Institute of Certified Management Accountants of Sri Lanka

Model Paper with effect from May 2019.

Instructions to Candidates

1.Time allowed is **three (3) hours**.
2.Total **100** Marks
3.Answer **four** questions including Question No 01.
5.Candidates are allowed to use non-programmable calculators.
6.The answers should be given in **English Language**.

Subject	Subject Code
Financial Strategy & Valuation (Model Paper)	**(FSV/ SL 2)**

Part I

Question-1(Compulsory)

a. 'Finance for invention and innovation is important for new development priorities in Sri Lanka.' Identify financing sources for such inventions and innovations?

(4 marks)

b. What is the government's role in helping small entrepreneurs? Illustrate with some examples. **(4 marks)**

c. Illustrate different kinds of business organizations in the stages of life cycle model.

(4 marks)

d. What are the firm valuation methods?

(4 marks)

e. IT and internet companies more frequently use multiples to value their companies. Explain briefly showing such multiples. **(4 marks)**

f. Indicate three examples for non-financial multiples **(4 marks)**

g. What are the benefits of outsourcing their business operations? **(4 marks)**

h. What is the meaning of Net Operating Profit Less Adjusted Taxes? **(4 marks)**

i. Company P having shares of 200,000 is planning to acquire Firm Q having shares of 100,000, by exchanging its 1.6 shares for every share of Firm Q. Estimate post-merger number of shares. **(4 marks)**

j. A company recently paid a Rs. 12 dividend per share which is equal to 60% dividend payout. Cost of capital of the company is 12%. Estimate value of the company assuming the company continues forever. **(4 marks)**

(Total 40 marks)

PART II

Answer any Three (3) Questions

Question 02

a. W&A issues a bond with a coupon rate of 5.5% with semi-annual payment and a yield to maturity of 6.32%. The bond matures in 11 years.

i. What is the market price of this bond? **(02 marks)**

ii. What is the current yield of the bond? **(02 marks)**

iii. What is yield to maturity, if yield to maturity is not known? **(02 marks)**

iv. Estimate yield to call, if the issuer can call the bond for face value (Rs. 1,000) in two years. **(02 marks)**

b. Semaneris PLC is a retailer. You are provided the following information for the recent two year period.

	2018 Rs. in million	2019 Rs. in million
Capital expenses	40	48
Working capital	60	70
Interest charges	04	05
Depreciation	20	22
Debt to total capital	40%	40%
No of shares outstanding (million)	10	10

Company's operating profit before depreciation is Rs.125 million for the year 2019. Corporate tax rate is 40%. The company's cots of equity and cost of debt (pre-tax) are 12% and 19% respectively.

Estimate:

a. Free cash flow for 2019 **(04 marks)**

b. Weighted average cost of capital **(04 marks)**

c. Estimate the value per share **(04 marks)**

(Total 20 marks)

<u>Question No 03</u>

a. MARGA management states that they plan to increase the proportion of debt capital in their capital structure. Andy who is CEO of the company is concerned that any changes in capital structure will negatively affect the value of the firm.
To evaluate the potential impact of such a capital structure change on firm's investment, she gathers the information about firms given as follows:

Yield to maturity on debt	8%
Market value of debt	100 million
Number of shares of common stock `	10 million
Market price per share of common stock	Rs. 30/=
Cost of capital if all equity-financed	10.3%
Tax rate	35%

Andy expects that an increase in company financial leverage will increase its costs of debt and equity. Examining the similar companies in the same industry Andy estimates firms' cost of debt and cost of equity at various debt-to-capital ratios, as shown below.

Debt to capital ratio	cost of debt (%)	cost of equity (%)
20	7.7	12.5
30	8.4	13.0
40	9.3	14.0
50	10.4	16.0

Required:

i. Current after tax cost of debt **(04 marks)**

ii. Cost of equity **(04 marks)**

iii. Debt to total capital ratio that would minimize weighted average cost of capital **(04 marks)**

b. The Chalant Company is considering the use of commercial paper to finance a seasonal need for funds. A commercial paper dealer will sell a Rs.25 million issue maturing in 91 days at an annual interest rate of 8.5% (deducted in advance). The fee to the dealer for selling the issue is Rs. 75,000.

Determine Chalant's annual financing cost of this commercial paper issue.

(08 marks)

(Total 20 marks)

<u>Question No 04</u>

a. i. Briefly explain:

a Bird in the hand theory **(02 marks)**

b. residual dividend policy **(02 marks)**

ii. XYZ company is planning to declare Rs. 600,000 as dividend out of Rs. Rs. 1,200,000 earnings.

