

TRƯỜNG ĐẠI HỌC VĂN LANG

KHOA: THƯƠNG MẠI

ĐÁP ÁN ĐỀ THI KẾT THÚC HỌC PHẦN**Học kỳ 2 , năm học 2022 – 2023**

Mã học phần: 7TM0310

Tên học phần: Quản trị tài chính công ty đa quốc gia

Mã nhóm lớp học phần: 222_7TM0310_01

Thời gian làm bài (phút/ngày): 60 phút

Hình thức thi: **Tự luận**SV được tham khảo tài liệu: Có Không

Cách thức nộp bài: Upload file bài làm (word, excel, pdf...)

Đáp án đề thi:**(ĐỀ 02)**

Q.1	Suggested answer	Mark(s)																							
Part a	<i>Forward hedge</i> Purchase A\$920,000 1-year forward: $A\$920,000 \times \$0.76 = \$699,200$	0.25																							
	<i>Money market hedge</i> 1. Need to invest A\$893,203.8835 ($A\$920,000/1.03 = A\$893,203.8835$) 2. Need to borrow \$669,902.9126 ($A\$893,203.8835 \times \$0.75 = \$669,902.9126$) 3. Will need \$730,194.1748 to repay the loan in one year ($\$669,902.9126 \times 1.09 = \$730,194.1748$)	0.50																							
	<i>Call option hedge (Exercise price = \$0.75; Premium = \$0.02)</i>	0.50																							
	<table border="1"> <thead> <tr> <th>Possible Spot Rate</th> <th>Option Premium per Unit</th> <th>Exercise</th> <th>Amount Paid per unit (accounting for premium)</th> <th>Total Amount Paid for A\$920,000</th> <th>Probability</th> </tr> </thead> <tbody> <tr> <td>\$0.73</td> <td>\$0.02</td> <td>No</td> <td>\$0.75</td> <td>\$690,000</td> <td>15%</td> </tr> <tr> <td>\$0.75</td> <td>\$0.02</td> <td>Yes or No</td> <td>\$0.77</td> <td>\$708,400</td> <td>50%</td> </tr> <tr> <td>\$0.77</td> <td>\$0.02</td> <td>Yes</td> <td>\$0.77</td> <td>\$708,400</td> <td>35%</td> </tr> </tbody> </table>		Possible Spot Rate	Option Premium per Unit	Exercise	Amount Paid per unit (accounting for premium)	Total Amount Paid for A\$920,000	Probability	\$0.73	\$0.02	No	\$0.75	\$690,000	15%	\$0.75	\$0.02	Yes or No	\$0.77	\$708,400	50%	\$0.77	\$0.02	Yes	\$0.77	\$708,400
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The forward hedge is superior to the money market hedge and has 85% chance of outperforming the call option hedge. Therefore, the forward hedge is the optimal hedge.	0.25																								
Part b	<i>Unhedged Strategy</i>	0.25																							

