



UNIVERSITY OF COLOMBO, SRI LANKA
FACULTY OF MANAGEMENT AND FINANCE

Master of Business Administration (Weekday) Programme - 2015/2017

(Semester III First Half) Examination – March, 2017

MBAFI 611 - Financial Markets

Three (03) Hours

ANSWER 5 QUESTIONS

Question 1 and 2 relate to the extracts from the two articles provided below

Article 1: US treasury official in town to advice on G-sec auctions (*Daily Mirror; Dec 01, 2016*): An official from the US Treasury is now in town to advise the CBSL on improving the G-sec market and its auction process among other things, according to CBSL Governor Dr. Indrajit Coomaraswamy. Despite overhauling the G-sec market operations, CBSL will operate a hybrid system of competitive and non-competitive bidding as the level of market development is not sufficient to have a pure auction system. The credibility of Sri Lanka's G-sec auctions was shattered in at least in two instances this year and the previous year as charges of auction rigging surfaced, which allegedly had allowed a connected party to the former Central Bank governor to make thumping gains. In a bid to enhance transparency, in July, CBSL decided to hold pre-bid meetings with all primary dealers to inform relevant information regarding forthcoming auctions. "So, the same information will be available to all primary dealers as a result of these pre-bid meetings," Dr. Coomaraswamy said.

Article 2: Sri Lanka plans Treasury auctions with non-competitive bids (*Economynext; Nov 30, 2016*): CBSL officials said investors who submit non-competitive bids will be allocated at the 'weighted average' yield, seemingly indicating that the new auctions also involve multiple price auctions. Sri Lanka's Treasuries sales was for years manipulated with 'private placements', selling 'on tap' at mandated rates, issuing illiquid securities which could not be traded, and large scale purchases of securities with printed money.

1. Answer the following questions based on the two articles provided in Page 1.

- i. Compare and contrast in detail the auction process carried out in the US and in Sri Lanka (05 Marks)
- ii. Critically analyse at least one advantage and one disadvantage of the proposed new measures to the auction process (compared to the existing auction process in Sri Lanka) (03 Marks)
- iii. Why is it important to regulate financial markets? (Discuss at least two main reasons) (04 Marks)
- iv. Explain the role of a market maker. Are primary dealers market makers? Why or why not?(04 Marks)
- v. Why is it important to have a well-functioning financial market? Discuss how adverse practices alluded to in the articles above may cause to reduce the efficiency of the financial system. (04 Marks)

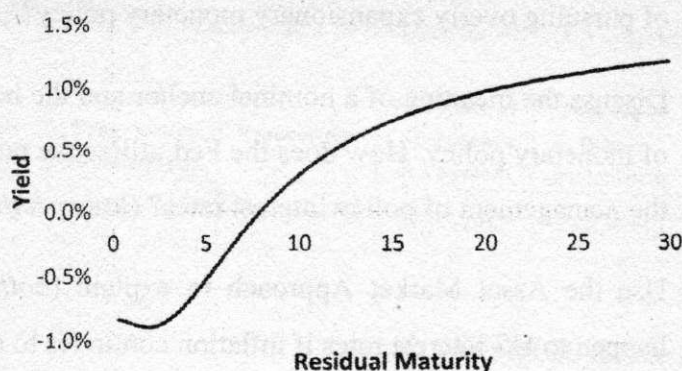
(Total 20 marks)

2. Questions ii and iii are based on Article 1 provided in Page 1.

- i. Utilizing the equation for asset returns derive and explain how “current prices in a financial market will be set so that the optimal forecast of a security’s return using all available information equals the security’s equilibrium return”. (04 Marks)
- ii. Briefly discuss the three forms of efficient markets. Article 1 alludes to a violation of EMH. Identify the violation and explain under which form(s) of EMH such a violation could occur. (04 Marks)
- iii. Article 1 indicates CBSL commenced holding pre-bid meetings to alleviate the violation referred to in ‘ii’ above. Are these actions in line with what EMH implies regarding the dissemination of information among market participants? Why or why not? (04 Marks)

iv. With regard to market efficiency, what is meant by the term "anomaly"? List three examples of market anomalies and explain why each is considered to be an anomaly (04 Marks)

v. The following shows the euro area yield curve including all euro area central government bonds as at February 23, 2017. Interpret what you expect would happen to short term interest rates in the Euro Zone going forward. What is the theory you have utilized for your analysis?



