CMA DECEMBER, 2019 EXAMINATION
STRATEGIC LEVEL
SUBJECT: F3. FINANCIAL STRATEGY

Time Allocated: Three hours | Total Marks: 100

Instructions to Candidates

There are three sections (that is A, B & C) in this paper. You are required to answer ALL questions.
Answers should be properly structured, relevant and computations need to be shown wherever necessary.
You are strongly advised to carefully read ALL the question requirements before attempting the question concerned (that is all parts and/or sub-questions).
ALL answers must be written in the answer book. Answers written on the question paper will not be submitted for marking.
Start answering each question from a fresh sheet. Your answers should be clearly numbered with the sub-question number then ruled off, so that the markers know which sub-question you are answering.

Section	No of questions in the Section	No of sub-questions in the Section	Marks allocation
A	01	08	20%
B	01	05	40%
C	02	02	40%

TURN OVER

SECTION A – 20 MARKS

This section consists of 1 question and 8 sub-questions.

You are advised to spend no longer than 36 minutes on this section. Section will carry 20 marks and one sub-question will carry 2.5 marks each.

QUESTION 01

(a) Luther Industries needs to borrow $50 million in cash. Currently long-term AAA rates are 9%. Luther can borrow at 9.75% given its current credit rating. Luther is expecting interest rates to fall over the next few years, so it would prefer to borrow at the short-term rates and refinance after rates have dropped. Luther management is afraid, however, that its credit rating may fall which could greatly increase the spread the firm must pay on new borrowings. How can Luther benefit from the expected decline in future interest rates without exposure to the risk of the potential future changes to its credit ratings bring?

(2 ½ Marks)

(b) Distinguish between internal rate of return and modified internal rate of return?

(2 ½ Marks)

(c) Describe the two factors, volatility and dividend, that affect the value of an investment timing option?

(2 ½ Marks)

(d) "In a decision tree - decision nodes are nodes in which uncertainty is involved that is out of the control of the decision maker." Do you agree with this statement? Explain with examples.

(2 ½ Marks)

(e) "Projects may vary in the amount of leverage they will support - for example, acquisitions of real estate or capital equipment are often highly levered, whereas investments in intellectual property are not." Do you agree with this statement? Explain with examples.

(2 ½ Marks)

(f) State the purposes of post completion audit of investment projects.

(2 ½ Marks)

(g) Techno Corporation's bonds will mature in 10 years. The bonds have a face value of Tk. 1,000 and an 8% coupon rate, paid semiannually. The price of the bonds is Tk. 1,100. The bonds are callable in 5 years at a call price of Tk. 1,050. What is their yield to call?

(2 ½ Marks)

(h) Weston Industries has a debt-equity ratio of 1.5. It WACC is 11 percent, and its cost of debt is 7 percent. The corporate tax rate is 35 percent. What is Weston's unlevered cost of equity capital?

(2 ½ Marks)

[2 ½ Marks × 8 Questions = 20 Marks]

END OF SECTION A

SECTION B Starts on page 3

SECTION B– 40 MARKS
This section consists of 1 question and 5 sub-questions
You are advised to spend no longer than 14.4 minutes on each sub-question in this section.
Section will carry 40 marks and one sub-question will carry 8 marks each.

QUESTION 02

(a) Evince Textile recently made a large investment to upgrade its production facilities by sacrificing dividend payment to its shareholders. Although these improvements won't have much of an impact on performance in the short run, they are expected to reduce future costs significantly.

Required:

(i) What impact will this investment have on Evince Textile's earnings per share?

(ii) What impact might this investment have on the company's intrinsic value and stock price?

[Marks: (4+4) = 8]

(b) On August 26, 2019, Indo-Bangla Pharmaceuticals Limited announced that they have made a manufacturing agreement with RHK Global (HK) Ltd., Hong Kong, under which Super Tramex-100mg brand Tablet will be produced in Indo-Bangla's production plant, College road, Barisal, Bangladesh. As per the agreement, they will produce 1200 million tablets per year and the revenue of which is projected to be Tk. 600 million per year. The stock prices and volume related information of Indo-Bangla around the announcement date are given below:

Date	Trading Code	Closing price	Value (mn)	Volume
27-08-2019	IBP	25	88.517	3,531,868
26-08-2019	IBP	23.8	26.012	1,082,352
25-08-2019	IBP	24.5	28.551	1,152,242

Required:

(i) What is efficient market hypothesis? Explain the implications of efficient market hypothesis for investors and for firms.

