SOLUTION: FINANCIAL MANAGEMENT, NOV 2007

QUESTION 1

(a) Agency problem is potential conflict of interest between agents, who are managers of a company, and the outside stakeholders. The problem arises whenever the managers of firms own less than 100% of the firms' common stock. The fact that the manager will neither gain all the benefits of wealth created by his effort nor bear all the costs of perquisites will increase the incentive to take actions that will conflict with the interest of shareholders.

Four (4) ways to deal with agency problem are:

(i) Threat of firing

(ii) Managerial compensation

(iii) Direct intervention by shareholders

(iv) Threat of takeovers

b) COST OF LEASING

Year	0	1	2	3	4	5	6
Lease Payment	15,000	18,000	15,000	15,000	15,000	15,000	15,000
Tax Saving	3,750	3,750	3,750	3,750	3,750	3,750	3,750
	11,250	11,250	11,250	11,250	11,250	11,250	11,250

Lease payment Constitute annuity

Cost of Debt to the Company = 10% (1 - 0.25)

= 7.5%

$$\therefore \text{PV of Lease Payments} = 11{,}250 \times \left(\frac{(1.75)^6 - 1}{0.075\ (1.075)^6} \right) \times 1.075$$

$$= 11{,}250 \times 5.045885$$

$$= 56{,}766.21$$

Cost of Owing:

	0	1	2	3	4	5	6
Net Purchase Price	(90,000)						
Maintenance Cost		(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
Maintenance cost saving			750	750	750	750	750
Tax savings		9,000	5,400	3,240	1,944	1,167	700
Residual Value		-	-	-	-	-	4,199
	(90,000)	6,750	3,150	990	(306)	(1,083)	2,649

PV of Owing

$$= (90,000) + \frac{6,750}{(1.075)^1} + \frac{3,150}{(1.075)^2} + \frac{990}{(1.075)^3} + \frac{(306)}{(1.075)^4} + \frac{(1,083)}{(1.075)^5} + \frac{2,649}{(1.075)^6}$$

PV (90,000) = (90,000) + 6,279.07 + 2,725.80 + 796.91 - 229.13 - 754.37 + 1,716.45

= (¢79,465.27)

Cost of Leasing = ¢56,766.21

Cost of owing = ¢79,465.27

Decision:

The equipment should be leased.

QUESTION 2

Current profit margin:

	Sales	100%
	Cost of sales	60%
	Marketing	25%
*	Margin	15%

This translates to 15% x GH¢6,000 = 900

: . Minimum Margin under new policy should also be GH900.

Cost: (i) Running credit department for 1 year = 12 x GH¢2 = GH¢24

(ii) Losses from bad debits = 1.5% of X

X = new sales level

30 day collecting period means

30/365 of annual sales will be outstanding

:. Must finance this at 12% p.a.

:. Annual cost = 12% x 30/365 x X

Thus Margin on new sales level must at least equal GH¢900

That s 15% x – 1.5% x – 12% x 30/365 x X – 24 = 900

Solving, X = GH¢7,384

QUESTION 3

a) The dollar cash flow associated with lease two spread – syndicate fee combinations are as follows:

	Fee	Interest Spread Years 1 – 5
	$	$
Loan 1 (2.5% fee, 1% spread)	2,500,000	1,000,000
Loan 2 (0.75% fee 1.5% spread)	750,000	1,500,000

Using a 10% discount rate we can compare the present values of these two combinations.

$$\text{Loan 1 } \$2{,}500{,}000 + \sum_{t=1}^{5} \frac{1{,}000{,}000}{(1.1)}$$

Present value 10% for 5 years = 3.7908

$2,500,000 + 1,000,000 x 3.7908 $\underline{\underline{\$6{,}290{,}800}}$

$$\text{Loan 2 } \$750{,}000 + \sum_{t=1}^{5} \frac{1{,}500{,}000}{(1.1)}$$

$750,000 + 1,500,000 x 3.7908

= $\underline{\underline{\$6{,}436{,}200}}$

Based on these computations Loan 1 appears cheaper than Loan 2

b) Speedy communication and processing – By:

(i) transmitting data to central location from around the world the government can respond immediately to changes in its finances.

(ii) Systems expertise centralized – This eliminates redundant offshore systems, personnel and facilities while increasing the level of expertise at which these functions are performed.

(iii) Better overall picture of where government finances stand. Government has a more complete view of its current assets and liabilities and cash flows. This enables the government to better manage these positions.

(iv) Centralizing government foreign exchange management will help to reduce costs and lower transfer charges.

QUESTION 4

Market values	xx	GH¢50		
	yy	GH¢200		
Cost savings	=	Synergies GH¢25	=	GAIN

(i) Cost cash offer =GH¢65 - GH¢50 =¢15

(ii) Gains = Synergies = GH¢25

(iii) Cost under cash offer

- Value of merged firm = 275
- No of shares = 100 + 30 = 130

:. Value of share = $\frac{275}{130}$ = GH¢2.12

:. Cost of share offer

= 2.12 x 30 – 50
= 63.46 – 50 = GH¢13.46

(iv) NPV = GAIN - COST

Cash offer = 25 - 15 = 10

(v) Share offer NPV = 25 - 13.46 = 11.54

(vi) Synergies may arise because of

- Cost reductions due to economies of scale
- Attaining market power
- Gaining unused tax shields
- Gaining hands on surplus funds etc.

QUESTION 5

(a) The implications of Efficient Market Hypothesis for investors and firms are as follows:

- Since information is reflected in prices immediately, investors should expect to obtain a normal rate of return. Awareness of information when it is released does an investor no good. The price adjusts before the investor has time to trade.

- Similarly firms should expect to receive the fair value for securities that they sell. Fair means that the price they receive for the securities they issue is the present value.

(b) A futures contract is most valuable when the quantity of foreign currency being hedged is known. An option contract however is most valuable when the quantity of foreign currency is unknown. All things being equal, a company should use futures contracts to hedge its currency risk when it knows the amount involved.

Futures contracts must be honoured even if the spot rate settlement is less than the futures price. In contrast a company can choose not to exercise currency call options if the call prices exceed the spot prices. Although this feature is an advantage of currency options it is fully priced out in the market via the call premium. Hence options are not unambiguously better than futures.

(c) (i) Based on the interest rate profiles of the two companies, there is an anomaly between the two markets. One judges that the difference in credit quality between the two companies is worth 200 basis points whereas the other determines that this difference is worth only 100 basis points. The parties can share among themselves the difference of 100 basis points by engaging in currency swap. This transaction will involve Asaba Ltd borrowing floating-rate funds and Bezec Ltd borrowing fixed rate funds and then swapping the proceeds.

(ii) If the two companies split the cost savings the resulting cost to Asaba Ltd would be 12.50%

	Normal	Cost after	
Company	Funding Cost	Swap	Difference
Asaba Ltd	13.00%	12.50%	.50%
Bezec Ltd	Prime Rate + ½%	Prime Rate	.50%
			1.00%