(04 Marks)

(Total 20 marks)

3. The articles below discuss the recent ongoing debates regarding independence of Central Banks:

Sri Lanka central bank independence; time for Treasury representation to end (Economynext; Dec 22, 2016): Sri Lanka's central bank should be reformed to insulate it from political meddling and the time has come to end finance ministry representation in its governing board, a top economist said amid concerns over threats to its independence. Under Sri Lanka's existing monetary law, the Secretary of the finance ministry is automatically a member of the monetary board. In the past, secretaries have been blamed for effectively 'vetoing' potential rate hikes and forcing the Central Bank to buy up Treasury bills with printed money to keep interest rates down.

Yellen defends Fed independence, banking regulations (Associated Press; Feb16, 2017): Fed chair Janet Yellen defended the central bank's independence from Republican lawmakers who are pushing for major changes in how the Fed operates and how regulators oversee the nation's banking system. During a hearing that stretched over four hours, Republican lawmakers repeatedly challenged Yellen's handling of the economy. *Defending the position*, Yellen indicated that on monetary policy the Fed, which has implemented two 0.25% interest rate hikes over the past two years, is likely to accelerate increases this year if the labor market remains healthy and inflation continues to move toward the Fed's 2% target.

- i. What are the arguments **for** and **against** an independent Central Bank? (04 Marks)
- ii. Is it correct to state that "an independent Central Bank leaves it completely unaccountable for its actions"? Explain your answer. (03 Marks)

- iii. Explain the time inconsistency problem and discuss how the Sri Lankan example provided above describes a time inconsistency trap. Why would a central bank fall into the time-inconsistency trap of pursuing overly expansionary monetary policy? (04 Marks)
- iv. Discuss the meaning of a nominal anchor and the benefits of using a nominal anchor for the conduct of monetary policy. How does the Fed utilize the nominal anchor in deciding the course of action for the management of policy interest rates? (*use specific examples from above*) (04 Marks)
- v. Use the Asset Market Approach to explain (*both diagrammatically and in words*) what would happen to US interest rates if inflation continues to move up (*clearly label diagrams*)? (05 Marks)

(Total 20 marks)

4. i. On December 2016, the Federal Reserve increased the target fed funds rate from a range of 0.25% - 0.5% to a range of 0.5% - 0.75%. The following statement was issued by the Fed regarding the implementation of the policy: "The Open Market Trading Desk at the New York Fed, effective December 15, 2016, would undertake open market operations as necessary to maintain the federal funds rate in a target range of $\frac{1}{2}$ to $\frac{3}{4}$ percent, including overnight repurchase operations. It is anticipated that around \$2 trillion of Treasury securities will be available for overnight repo operations to fulfil the domestic policy directive."
 - a. Explain the mechanics underlying an overnight repo operation. Does a repo transaction replicate an open market purchase or sale? (02 Marks)
 - b. Show the impact of the actions of the Fed's Open Market Trading Desk on the Balance Sheets of the Fed, Commercial Banks in the US and the General Public. (06 Marks)
 - c. Explain the terms Fed Funds Rate and Discount Rate. Describing the general characteristics of Fed Funds explain why it is categorized as a money market instrument. What is the equivalent instrument available in Sri Lanka? (04 Marks)
 - d. Utilizing the Demand Supply analysis for the market for Reserves explain (*both diagrammatically and in words*) how the measures taken by the Open Market Trading Desk resulted in increasing the equilibrium fed funds rate after the rate hike announcement. *Assume the average fed funds rate at equilibrium both before and after the announcement (as relevant). The Discount Rate is 1.25%.* (05 Marks)

- ii. On February 20, 2017 two way quotes were available for the shares and rights of Pan Asia Bank at were Rs. 15.50 – 15.60 and Rs. 0.90 – 1.00 respectively. Would you prefer to purchase the share or the rights? Explain your rationale (*Details regarding the rights issue are provided below*). (03 Marks)