Required:

a. Estimate dividend payout of the company. **(02 marks)**

b. If the firm is planning to invest in new investment project costing Rs. 900,000, how much of profit should the company pay out as dividend? **(02 marks)**

c. If the firm is planning to invest Rs. 450,000 in investment project while maintaining company capital structure policy of 60% equity and 40% debt, how much of profit should the firm pay out as dividend? **(02 marks)**

b. i. Based on the information given below ascertain the exchange ratio based on Net Assets Value:

	Slice Ltd (Acquirer)	**Maaza Ltd (Target)**
Total Assets	1000 Lacs	500 Lacs
External Liabilities	400 Lacs	200 Lacs

(02 marks)

ii. Small company is being accqired by large company on a shares exchange basis. Data for two companies are as follows:

	Large	**Small**
Profit after tax (Rs.million)	56	21
Number of shares (million)	10	8.4
Earnings per share (Rs)	5.6	2.5
Price earnings ratio (times)	12.5	7.5

The large firm will pay 0.6 of its shares to the shareholders of small for each share held by them.

Required:

a. Pre-merger market value per share. **(02 marks)**

b. Calculate the earnings per share of the surviving firm after the merger **(02 marks)**

c. If the price earnings ratio falls to 10 after the merger, market value per share **(02 marks)**

d. The premium received by the shareholders of small, if small had a market price of a share at Rs. 30. **(02 marks)**

(Total 20 marks)

Question No 5

a. Annual discount on forward Canadian dollars is 3%. The annualized U.S.interest rate is 8%, and the comparable Canadian interest rate is 12%.
How can a U.S trader use covered interest arbitrage to take advantage of this situation? **(5 marks)**

b. A financial manager of Newtech, Sri Lankan company, is planning to sell its newly developed plant in the US. Newtech receives $ 12,000 for each plant sold in the US and want to get the same net proceeds from its export sales.

i. If the exchange rate of US dollar for SLR is 180=$1, what price must Sri Lankan firm charge in Sri Lanka (SLR)? **(5 marks)**

ii. What price will Newtech have to charge in Sri Lanka if the value of the dollar falls to 170 Sri Lankan rupees? **(5 marks)**

c. The annualized yield on 2-year maturity US government bonds is 4%, while the yield on similar maturity Swiss bonds is 5%. The current spot exchange rate between the dollar and the Swiss franc (CHF) is $0.61/CHF.

What is the expected future spot rate for the CHF in 2 years? **(5 marks)**

(Total 20 marks)

Subject	Subject Code
Answers – Financial Strategy & Valuation (Model Paper)	**(FSV/ SL 2)**

Question No 01 (40 Marks)

a. **CEPA innovation fund**

COSTI fellowship fund

Social impact funds

Digital innovation funds by Dialog

Venture funds

Leasing

Bank finance

The venture capitalist

Supply chain financing

b.

- Fostering the growth of entrepreneurial ecosystem (govr policy, regulatory framework, funding and finance, markets, human capital, education and training, mentoring etc)
- Providing tax breaks
- Providing advice
- Guaranteeing loans (in case of mega projects)

c. Life cycle models are similar in their stages in any life cycle. So Industries experience a similar cycle of life. Just as a person is born, grows, matures, and eventually experiences decline and ultimately death. The stages are the same for all industries, yet every industry will experience these stages differently, they will last longer for some and pass quickly for others.

Introduction- ex, sme enterprises

Growth- ex, agri business/transport (Uber, pick me etc)

Maturity- ex, Traditional Rubber product

Decline – ex, traditional farming techniques

Possible exit

d. Enterprise value

Economic Profits

Adjusted Present value

Contingent claim, ex multiples

e. Enterprise value to EBITDA

Enterprise value to EBITA

EV/Revenue

PEG ratio

Mkt cap/BV etc

f. Enterprise value/web hits

Enterprise value/ No of subscribers

Enterprise value/Unique visitors

g. Focus on core business

Acess to technology

Cost savings

Improve internal staff

Customer solution

Improve risk management

h. **Net Operating Profit Less Adjusted Taxes**.

NOPLAT is the earnings before interest and taxes after making the adjustments for taxes. It is a firm's total operating profit after the adjustments for taxes. It shows the profits that are generated from the core operations of a company after making the deductions of income taxes which are related to the company's core business operations.

i. New shares to be issued to target = Exchange ratio x no of shares of
target 1.6 x 100000=160000
Firm P =200000
Post merger 360,000

j. Dps =12
Eps=Dps/d.pay
out
=12/.6=20
Wacc=12%
Value Per share=eps/wacc=20/.12=Rs. 166.67

<u>Question 2</u> (20 Marks)

a.

i. PV=PVA+PV of Maturity value

Current Price=(CPx 1-((1/(1+YTM)^n)/YTM + FV/(1+YTM^n)=5.18%

=935,69

ii. current yield=coupon pmt/market price

=(27.5x2)/935.69

= 5.88%

iii. $\dfrac{\text{YTM=CP+(FV-Mkt Value)/n}}{\text{(FV+ Mkt Value)/2}}$

$= \dfrac{55+(1000-935.64)/11}{(1000+935.64)/2}$

=6.29%

iv YTC = $\dfrac{CP+(FV\text{-}Call\ price)/n}{(FV+ Call\ price)/2}$

$=\dfrac{55+(1{,}000-1{,}000)/2}{(1{,}000+1000)/2}$

=5.5%

b.