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	The unhedged strategy is preferable because it has 65% chance of outperforming the forward hedge.			0.25																								
	Total			2.0																								
Q.2																												
Part a	<i>Forward hedge</i> Sell NZ\$777,000 × \$0.72 = \$559,440			0.25																								
	<i>Money market hedge</i> 1. Borrow NZ\$765,517.2414 (NZ\$777,000/1.015 = NZ\$765,517.2414) 2. Convert NZ\$765,517.2414 to \$535,862.069 (at \$0.70 per NZ\$) 3. Invest the \$535,862.069 at 7%/year to earn \$554,617.2414 after 6 months			0.5																								
	<i>Put option hedge (Exercise price = \$0.73; Premium = \$0.04)</i>			0.5																								
	<table border="1"> <tr> <th>Possible Spot Rate</th> <th>Option Premium per Unit</th> <th>Exercise</th> <th>Amount Received per unit (accounting for premium)</th> <th>Total Amount Received for NZ\$777,000</th> <th>Probability</th> </tr> <tr> <td>\$0.71</td> <td>\$0.04</td> <td>Yes</td> <td>\$0.69</td> <td>\$536,130</td> <td>28%</td> </tr> <tr> <td>\$0.73</td> <td>\$0.04</td> <td>Yes or No</td> <td>\$0.69</td> <td>\$536,130</td> <td>46%</td> </tr> <tr> <td>\$0.77</td> <td>\$0.04</td> <td>No</td> <td>\$0.73</td> <td>\$567,210</td> <td>26%</td> </tr> </table>	Possible Spot Rate	Option Premium per Unit		Exercise	Amount Received per unit (accounting for premium)	Total Amount Received for NZ\$777,000	Probability	\$0.71	\$0.04	Yes	\$0.69	\$536,130	28%	\$0.73	\$0.04	Yes or No	\$0.69	\$536,130	46%	\$0.77	\$0.04	No	\$0.73	\$567,210	26%		
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The forward hedge is superior to the money market hedge and has a 74% chance of outperforming the put option hedge. Therefore, the forward hedge is the optimal hedge.			0.25																									
Part b	<i>Unhedged Strategy</i>			0.25																								
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When comparing the optimal hedge (the forward hedge) to no hedge, the unhedged strategy has an 72% chance of outperforming the forward hedge. Therefore, the firm may desire to remain unhedged.			0.25																									
	Total			2.0																								
Q.3																												
	<i>Cost of equity (CAPM)</i> $K_e = R_f + \beta(R_m - R_f) = 7\% + 0.8 \times (11\% - 7\%) = 10.2\%$			1.0																								
	<i>Cost of capital</i> $K_c = \frac{D}{D+E} K_d(1-t) + \frac{E}{D+E} K_e$ $= 0.45 \times 8\% \times (1 - 19\%) + 0.55 \times 10.2\% = 8.526\%$			1.0																								
	Total			2.0																								
Q.4																												

Part a	Currency	Interest Rate	Possible % Change	Effective Financing Rate Based on That Change	Probability	1.0
	British pound	9%	5%	14.45%	10%	
	British pound	9%	3%	12.27%	90%	
	Liberian dollar	7%	8%	15.56%	25%	
	Liberian dollar	7%	6%	13.42%	75%	
Part b	Possible Joint Effective Financing Rate		Joint Probability	Effective Financing Rate of Portfolio		0.5
	£	LR\$				
	14.45%	15.56%	2.5%	15.04%		
	14.45%	13.42%	7.5%	13.90%		
	12.27%	15.56%	22.5%	14.01%		
	12.27%	13.42%	67.5%	12.88%		
There is a 2.5 percent that Synposys will incur a higher effective financing rate from borrowing the portfolio.						0.5
Total						2.0
Q.5						
Part a	$r_p = w_A r_A + w_B r_B = 0.45 \times 3.6\% + 0.55 \times 2.2\% = 2.83\%$					1.0
Part b	$\begin{aligned} \text{VAR}(r_p) &= w_A^2 \sigma_A^2 + w_B^2 \sigma_B^2 + 2w_A w_B \sigma_A \sigma_B \text{CORR}_{AB} \\ &= 0.45^2 \times 0.05^2 + 0.55^2 \times 0.07^2 + 2 \times 0.45 \times 0.55 \times 0.05 \times 0.07 \times 0.11 \\ &= 0.002179075 \end{aligned}$					1.0
Total						2.0
TOTAL:						10.0

Ngày biên soạn: 02.03.2023

Giảng viên biên soạn đáp án đề thi: Tiến sĩ Nguyễn Công Thành

Ngày kiểm duyệt:

Trưởng (Phó) Khoa/Bộ môn kiểm duyệt đề thi: ThS. Nguyễn Thị Dị Anh

Sau khi kiểm duyệt đề thi, Trưởng (Phó) Khoa/Bộ môn gửi về Trung tâm Khảo thí qua email: khaothivanlang@gmail.com bao gồm file word và file pdf (được đặt password trên 1 file nén/lần gửi) và nhắn tin password + họ tên GV gửi qua Số điện thoại Thầy Phan Nhật Linh (0918.01.03.09).