(ii) Analyze the behavior of IBP's stock price and trading volume around the announcement date. What does it tell about the market efficiency of Dhaka Stock Exchange (DSE)?

[Marks: (4+4) = 8]

(c) Schultz Industries is considering the purchase of Arras Manufacturing. Arras is currently a supplier for Schultz, and the acquisition would allow Schultz to better control its material supply. The current cash flow from assets for Arras is Tk. 7.5 million. The cash flows are expected to grow at 8 percent for the next five years before leveling off to 4 percent for the indefinite future. The cost of capital for Schultz and Arras is 12 percent and 10 percent, respectively. Arras currently has 3 million shares of stock outstanding and Tk. 25 million in debt outstanding. What is the maximum price per share Schultz should pay for Arras?

[Marks: 8]

SECTION B Continues on page 4

(d) A mutual fund's net asset value is $50, but the fund charges an exit fee of 1 percent of net asset value and a load fee of 4 percent of net asset value. An individual purchases the shares. During the year the fund distributes $2.34. The net asset value rises to $58.38 and the investor redeems the shares.

i. What is the percentage return the fund can report that was achieved by its portfolio managers?
ii. What is the percentage return the individual earned on the investment?
iii. Why are the two percentages different?

[Marks: 8]

(e) Debra Simpson, the CFO of Carlson Airlines, was considering the acquisition of Beta Transport Supply Company. The asking price was $100 million. Carlson Airlines was in a 30 percent tax bracket. The purchase was to be for cash and Debra intended to use capital budgeting procedures in the analysis.

Beta's Past Performance

Last year, Beta had the following financial data.

Sales	$30,000,000
Cost of goods sold	18,000,000
Gross profit	$12,000,000
Selling and administrative expense	3,000,000
Depreciation expense	4,000,000
Earnings before taxes	$5,000,000
Taxes (30%)	1,500,000
Earnings after taxes	$3,500,000
Plus depreciation	4,000,000
Cash flow	$7,500,000

Debra's Projections

Sales	+11%
Cost of goods sold	+8%
Selling and administrative expense	+20%
Depreciation	+10%

She was doing a 10 year analysis and expected cash flow to grow by 12% each of the remaining 9 years. She used 10% as the discount rate.

She further projected she could sell Beta Transport for $140 million after 10 years and pay 15% tax on the proceeds.

➔ Should the company be purchased?

[Marks: 8]

[8 Marks × 5 Questions = 40 Marks]

END OF SECTION B

SECTION C Starts on the page 5

Section C- 40 Marks

This section consists of 2 questions.

You are advised to spend no longer than 36 minutes on each question in this section. Section will carry 40 marks and allocation of marks for each sub-question is indicated next to the sub-question.

QUESTION 03

GG is a manufacturing company based in Europe with the euro (EUR) as its functional currency. It has a year end of 30 June. GG is considering the best way to finance the replacement of a particular high-specification piece of equipment that has become too costly to maintain. The replacement equipment is estimated to have a useful life of 6 years with no residual value after that time. GG depreciates its non-current assets on a straight line basis over their estimated useful lives.

Two alternative financing schemes being evaluated are:

- Scheme A: Buy the equipment outright, funded by a bank loan.
- Scheme B: Enter into a six year finance lease.

Scheme A: Buy outright, funded by a bank loan

GG could purchase the equipment outright at a cost of EUR 6.0 million on 1 July 2014. GG can normally borrow at an annual interest rate of 7% a year.

