires.
- The price of commercial plane tires for any given month follows a Normal distribution with mean of \$4000/tire and standard deviation of \$1000/tire.

7. Continued

BJT wants to simulate earnings projections over the next 10 months. You are given one set of random uniform numbers and one set of Standard Normal random variables (Z):

Month	Random Number Set 1 (Demand for Commercial Plane Tires)	Z , Standard Normal random variable (Price of Commercial Plane Tires)
1	0.35	0.00
2	0.75	-0.50
3	0.85	0.50
4	0.15	-1.00
5	0.25	-0.50
6	0.05	1.50
7	0.45	1.00
8	0.55	-2.00
9	0.95	0.50
10	0.65	0.00

- (d) (6 points)
- (i) Design a model to project BJT's earnings from commercial plane tires.
 - (ii) Calculate projected earnings over the next 10 months using the random numbers provided. Show your work.
- (e) (2 points) Recommend two metrics BJT could use to evaluate earnings risk from the commercial plane tire product line. Justify your answer.
- (f) (2 points) Describe two additional considerations as to whether or not BJA and BJT should enter into a vertical alliance. Justify your answer.

***Question 8 pertains to the Case Study.
Each question should be answered independently.***

- 8.** (12 points) Information on Darwin Life Insurance Company can be found in Section 7 of the Case Study.

Consider these four segments of the general environment that influence industry and the firms within it:

- I. Demographic
- II. Economic
- III. Political/Legal
- IV. Technological

- (a) (6 points) Describe how Darwin's market-consistent embedded value (MCEV) calculation is or could be affected by each of the four segments (I to IV).

The board of directors is considering disclosing Darwin Life's MCEV results at year end in order to raise investor confidence. Furthermore, the board is considering using the year-over-year change in MCEV as the sole key performance measure for incentive compensation.

- (b) (6 points)
- (i) Describe two shortcomings of MCEV as a measure of corporate value to investors.
 - (ii) Critique the board's proposal to use the change in MCEV as the sole key performance indicator for incentive compensation.
 - (iii) Recommend changes to the compensation structure based on your answer in part (ii). Justify your answer.

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Question 9 pertains to the Case Study.
Each question should be answered independently.

- 9.** (15 points) Information on Frenz can be found in Section 4 of the case study.

Due to capital restraint, Frenz's senior management has decided to choose only one of the following two projects:

- Continue to expand on its digital strategy
- Vertically integrate into Vietombia's coffee bean industry

Frenz wants to analyze its vertical integration project with respect to the four features of vertical market failure (VMF):

- I. A small number of buyers and sellers
- II. High asset specificity, durability, and intensity
- III. Frequency of transactions
- IV. Uncertainty, bounded rationality, and opportunism

- (a) (1 point) Evaluate the Vietombia proposal with respect to each of the features of vertical market failure (I – IV).

Frenz has created a taskforce to investigate both projects, and appointed Jeff Bemowski to lead this taskforce.

Jeff wants to decide which strategy Frenz should implement using six steps:

- I. Define the problem
- II. Identify Criteria
- III. Gather and Evaluate Information
- IV. List and Evaluate Alternatives
- V. Select Best Alternative
- VI. Implement and follow up

Assume Jeff exhibits a perceptual influence and judgmental influence style when making decisions.

- (b) (6 points)
- (i) Apply the six-step process to compare the projects from Jeff's perspective.
 - (ii) Recommend which project would best align with Jeff's perspective.

9. Continued

Jeff wants to prepare a brief memo to David Gillet (CEO of Frenz) to summarize the decision he has made above in part (b).

- (c) (4 points) Construct a three-level pyramid structure with the top-down approach using the information from part (b) that Jeff can use as an aide to write a memo communicating his decision.

Frenz has chosen to pursue the digital strategy and launched its smartphone app. Since the launch, the app has been downloaded frequently by Frenz's customers; however, most customers do not actively use their app or sign up for the loyalty program. Frenz wants to update the app with the goal of increasing the digital enrollment rate of the loyal program.

You are an external consultant hired by Frenz to redesign the app. You want to use Choice Architecture to nudge customers to enroll for the loyalty program on the app.

- (d) (4 points) Explain one lever from each of the following modes of decision making that can help you achieve the goal.
- (i) System 1
 - (ii) System 2
 - (iii) Bypass both systems

****END OF EXAMINATION****
Afternoon Session

USE THIS PAGE FOR YOUR SCRATCH WORK