THE UNIVERSITY OF QUEENSLAND AUSTRALIA
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Assessment Information for School based non-invigilated take home assessments

Assessment information	
Course code and name	FINM3403 International Financial Management
Semester	Semester 1, 2023
Assessment type	Take home Assessment
Assessment date and time	The assessment will be available **6 June 2023 at 8:00 AM AEST**. The assessment is due by **6 June 2023 at 8:00 PM AEST**. Please note you will not be able to access the assessment task after this time.
Assessment window	You have a 12 hour window in which you must complete your assessment. You can access and submit your assessment at any time within the 12 hour window. Even though you have the entire 12 hours to complete and submit your assessment, the expectation is that it will take most students about 2 hours under normal exam conditions
Weighting	This assessment is weighted at 50% of your total mark for this course.
Permitted materials	This is an open book assessment – all materials permitted
Instructions	1. The marks for each question and their individual sub-parts are indicated. 2. Where explanations are required and a word count maximum is indicated, <u>no more than the maximum quantity of words specified will be assessed</u>. 3. If <u>you believe</u> I have not included information that is relevant to answer the question, make a valid assumption; include it in your answer and we will look at it. Let me reiterate, this **ONLY** applies if the question is missing information, so it is important that you read the question closely. 4. **Submit the PDF document to the Blackboard submission portal.** The document uploaded to Blackboard is what we will grade. 5. Please ensure the document is 1.5 line spaced with size 12 type and with 1” (2.54 cm) margins. **Note:** Uploading hand-written answers will attract a penalty of 25% of the score you receive for this piece of assessment (See ECP). 6. Your answers to questions should be presented sequentially (i.e., Question 1 is followed by Question 2 and so on). 7. Clearly indicate the question being answered. For example, Question 1 (a), Question 1 (b) and so on. 8. SAVE your work regularly as you are doing the exam. 9. **Only ONE submission of exam is allowed,** so ensure that you are uploading the FINAL version of your answers. Course personnel do

	NOT have the ability to override your Blackboard submission, so pay attention to what you are uploading.
Assessment extension	Please begin your assessment as soon as possible within the available window. However, if you become unwell or experience exceptional circumstances while completing this assessment then submit an **extension request before the due date/time:**.https://my.uq.edu.au/information-and-services/manage-my-program/exams-and-assessment/applying-extension
Who to contact	Should you have any issues about the assessment task, you should contact the course coordinator Dr Vanitha Ragunathan: v.ragunathan@business.uq.edu.au. If you experience any **technical difficulties** during the assessment task, contact the Library AskUs service for advice. You should also ask for an email documenting the advice provided so you can provide this to the course coordinator immediately at v.ragunathan@business.uq.edu.au
Important assessment condition information	The normal academic integrity rules apply to this assessment task. • You cannot cut-and-paste material other than your own work as answers. • You are not permitted to consult any other person – whether directly, online, or through any other means – about any aspect of this assessment during the period that this assessment is available. If it is found that you have given or sought outside assistance with this assessment, then that will be deemed to be cheating and will result in disciplinary action. By undertaking this online assessment you will be deemed to have acknowledged UQ's academic integrity pledge to have made the following declaration: *"I certify that my submitted answers are entirely my own work and that I have neither given nor received any unauthorised assistance on this assessment item"*. If you submit your assessment late, penalties will be applied.

Question 1 Part A – FIVE Multiple-Choice Questions (5 Questions × 1 point = 5 points)

INSTRUCTION: Choose the option that you feel is the best answer.

Question I

Dell computer has a £1 million receivable that it expects to collect in one year. Suppose the interest rate on pounds is 15%. How could Dell protect this receivable using a money market hedge? **(1)**

(a) borrow £1 million today

(b) lend £1 million today

(c) borrow £869,565 today

(d) lend £986,754 today

Question II

An Australian firm that sources inputs, manufactures and sells its products in Australia **(1)**

(a) Faces no operating exposure, since its customer are Australian citizens

(b) Faces operating exposure if a foreign company operates in the same Australian market

(c) Faces no transaction exposure

(d) All of the above

(e) Both (b) and (c)

Question III

International diversification provides a better risk-return trade-off than does investing solely in Australian securities primarily because. **(1)**

(a) many foreign industries don't exist in Australia

(b) there are many more securities to choose from overseas

(c) the economic cycles of nations are not perfectly in phase

(d) none of the above

(e) (a) and (b) only

Question IV

Nomura wants to expand its lending operations in Australia, but to do so it needs to raise more long-term debt capital to help finance these loans. Currently long-term interest rates are 6% in Australia and 4.3% in Japan. What would you recommend Sumitomo do? **(1)**

(a) Raise yen in Japan because of the lower cost of money

(b) Raise yen in Japan because Japanese investors are more patient than Australian investors

(c) Raise dollars in Australia to avoid depressing Japanese stocks

(d) Raise dollars in Australia to hedge against currency risk.