Scheme B: Six year finance lease

The equipment would be delivered on 1 July 2014 and GG would pay 6 annual payments of EUR 1.34 million under a finance lease. Lease rentals would be payable on 30 June each year, with the first payment on 30 June 2015. The lease has an implied interest rate of 9.0%. GG would have the option of extending the lease beyond the initial 6 year term at a peppercorn rent.

Tax regime

GG pays corporate income tax at a rate of 30%. Tax is paid or recovered a year in arrears. If purchased outright the equipment would be eligible for 100% tax depreciation allowances in the financial year in which it was acquired. GG has adopted international financial reporting standards and the tax treatment of the finance lease follows the accounting treatment for finance leases detailed in IFRS 16: Leases. That is, tax relief is given for depreciation and implied interest. Assume that GG has sufficient taxable profits to be able to benefit from any tax savings arising.

Required:

(a) Calculate the net present value (NPV) of the incremental financial benefit or cost of Scheme A in comparison with Scheme B. Use GG's cost of debt as the discount rate.

(b) Discuss the appropriateness of using GG's cost of debt to evaluate the financing decision.

(c) Evaluate financing schemes A and B from the viewpoint of GG, taking all relevant factors into account.

[Marks: (10+4+6) = 20)

SECTION C Continues on page 6

QUESTION 04

National Brands vs. A-1 Holdings - At 5:30 on Friday afternoon, January 22, 2016, Bill Hall, the chairman and CEO of National Brands, Inc., was clearing up the last of the papers on his desk and looking forward to a relaxing weekend. It had been a good week. The company's annual results were in, and they showed that 2015 had been the best year in the company's history. Sales and net income were up over 8 percent from last year, and there was over $1.1 billion dollars in the cash and equivalents account to invest in the coming year. The phone rang. It was Maria Ortiz, his secretary. "Did you hear the latest on the newswire?" Maria asked.

"No, what's up?" Bill replied, with a suspicious feeling that his evening wasn't going to be so relaxing after all.

"Kelly O'Brien, head of A-1 Holdings, just announced that he's bought 5 percent of our outstanding shares, and now he's making a tender offer for all the rest at $55."

"I knew it!" Bill spat out. "He was in here just a few weeks ago, talking about whether we would sell the company to him. We turned down his offer because we want to stay independent, and he left after implying we weren't looking out for our stockholders. He's got some plan to restructure the company around a six-member board of directors instead of the 15 we have now. Now he's trying to do it anyway, whether we like it or not!"

"Looks like it," Maria agreed, "so what do you think we should do?" "OK, get ahold of Tom Straw, the chief operating officer, and Doris Faraday in finance, and tell them to get up here for a meeting right away," Bill directed. "Oh, and have Stan Lindner from public relations come, too; we're sure to have a press release about this, and—oh, wait—call my wife, too, and tell her I won't be home until late tonight."

After about half an hour, those that Bill had called began arriving, armed with pencils, papers, and calculators in anticipation of the coming session. Bill, in the meantime, had managed to compile some financial data about A-1 Holdings, which he had summarized on a sheet of paper along with comparable data on his own company, National Brands, (see Figure 1). He passed the sheet around among the others.

"OK, let's start with what we know," Bill led off. "A-1 already has 5 percent of our outstanding shares, and is making a bid for the rest at $55, or 7 1/8 over market."

"I hate to be the devil's advocate," Stan said, thinking of the 1,000 shares he owned personally, "but that sounds like a pretty fair offer. What will happen if he succeeds?" Most of us will be out of a job, and this company will become just another card in Kelly O'Brien's poker hand," Bill said acidly. "Our employees deserve better than that, so let's talk about what we can do to keep it from happening."

"What about a poison pill?" Tom suggested. "We could take out a fair-sized loan based on our heavy cash position, and A-1 would have a tough time absorbing it—just look at the amount of debt they're carrying now!"