Company	Proportion	EGM/ Prov. Allotment	XR Date	Dispatch of Prov. Letter of Allotment	Renunciation	Last date of Acceptance & Payment	Trading of Rights commences
Pan Asia Banking Corporation PLC	01 for 02	31-01-2017	01-02-2017	06-02-2017	20-02-2017	21-02-2017	13-02-2017
Issue Price: Rs. 14.00; To Fund Bank's growth plans							

(Total 20 marks)

5. i. The following extracts are from the Prospectus of the Vallibel Finance Debenture Issue in March 2015. The debentures carry a par value of Rs. 100.00.

Issuer	Vallibel Finance PLC
Type of Debt Security/ Debenture	Rated, Guaranteed, Subordinated, Redeemable Debentures
Interest Rates / Tenor	10.25% payable semi-annually (31 March and 30 September) over 5 years
Issuer Rating	BBB-
Issue Rating	AA
Guarantee	Hatton National Bank PLC has guaranteed the Principal Sum and two Interest payments of the Debentures up to a sum of LKR 1,102,500,000/-

- a. Explain the meaning of the terms guaranteed and subordinated (02 Marks)
- b. What is the difference between an Issuer Rating and an Issue Rating? Provide specific examples from above as to why the two ratings differ in the above debenture? (03 Marks)

On Thursday, March 02, 2017 a two-way quote is available in the Colombo Stock Exchange for the above debenture at Rs. 97.00 – 105.00. An investor places a limit buy order at Rs. 95.00 for 10,000 debentures to be settled on SPOT basis. The transaction is executed during the day.

- c. Distinguish between a limit buy order and a market buy order and use the above example to explain at what price a trade would be carried out under each circumstance. (03 Marks)
- d. What is the clean price, accrued interest and total cost to the above investor? (03 Marks)

- e. Assume the investor partially financed the purchase of the debentures through a margin loan. If the initial margin is 55% and maintenance margin is 50%, how far can the price fall before the investor receives a margin call? *(for ease of calculation ignore accrued interest and only consider market movements of the clean price)* (04 Marks)
- ii. Proposals for Sri Lanka's Budget 2017 include removing the present exemption on taxes on interest received from listed debt securities. Currently listed debentures are exempt from corporate or income taxes. Use the Asset market approach, to explain *(both diagrammatically and in words)* how the risk premium of listed debt securities would be impacted due to the new proposals? (05 Marks)

(Total 20 marks)

6. i. Calculate the total cash outflow of a commercial paper with 182 days to maturity and having a yield of 13.5% (face value Rs. 1,500 mn). As per market norms with-holding taxes are payable upfront at the inception of the transaction (04 Marks)

ii. **Journal of Business Ethics, 2005:** On Sep 03, 2003, New York Attorney General (AG) Elliot Spitzer revealed that his office had "obtained evidence of widespread illegal **late trading** schemes that potentially cost mutual (*unit trust*) fund shareholders billions of dollars annually." The investigation initially focused on the activities of hedge fund Canary Capital Partners and four mutual funds with which it had formal trading agreements. By Dec 2004, the SEC and several state AGs' have formally indicted or investigated at least 25 mutual funds with settlements totalling over \$3.1 bn in fines and compensation.

- i. What is late trading in the context of mutual funds? Explain why the paragraph above alleges that this practice "potentially cost mutual fund shareholders billions of dollars annually" (04 Marks)
- ii. Compare and contrast the similarities and differences between a hedge fund and a mutual fund. Explain what you believe may be the motivation for a hedge fund to engage in late trading practices. What is the motivation for a mutual fund? (04 Marks)
- iii. **Daily FT; Nov 08, 2016:** Emerald Sri Lanka Fund (established Dec 2014), a dedicated Rs. 6.5 bn private equity entity managed by NDB Zephyr Partners, has earmarked five year funds to grow local emerging businesses in a venture capital takeoff. Jointly owned by NDB Capital Holdings and Zephyr Management, Emerald Fund's investors include IFC, DEG, FMO and

other private sector participants. On Oct 2016, the Fund invested Rs. 158 mn, in Cleanline Linen Management to support its operations.