Question V

An Australian firm has to make a large payment denominated in Israeli Shekel in two years. To hedge this exposure, it can **(1)**

(a) Issue bonds that pay interest in the Israeli Shekel

(b) Go short with forward contracts for a currency that is highly correlated to the Shekel relative to the dollar

(c) Buy call options for a currency that is highly correlated with the Shekel relative to the dollar

(d) All of the above

(e) None of the above

Question 1. PART B (5 points; Max 200 words)

The Swedish Steel Company has debt of 100,000 Euros, which becomes due in 12 months. The company's financial controller, Freja Doe, is having trouble sleeping at night knowing that the debt is unhedged. Sweden's currency is the Krona (Kr). The current Kr/Euro exchange rate is 20, and the per annum interest rates are 21 percent on Krona and 10 percent on the Euro. Freja is considering a forward hedge. However, a friend tells her that he recently bought a call on 100,000 Euros with strike price of 20 and is willing to sell the call option to her at the historic cost of 1 Kr per Euro or Kr 100,000 for the total contract. What should she do? Show your workings.

Question 2. PART A (5 points)

Suppose you live in a world with three islands and where currencies are unknown. Each island is specialized in mining a precious or rare earth metal that is the commodity used for transaction on each of those islands. Island one (I1) mines rhodium (R); island two (I2) mines Silver (S), and island three (I3) mines Gold (G). There exists a network of three precious metal dealers, D1, D2, and D3, with each one making a market in one of these metals with prices quoted per ounce.

a. Suppose dealer D1 is currently quoting to exchange 1.4260oz of rhodium per ounce of gold, and dealer D2 is exchanging 1.6230oz of silver per ounce of gold. Using only those two dealers, how many ounces of silver do you need to receive one ounce of rhodium? **(1)**

b. Suppose dealer D3 is quoting you to exchange 1.1250oz of silver for one ounce of rhodium. Given this quote and neglecting transaction costs would you say that there is an arbitrage opportunity? What would be the direct quote that excludes any arbitrage? **(1)**

c. Let us add some real-world complexity and assume that there are transactions costs involved if you were to exchange one precious metal for another. If you buy silver with rhodium you need to pay 0.005oz of silver as transaction cost. If you buy gold with silver you will need to pay 1.628oz of silver per ounce of gold. And finally, if you buy rhodium with gold you will only get 1.421oz of rhodium per ounce of gold. Suppose you start out with one ounce of rhodium and you follow the arbitrage strategy to first exchange rhodium for silver, then silver for gold and finally gold for rhodium. What is the amount of rhodium you end up with if you take transaction cost into account. **(3)**

Question 2. PART B (5 points; Max 200 words)

The following tables contain information on Swiss Franc/Singapore dollar exchange rate and their interest rates:

Currency	Spot	1 Month	3 Months	6 Months	12 Months
CHF/SGD	6.6575/625	73/86	263/296	505/590	1194/1351

Currency	1 Month	3 Months	6 Months	12 Months
SGD	5.6785-5.8125	5.5000-5.6250	5.5000-5.6250	5.6250-5.7500
CHF	7.1250-7.2500	7.1875-7.3125	7.1875-7.3125	7.2500-7.3750

Consider the 12-month premium/discount and the relevant interest rates. Is there way to make arbitrage profits? If yes, explain the strategy. Assume you have CHF 10m to work with.

Question 3. (15 points)

State-owned Norwegian telecommunication firm BaneTele (BT) is to be privatized via an initial public offering (IPO). The planned IPO will involve selling 500 million new shares representing a 17% stake in BT. The global coordinators for the IPO are UBS, Goldman Sachs and Macquarie Bank of Australia. The announcement of the final share price is expected to be made in early April of 2024. The stock will start trading on April 22nd in Oslo and New York, the next day in Sydney.

BT's CEO Lars Thorwald is sweating on the pricing of the IPO. When he took the position as CEO, it was clear that BT's privatization would be a challenge. BT is expected will lose its monopoly on land lines and the growing threat from 5G and deregulation that could attract competition. The exact nature of the future regulatory environment is highly uncertain.

BT has 3 million subscribers and sales reached Krone (NOK) 16.1 billion. Currently, BT derives 95% of its revenues from sales in Norway. Virtually all costs are in NOK. Mr. Thorwald plans to increase revenue from foreign sources to 20% by the year 2030. To position BT for future international expansion, BT together with France Telecom acquired a 10% stake in Telstra of Australia. BT and France Telecom each paid $1.8 billion for 5% of Telstra.

BT, following privatisation, will list on multiple exchanges, and will now have to pay income tax though, it no longer has to pay for losses of other government owned entities. Furthermore, Mr. Thorwald needs the fresh capital to start paying off BT's considerable debt. The debt of BT is currently estimated to be NOK 100 billion at market value.

