



# **AFRICAN ECONOMIC RESEARCH CONSORTIUM**

## **Collaborative Masters Programme in Economics for Anglophone Africa (Except Nigeria)**

### **JOINT FACILITY FOR ELECTIVES (JFE) 2019 JUNE - SEPTEMBER**

#### **FINANCIL ECONOMICS II**

##### **Second Semester: Final Examination**

**Duration: 3 Hours**

**Date: Monday, September 23, 2019**

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#### **INSTRUCTIONS:**

1. There are **FIVE** questions in this examination.
  2. You are required to answer **ANY THREE** questions.
  3. All questions carry equal marks.
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#### **Question 1: [20 Marks]**

- (a) The spot exchange rate for the Canadian dollar (relative to the US dollar) is Can\$1.26 and the six-month forward rate is Can\$1.22.
- (i) Which is worth more, a US dollar or a Canadian dollar? **(3 Marks)**
  - (ii) Assuming absolute PPP holds, what is the cost in the United States of a Beverwyck beer if the price in Canada is Can\$2.19? Why might the beer actually sell at a different price in the United States? **(3 Marks)**
  - (iii) Is the U.S. dollar selling at a premium or a discount relative to the Canadian dollar? **(3 Marks)**
  - (iv) Which currency is expected to appreciate in value? **(3 Marks)**
- (b) Explain whether, in your opinion, exchange rate changes are necessarily good or bad for a particular company. **(2 Marks)**
- (c) Suppose the Canadian spot exchange rate is 1.4680 Canadian dollars per U.S. dollar. U.S. inflation is expected to be 3% per year and Canadian inflation is expected to be 2%.
- (i) Do you expect the U.S. dollar to appreciate or depreciate relative to the Canadian dollar? **(3 Marks)**
  - (ii) What is the expected exchange in one year? **(3 Marks)**



### Question 2: [20 Marks]

- (a) Duncan Ltd. has a market value of £900 million and 30 million shares outstanding. Edwin's Hyper Market has a market value of £400 million and 20 million shares outstanding. Duncan is contemplating acquiring Edwin's. Duncan's Chief Financial Officer concludes that the combined firm with synergy will be worth £1.5 billion, and Edwin's can be acquired at a premium of £200 million.
- (i) If Duncan offers 15 million shares of its stock in exchange for the 20 million shares of Edwin's, determine what the stock price of Duncan will be after the acquisition. **(4 Marks)**
- (ii) Find out the exchange ratio between the two stocks that would make the value of stock offer equivalent to a cash offer of £500 million. **(4 Marks)**
- (b) Explain what is meant by 'Bootstrap effect' in mergers and acquisitions. How does it occur? **(3 Marks)**
- (c) Budweiser Breweries is a large multinational company with a total market value of US\$ 20 million. The company has 100,000 of its shares in circulation, each priced at US\$ 200. Per latest income statement, total earnings are US\$ 1 million, hence earnings per share are US\$ 10. The income statement for Kenya Breweries for the same period shows that Kenya Breweries has total earnings similar to Budweiser Breweries. Kenya Breweries also has 100,000 shares outstanding, but these are priced at US\$ 100 each. Budweiser is acquiring Kenya Breweries by exchanging each of its shares for 2 Kenya Breweries shares. Some of the less smart investors believe that the current growth opportunities of Budweiser Breweries will continue after the acquisition; hence maintain the current price-to-earnings ratio.
- (i) Determine the current price-to-earnings ratios for Budweiser Breweries and Kenya Breweries. **(2 Marks)**
- (ii) Explain how the Bootstrap effect affects valuation of the post-acquisition company, in the eyes of the not-so-smart investors. Show what the share price and total value of the company will be. **(4 Marks)**
- (iii) Suppose the investors are smart, what will be their valuation of the post-acquisition company? What will they consider to be the price-to-earnings ratio? **(3 Marks)**

### Question 3: [20 Marks]

- (a) Explain the concept of house money. Why is the house money concept such a common behavior for so many individuals and why is it an irrational behavior? **(5 Marks)**
- (b) Explain 'mental accounting' in relation to behavioural finance. **(5 Marks)**
- (c) Consider the following two investments: Investment 1 is in the shares of Nigel Enterprises which were purchased one year ago for \$40 per share. Those same shares are valued today at \$20 each. Investment 2 is in the shares of Lingo Company, also purchased last year at



\$5 per share. The shares are also trading today at \$20 each. For each of the two shares you can either sell it or hold on to it. You are considering a new investment in Nigel Enterprises.

Assume that you think and behave rationally relative to the current price of Nigel shares, and that you do not suffer from loss aversion. Describe your actions on the Nigel shares. Will you sell or keep the shares? Explain. **(10 Marks)**

#### **Question 4: [20 Marks]**

- (a) Stima Company is considering a \$50 million project in its power systems division. Tom Mangi, the company's Chief Financial Officer, has evaluated the project and determined that the project's unlevered cash flows will be \$3.5 million per year in perpetuity. Mr. Mangi has devised two possibilities for raising the initial investment: issuing 10-year bonds or issuing common stock. Stima's pretax cost of debt is 7.2 percent, and its cost of equity is 10.9 percent. The company's target debt-to-value ratio is 80 percent. The project has the same risk as Stima's existing businesses, and it will support the same amount of debt. Stima is in the 34 percent tax bracket.

Advise whether Stima should accept the project. **(10 Marks)**

- (b) Explain 'adverse selection' and 'moral hazard' as they apply in the insurance business and explain what causes them to exist. What are the problems that can affect an insurance provider, and how does the insurer mitigate against those problems? **(10 Marks)**

#### **Question 5: [20 Marks]**

- (a) Carefully discuss, citing the appropriate theory, the significance of corporate governance to financial institutions in developing economies. What is the principle role of the board of directors to such institutions? Critically discuss three board characteristics and their stated impact on performance of banks in developing economies. **(8 Marks)**
- (b) Risk refers to any event that can prevent a business from achieving its goals and objectives. This gives rise to a need to manage risk.
- (i) Explain, citing one example for each, the three sources of risk.
- (ii) Describe in a precise manner the following three risks that apply to financial institutions: (1) liquidity risk; (2) insolvency risk; and (3) off-balance sheet risk. For each of the risks indicate any one cause and any one mitigation measure for the risks. **(12 Marks)**