MSc ISFM – Module: Financial Management 2022

Answer FOUR (4) questions

Question 1

(a) Contrary to popular perception the main reason that corporations are involved in an Initial Public Offering (IPO) may not always be to raise new capital". Discuss.

(b) Company XYZ has a stock price of 3$, earnings per share of 0.3$, pays dividends per share 0.1$ and has a ROE of 8%, and an appropriate discount rate of 10%. If we assume a constant growth rate in dividends for the foreseeable future is the stock fairly valued in the market?

(c) Assume that currently company X, a boat manufacturer, has Earnings Per Share (EPS) of 3 Euros, a dividend pay-out ratio of 100%, no growth in dividends, and the appropriate discount rate is 10%. With these data the stock price is 30 Euros. The management wants to boost the stock price and plans to retain 50% of the EPS and distribute as dividends the rest, and invest in a project (expansion of the shipyard) that is expected to have a return (ROE) of 8% per year. The resulting growth rate in dividends will be constant forever. They expect that this investment will lead to a stock price increase. If this all the available information to you, what would your advice be to the management and why?

Question 2

(a) Firm A wants a 10-year floating rate loan, while firm B wants a 10-year fixed rate loan. Firm A can borrow at 7.5% fixed and Libor+0.25% floating, while firm B can borrow at 9% fixed and Libor+0.5% floating. Design a swap that pays 0.25% commission to a bank that organizes the swap and splits the profit equally between the two firms.

(b) A US bank has agreed swap with a client where she receives 4% in $ (US dollars) and pays 8% in AUS$ (Australian dollars), annually. The principals are $12 million and 20 AUS$ million. The current exchange rate is a 1$ = 1.48 AUS$ (S_0 = 1 / 1.48 = 0.6756). The appropriate spot rates for years 1 and 2, respectively (yield curve), are 3% and 3.5 in the US and 4%, and 4.5% in Australia. What is the current value of the swap agreement in US $ for the bank?

Question 3

(a) Assume that the current prices for the following zero-coupon government bonds are: 1-year = 90 $, 2-year = 86$, 3-year = 82$. Find the spot rate curve and then use it to price a 3-year government bond with a coupon rate of 6%. All par values are 100$.

(b) Estimate the Modified Duration of a bond with a coupon rate of 6% with 2 years left to maturity, annual payments, a 5% discount rate, and a Par Value of 100$. If we expect a 1% change in interest rate what will be the change in the bonds' price?

(c) You buy a bond today with a coupon rate of 4% at a price of 90% (Par Value = 100 Euro). There are 30 days left before the next coupon payment (annual payments). How much will you pay?

(d) What is a "call provision" in a corporate bond?

Question 4

Your firm is about to develop a new product that will have an expected life of 4 years. After careful analysis you have the following projections for the total sales and cost of sales (in $ thousands, i.e., expected total sale of 168,000 thousand $).

Budgeting (in $ thousands)	0	1	2	3	4	5
Total Sales		168000	168000	168000	168000	
Cost of Sales		90000	90000	90000	90000	

Your tax rate is 40% and you have paid for a marketing survey 50,000$, and for R&D for the product another 50,000$. You have annual General, Selling, Admin Expenses of 25,000$. For the project you buy new equipment for 100,000 and it has an expected life of 5 years, and you expect it will have no resale value in year 5. You use straight line depreciation. You will need 7,200$ for Net Working Capital per year. Given these data, will you accept the project if you employ the Net Present Value criterion, if the appropriate discount rate is 10%?

Question 5

The following Table 1 shows financial statement data and stock price data for Company X for 2022, while the following Table 2 shows selected average ratios for the industry-sector where Company X operates. The current stock price of X is 12$ and there are 4 million shares outstanding in the stock exchange. Evaluate with ratio analysis the performance of Company X with respect to Profitability, Liquidity, Leverage, and Valuation.

TABLE 1

Firm X			
Balance Sheet (Dec 2020, in $ million)			
ASSETS	2022	LIABILITIES	2022
Current Assets		Current Liabilities	
Cash	45	Accounts Payable	31.3
Accounts Receivable	21.4	Short term Debt	2.2
Inventories	15.7	Long Term Debt maturing Currently	11
Other current assets	3.5	Other current aLiabilities	1.8
Total Current Assets	85.6	Total Current Liabilities	46.3
Long Term Assets		Long Term Liabilities	
Land	19.3	Long Term Debt	90.6
Building	39.2	Leasing Obligations	1
Equipment	48.4	Total Debt	91.6
(Less) Accumulated Depreciation	-22.4	Deffered Taxes	8.5
Net	84.5	Other long term liabilities	3
Goodwill and intangible	18	Total Long Tem Liabilities	103.1
Other long term assets	24		
Total Long Tem Asstes	126.5	Total Liabilities	149.4
		Stocholders Equity	62.7
Total Assets	212.1	Total Liabilities & Stockholders Equity	212.1
Income Statement (Dec 2020, in $ million)		**Statement of Cash Flows (Dec 2020, in $ million)**	
	2022		2022
Total Sales	230	Operating Activities	
Cost of Sales	-180.5	Net Income	16.725
Gross Profit	49.5	Depreciation & Amortisation	1.8
General, Selling, Admin Expenses	-11.4	Other non-cash items	-0.3
Research & Development	-9	Cash effects of adjustments in	
Depreciation & Amortisation	-1.8	Accounts Receivable	-5
Operating Income	27.3	Accounts Payable	4
Other Income	0.2	Inventory	-2
Earnings Before Interest & Taxes (EBIT)	27.5	Cash form Operating Activities	15.225
Interest Income	-5.2	Investment Activities	
Pretax Income	22.3	Capital Expenditures	-11.2
Taxes (25%)	5.575	Acquisitions etc	-3
Net Income	16.725	Cash from Investing Activities	-14.2
Shares (in million)	4	Financing Activities	
Earnings Per Share (EPS)	4.18125	Dividends Paid (50% of Net Income)	8.3625
		Sales (Purchases) of Stock	0
		Increase in Borrowing	1.5
		Cash from Financing Activities	9.8625
		Change in Cash and Cash Equivalents	9

TABLE 2

PROFITABILITY RATIOS - INDUSTRY	2020
Gross Margin	18.2
Operating Margin	9.3
EBIT Margin	8.5
Net Profit Margin	6
LIQUIDITY RATIOS	
Current Ratio	1.62
Quick Ratio	1.23
Cash Ratio	0.87
WORKING CAPITAL RATIOS	
Accounts Receivable Days	41
Average Daily Cost of Sales	0.9
Inventory Days	35
Accounts Receivable Turnover	12
Accounts Payable Turnover	6.2
Inventory Turnover	12
Interest Coverage Ratio	6
LEVERAGE RATIOS	
Debt to Equity Ratio	1.5
Debt to Capital Ratio	0.45
VALUATION RATIOS	
P/E ratio	4
P/B ratio	17
Enterprise Value to EBIT	6.5
Enterprise Value to Sales	0.9
OPERATING RETURNS	
Return on Equity (ROE)	18
Return on Assets (ROA)	3