SECTION C Continues on page 7

Figure 1 Selected Financial Data		*National Brands*		*A-1 Holdings*	
	Total earnings expected in the coming year	$400,000,000		$152,000,000	
	Number of shares outstanding	113,640,000		61,800,000	
	Earnings per share	$3.52		$2.46	
	Price–earnings ratio	13.6		5.3	
	Market price	$47.88		$13.00	(rounded)
	Book value per share	$26.84		$6.39	
	Growth rate before merger	8.53	%	19.61	%
	Liquid assets (cash and equivalent)	$1,153,000,000		$1,736,800,000	
	Total assets	$5,160,300,000		$2,294,500,000	
	Total debt	$2,110,300,000		$1,899,500,000	
	Total equity	$3,050,000,000		$395,000,000	
	Dividend payout ratio	48.0	%	0	%

"That would probably work, but it's not very good for us, either," Stan agreed. He was still thinking about the seven dollars a share profit to be made in a buyout. "So, how about someone else? You know, a white knight who would top A-1's offer but would keep the structure of the company substantially the same as it is now."

"I don't know who we could ask," Bill said, "and besides that, the basic problem would probably still occur—we would lose our status as an independent entity."

Doris had been working on some figures on her pad, and she spoke up now. "There's another alternative," she said, "that I'm surprised you all haven't mentioned, given the financial status of the two companies."

"What, what!" Bill said. "Don't keep us in suspense!"

"It's the Pac Man defense," she continued, unruffled. "What we do is launch a tender offer of our own for all of A-1's outstanding stock. If it's successful, we not only thwart the takeover attempt but we gain a new business in the bargain."

"Didn't Martin Marietta try that with Bendix back in 2002?" Bill asked.

"As I recall, it didn't turn out very well for them."

"You're right, it didn't," Doris agreed, "and no one else has tried it since. But, just comparing numbers here between National and A-1, I think it might work out quite well for us. I've been doing some calculating here, and I think an offer to A-1's shareholders of $17 a share would be accepted, and we could conclude the whole affair rather quickly."

SECTION C Continues on page 8

“I’m interested,” Bill said. “Tell you what, put your finance staff on it over the weekend and have them work up the proposal formally. Get the legal and accounting people to help you, too. In the meantime, Stan, tip off the news media that we will have an announcement of our own shortly and draft up a public notice for A-1’s shares at $17 each. Don’t release it yet, but be ready to on Monday. Oh, and be sure to include in it that I said the deal will not cause any dilution of National’s earnings per share. One last thing. Doris, draft an open letter to our shareholders for my signature, explaining what’s happening and reassuring them that we will keep their company intact and prosperous.

“Any questions? If not, let’s get on it—Mr. O’Brien is about to get a surprise!”

➔Required:

1. *a.* A-1 is offering $55 a share for National’s stock. How much total cash will it have to raise to buy the company? (The remaining 95 percent?)
   b. Assume A-1 plans to borrow the money needed to make the purchase. If A-1 uses the amount of liquid assets presently on hand at National to offset the amount it needs to borrow, what is the net amount it will have to borrow?
   c. Assuming A-1 does borrow the amount you determined in *b* above, what will A-1’s total debt be after the purchase is completed? In making your calculation, consider all forms of debt that the combined firm will have. Now compute A-1’s debt-to-equity ratio (A-1’s equity will not increase). Given this ratio, do you think it is likely that A-1 will be able to obtain the necessary debt financing?
   d. Suppose instead that A-1 decides to issue stock to raise the money needed for the purchase (i.e., the amount you computed in *b* above will be raised through a stock issue instead of by borrowing). How many shares of A-1 stock will have to be issued? (Assume the price at which it will be issued is $13 and disregard flotation costs.)
   e. If A-1 does raise the money by issuing new shares of its stock, what will A-1’s EPS be after the purchase is complete and earnings are combined?
   f. Do you think A-1’s shareholders will be happy if this deal goes through? What about the old National shareholders?
   g. If National employs the Pac Man defense and tries to buy A-1 for $17 a share, how much will the total dollar price be?
2. *a.* Do you think National’s Pac Man defense will be successful? Or do you think A-1 will succeed in buying out National?
   b. Do you think that National’s stockholders are better off as a result of A-1’s attack and National’s Pac Man defense (assuming it succeeds)?

[Marks: (14+6) = 20)

[2 × 20 Marks = 40 Marks]

END OF THE EXAM PAPER