The IPO is the first tranche (slice) that will be sold to the public. It is expected that a second equally large tranche will be offered in 2026, followed by the sale of the government's majority stake in the company.

Despite the volatility in the markets, other national telecommunication firms in Europe have either recently raised capital or are contemplating listing on exchanges.

The IPO will be global. An estimated 50% of the issue will be sold in Norway, and the rest will be distributed in Europe (20%), US (20%), and Asia & Oceania (10%). Norwegian institutional demand is secured since BT's shares will represent and estimated 8-10% of the Oslo Bors All-share index. To generate interest from Norwegian retail investors. BT has spent more than NOK 40 million on advertising. An extensive roadshow is going on right now to drum up sufficient demand from foreign institutions.

Below are recent analysts' projections for BT earnings and other relevant data.

BaneTele Pro Forma (NOK billions)							
	2022	2023	2024e	2025e	2026e	2027e	2028e
Sales Growth	0.2	3.3	0.9	1.8	1.4	4.5	7.4
EBIT	5.9	6.3	5.0	5.5	2.2	7.5	13.0
Interest Expense	3.5	3.5	4.5	4.5	4.5	4.5	4.5
Earnings before tax	2.4	2.8	0.5	1.0	-2.3	3.0	8.5
Taxes (30%)	0.7	0.8	0.2	0.3	-0.7	0.9	2.6
Earnings after tax	1.7	2.0	0.4	0.7	-1.6	2.1	6.0
Depreciation	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Capital Expenditure	2.0	1.1	1.1	1.1	1.1	1.1	1.1
Free Cash Flow	0.7	1.9	0.3	0.6	-1.7	2.0	5.9
PV @ 11%				0.5	-1.4	1.5	3.9
NPV			4.5				
Terminal Value		51.6	60.8	73.6	92.9		
Growth rate		4%	5%	6%	7%		
Spot NOK/$			1.56				
Forward NOK/$				1.55	1.53	1.52	1.50
NOK Interest (%)			5	5	5	5	5
$ Interest (%)			6	6	6	6	6
NOK Risk Premium (%)			6	6	6	6	6
$ Risk Premium (%)			7	7	7	7	7

(a) Mr. Thorwald needs your input on the price-range for the roadshow. He strongly believes that this should be based on DCF analysis. What NOK price-range would you recommend based on the pro forma above? You may assume that the price should reflect the DCF as of 31/12/2024 and that all cash flows arrive at the end of each calendar year. Please clearly state and motivate additional assumptions you make for your analysis. **(7)**

(b) Colonial Asset Management (CAM) calls you up and wants you to tell them what they should be willing to pay for BT's ASX listed shares. The manager for CAM's European Index portfolio is adamant that the valuation should be made based on DCF analysis. She tells you that based on recent historical data, the correlation between the Norwegian and the Australian stock market is 0.75 and that the annualized standard deviation of returns in Norway is 0.18 and in the Australia is 0.15. Should you simply send them the one you did for Thorwald and be done with it? Why? Why not? **(5)**

(c) What three major risks would you suggest should be disclosed in the IPO prospectus? **(3; Max 100 words)**

Question 4. Part A (7 points)

An Australian firm exports machinery to Korea at the price of 200,000 Korean won. This amount is however paid to the Australian firm only after six months. The Australian firm wishes to cover its exchange rate exposure. Using the information below, calculate its strategy of obtaining a forward contract or money market hedge will be equivalent. If not, which instrument will guarantee a higher dollar value at the end of six months. Explain how you would perform the forward contract and money market hedge. **(7)**

Spot Rate: 3 won/$	Six-month forward rate: 3.5 won/$
Korean won interest rate: 41.64% *p.a.*	Australian dollar interest rate: 4.04% *p.a.*

Question 4. Part B (5 points)

Suppose it is the end of 2023. *High on the Hog*, an Australian hospitality firm, is planning to sell the subsidiary it owns in Chile in two years. Given projections about the state of the economy, projected revenues and costs, the expected sale price is 50 million pesos. Chile has a currency board and its currency is trading at 1 peso per Australian dollar. However, your banker informs you that economists at his bank estimate the probability the currency board will collapse at 20%. Should it collapse, economists expect a devaluation of the local currency against the dollar of 25%. Furthermore, political risk analysts at ICRG contend that there is a 10% chance of complete expropriation in the event of the currency board collapsing. What is the maximum price that *High on the Hog* can hope to receive from the sale? **(5)**

Question 4. Part C (3 points; Max 100 words)

In your role as an advisor to the CFO of Watermelon Technologies you have been asked to write a report on why hedging might reduce agency costs. While you have no problems convincing him that bondholders would prefer the firm hedge exchange rate risk, what arguments would you put forward to persuade him that he has a personal stake in the decision as well? **(3)**

END OF EXAM.