UNIVERSITY OF SWAZILAND

DEPARTMENT OF ACCOUNTING AND FINANCE

SUPPLEMENTARY EXAMINATION PAPER JULY 2018

PROGRAMME	:	Bachelor of Commerce
YEAR OF STUDY	:	Year 4 (Full Time/Part Time)
TITLE OF PAPER	:	ADVANCED BUSINESS FINANCE
COURSE CODE	:	AC428/ AC513 (S) JULY 2018
TOTAL MARKS	:	100 MARKS
TIME ALLOWED	:	THREE (3) HOURS

INSTRUCTIONS	1	This paper consists of __6__ numbered pages, including this page and Appendix A which contains useful formulae.
	2.	There are five (4) questions, ANSWER all.
	2	Begin the solution to each question on a new page.
	3	The marks awarded for a question are indicated at the end of each question.
	4	Show all the necessary workings.
	5	Round off all prices to the nearest cent, values to the nearest rand and decimalized interest rates to four decimal places, and decimalized weightings to four decimals.

Note: You are reminded that in assessing your work, account will be taken of accuracy of the language and general quality of expression, together with layout and presentation of your answer.

THIS PAPER MUST NOT BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR OR SUPERVISOR.

Question 1   **25 marks**

Whatsfun Investment Limited (WIL) has obtained the following information from American National Bank:

$/€	1.1867
$/¥	0.0093

Annualised interest rates (in %) are as follows:

in $	12
in €	8
in ¥	5

Required:

(a) State whether the exchange rates above are quoted in direct or indirect terms, and explain your answer.

(2 marks)

(b) Calculate the relevant three-month ¥/$ forward rate and briefly explain the theory used in computing the three-month forward rate.

(4 marks)

(c) Assuming that WIL has just received ¥ 5 000 000 from a Japanese exporter, calculate the value of this receipt in Euros (€).

(6 marks)

(d) ABC bank is quoting €0.0077/¥1. Using the $/€ and $/¥ from American National Bank, calculate how WIL could exploit a potential arbitrage opportunity if it has €1 000 000.

(6 marks)

(e) Assuming that WIL can borrow $1 million, a 360 days or one-year forward $/¥ rate is 0.0101 and WIL wants to exploit this forward rate and interest rates given;

     i)   Compute the profits from covered interest arbitrage (CIA) explaining the different stages.

(7 marks)

Question 20   25 marks

Unlimited Soccer Fun, a German company, is evaluating a proposed expansion of an existing subsidiary located in Eswatini. The cost of the expansion would be E27 million. The cash flows from the project would be E7.5 million per year for the next 5 years.

The following information has been obtained from Germany Reserve Bank:

	Interest Rate
Eswatini	7%
Germany	8%

	Exchange Rate
Emalangeni/Euro	1.48000

Unlimited Soccer Fun uses a cost of capital of 11.95% for SADC region-based projects.

Required:

Using the home currency approach, calculate whether Unlimited Soccer Fun should proceed with this project or not.

Question 3 (25 marks)

Blue Jet Computers is working on acquiring a rapid growth software company, USB Corporation.

USB Corporation has 10 million shares in issue with a total market value of E130 000 000, and an equity beta of 1.5.

Post-acquisition, Blue Jet Computers expect USB to start generating <u>positive</u> incremental after-tax cash flows of E10 million at the end of the fourth year. These positive cash flows should grow at a rate of 25 percent per year during years 5 and 6, and at a constant rate of 10 percent per year thereafter.

If the acquisition goes ahead, Blue Jet Computers will increase USB's debt ratio from 0.45 to 0.65, and this increase will provide an annual perpetual interest tax shield of E1 500 000. The applicable cost of debt is 10%.

The expected return on the market is 12% and the risk free rate is 7%. The corporate tax rate, payable by both companies, is 30%.

Blue Jet Computers has 60 million shares and each share is currently trading at E12 each.

Required:

(a) Calculate the discount rate Blue Jet Computers should use in valuing USB's incremental cash flows.

(6 marks)

(b) Calculate the value of the incremental after-tax cash flows and the interest tax shield of acquiring Microchip.

(6 marks)

(c) Calculate the maximum cash price that Blue Jet Computers would be willing to offer for each USB share.

(6 marks)

(d) If Blue Jet Computers decides to offer R180 million worth of newly-issued shares in the post-merger company instead of cash, calculate the exchange ratio that should be offered to USB's shareholders.

(7 marks)

Question 4   30 marks

You have just been hired as the financial manager of a private company; Maximillan Publishers Ltd is a newspaper printing company. The company is considering investing in equipment which it can either lease or purchase.

- Purchase: The new equipment will cost E600 000 and will be depreciated using the straight-line method over its three year lifespan and the expected residual value at the end of 3 years is E150 000.

- Lease: The company is required to make annual lease payments of R250 000 per year, payable in advance over 3 years. The tax deduction relating to the lease payments will occur one year after each lease payment. The lessee will pay maintenance and insurance costs. At the end of the three-year period, Maximillan Publishers Ltd will exercise their option to purchase the machine for R75 000.

Whether the printing press is leased or purchased it will cost the company E30 000 per year through maintenance and insurance costs.

The tax rate is 30%. The company's cost of capital is 12%, whilst the pre-tax cost of debt is 10%.

Required:

Advise the company whether to lease or purchase the equipment.

- $R_E = \dfrac{D_0\,(1+g)}{P_0} + g$

- $R_P = \dfrac{D}{P_0}$

- $R_E = R_F + \beta_E \times (R_M - R_F)$

- Bond value $= C \times \dfrac{1 - 1/(1+r)^t}{r} + F/(1+r)^t$

- WACC $= \left(\dfrac{E}{V} \times R_E\right) + \left(\dfrac{P}{V} \times R_P\right) + \left(\dfrac{D}{V} \times R_D \times (1 - T_c)\right)$

- $\beta_{EQUITY} = \beta_{ASSET} \times \left(1 + \left((1 - T_C) \times \dfrac{Debt}{Equity}\right)\right)$

- $\beta_{ASSET} = \dfrac{\beta_{EQUITY}}{1 + [(1 - T_C)(D/E)]}$

- $R_E = R_U + (R_U - R_D)D/E(1 - Tc)$

- $(1 + R) = (1 + r) \times (1 + h)$

- $F_t = S_0 \times (1 + (r^* - r))^t$

- $F_t = E(S_t)$

- $E(S_t) = S_0 \times (1 + (h^* - h))^t$

- $P_{t-1} = \dfrac{D_t}{k_e - g}$

- P/E ratio $=$ Market price per share / Earnings per share

- $\alpha = \dfrac{\text{No. of new shares issued}}{\text{No. of old shares} + \text{No. of new shares issued}}$