	OP	125
	Taxes	(50)
	Depre	22
	New INV 48+10	58 (if cap expenses as it is)
a.	**FCF**	**139**

b. **WACC=** (12%X60%)+(19%(1-.4)X40%)

= 11.76%

c. Then here to be EPS not the Value per share

EPS= fcf-interest)/N of shares=(139-3)/10=13.6

(considering imputed tax- 5*(1-.4)

Question 3 (20 Marks)

a. i. $r_d(1\text{-}t)=0.08(1\text{-}0.35)=5.2\%$

ii $rs=r_o+(r_0\text{-}r_d)(1\text{-}t)D/E=0.103+(0.103\text{-}0.08)(1\text{-}0.35)100/300=10.8\%$

iv. $r_{wacc}=(D/V)r_d(1\text{-}t)+E/V)r_e$

D/V	Weight	After tax Cost of debt	Cost of equity	WACC
20%	80:20	0.077x0.65	0.125	0.11
30%	**70:30**	**0.084x0.65**	**0.130**	**0.1074**
40%	60:40	0.093x0.65	0.14	0.1082
50%	50:50	0.104x0.65	0.16	0.1138

b. Annualized financing cost= $\frac{Interest\ costs+Placement\ fee}{Usable\ funds}\ x\ \frac{365}{Maturity\ \ days}$

$$=AFC\ \frac{529{,}795+75{,}000}{24{,}395{,}205}\ x\ \frac{365}{91} = 9.94\%$$

Interest costs=0.85x25,000,000x91/365=529,795
Usable funds=25,000,000-529,795-75,000=24,395,205

<u>Question 4</u> (20 Marks)

a.

i.Dividend policy that companies use when calculating the dividends to be paid to shareholders. Companies use funds to capital expenditures with available earnings before paying dividends to shareholders and if there is remaining funds are distributed as dividends.

ii.

a. div P/O =600,000/1,200,000=50%

b. Earnings =1,200,000

Investment req = 900,000

Then dividends = 1,200,000- 900,000=300,000

c. Earnings	1,200,000
Investment req	450,000
60% of investment using profit	<u>270,000</u>
remaining 40%	180,000 new debt issue
Dividends	1,200,000-270,000=930,000
Then pay out ratio	930/1200 =77.5%

d. **i.** Net Assets = Total Assets – LiabilitiesNet Assets of Slice Ltd = 1000 – 400 = 600 Lacs

Net Assets of Maaza Ltd = 500 – 200 = 300 Lacs

Net Assets Ratio = Net Assets of Target Co./Net Assets of Acquiring Co.

= 300/600 = 0.5 Exchange Ratio = 0.5:1i.e., Shareholders of Maaza Ltd will get 0.5 share of Slice Ltd for every share held in Maaza Ltd

ii.

a. pre-merger mkt value per share=P/E ratioxEPS

large firm 12.5x5.6=Rs. 70

Small firm 7.5x2.5=Rs. 18.75

b. Combined profit after tax =56+21 = 77 million

Combined shares 10+0.6(8.4)

=15.04 million Eps =77/15.04

= Rs. 5.12

c. Mkt value per share =P/E x eps

=10x 5.12=51.2

a. Premium =(0.6(51.2)-30)/30

=2.4%

The merger is beneficial (2.4%) because their price increases.

<u>Question 5</u> (20 Marks)

a A U.S trader can sell US dollars, buy spot Canadian dollars, and invest in Canadian securities to earn 12%. Simultaneously, the trader could sell Canadian dollars forward at a 3% annual discount. At the end of the forward period, the trader could convert Canadian dollars back to US dollars. The net effect of these transactions is the trader earns 9%. Compared with the 8% return available in the US market.

b. i. SLR price=180x$12,000= 2,160,000

ii. SLR price=170x$12,000= 2,040,000

A decline in the value of the dollar relative makes Sri Lankan product more attractive abroad.

c. $$\frac{Sn}{So} = \frac{(1+i_h)^n}{(1+i_f)^n}$$

$$= \frac{Sn}{\$0.61} = \frac{(1+.04)^2}{(1+.05)^2}$$

S_3=\$.5984/CHF

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