- i. Draw the structure of how a private equity fund operates and explain how the key parties of the Emerald Sri Lanka Fund highlighted above relate to the structure. (04 Marks)
- ii. Using specific examples from the paragraph above explain the terms general partner, limited partner and draw down as it relates to private equity. (04 Marks)

(Total 20 marks)

7. i. **Extracts from the HDFC Annual Report 2005:** HDFC Bank raised Rs.500 mn by way of Mortgage Backed Securitizations, for the first time in the housing finance market in Sri Lanka. The transaction involved securitization of a pool of 3387 residential mortgages originated by HDFC. Deutsche Bank was used as the Special Purpose Vehicle, and the Trust after acquiring the receivables (which include all mortgage receivables and credit enhancements) issued Pass Through Certificates to investors.

In the context of securitizations, explain the terms originator, Special Purpose Vehicle, credit enhancements and Pass through Certificates. Utilize specific examples from above. (04 Marks)

- ii. The following are extracts from the Prospectus of the IPO of BPPL Holdings:

Invitation to Subscribe for the Initial Public Offering of BPPL Holdings Limited

Through an Offer for Sale of 30,685,000 Existing Ordinary Voting Shares at LKR 12.00 per Share

To be listed on the Diri Savi Board of the Colombo Stock Exchange

Issue Opens on 07th March 2017

- a. Distinguish the difference between an Offer for Sale and Offer for subscription. How much proceeds does the IPO intend to raise for the company? For its shareholders? (03 Marks)
 - b. Is it better if an IPO is fully subscribed, undersubscribed or oversubscribed? Why? (03 Marks)
 - c. Identifying the steps involved, discuss how an investment bank carries out an IPO. (04 Marks)
- iii. The following extract of the Research Report published by the Managers to the Issue of the above IPO: "BPPL's share is priced at LKR 12.00, which is at a 21.5% discount to the median fair value (based on NAV, DCF, PER, PBV based valuation methods) of LKR 15.29."

- a. Why is it that IPOs are generally under-priced providing investors an opportunity to earn abnormal returns? (03 Marks)
- b. According to EMH, investors cannot consistently earn abnormal profit except through luck. Yet according to general practice, buying stocks through an IPO consistently generates abnormal returns for investors. How can this be reconciled with efficient market hypothesis? (03 Marks)

(Total 20 marks)

8. Business Insider (Jan 18, 2017): Just days before taking office, President-elect Donald Trump inflamed international currency markets, telling The Wall Street Journal that the US dollar is "too strong" compared to other global currencies, particularly the Chinese Yuan. "Our companies can't compete with them now because our currency is too strong," Trump said. "And it's killing us."

i. What is the impact of Trump's policy to weaken the US Dollar on each of the following?

- a. Exports from the US
- b. Imports to the US
- c. Returns to foreign investors from investing in US dollar denominated financial assets
- d. Foreign borrowings taken by the US

(08 Marks)

ii. Utilizing the Asset Market Approach for exchange rates, briefly explain (*both diagrammatically and in words*) **how and why** the US Dollar would react against foreign currencies under each of the scenarios below **and state** whether the impact to the US Dollar is in line with the intention of the US president as stated in the Business Insider article on Jan 18th (*Clearly label your diagrams*).

- a. *Reuters (Jan 20)*: In his inaugural speech Trump, promised to put 'America First' and that the US would follow two rules: buy American and hire American (04 Marks)
- b. *Wall Street Journal (Feb 14)*: Federal Reserve Chairwoman Janet Yellen signalled Tuesday that the central bank could consider raising short-term US interest rates at its next policy meeting in March if the economy continues to strengthen as expected. (04 Marks)

- c. *Bloomberg (Jan 18)*: To make good on his election promises, Donald Trump's weapon of choice is imposing (or threatening) stiff tariffs on nations he deems to have an unfair advantage. His biggest targets are China and Mexico. (04 Marks)

(Total 20 marks)
