



Institute of Incorporated Public Accountants

Financial Management
Module 14
May 2015

Solutions

Instructions: Answer five questions

Section A

All three questions to be attempted

Section B

Two of the three questions to be attempted

Present Value Tables are attached to this paper.

Time Allowed: 3 Hours

Section A: All three questions to be attempted

Section A (70 marks in Total)

Question 1 Part (a)

Investment A

Statement of Incremental Cashflows

Cashflows €	Years				
	0	1	2	3	4
Sales Receipts		3,000,000	3,300,000	3,630,000	3,993,000
Costs		-1,350,000	-1,485,000	-1,633,500	-1,796,850
Capital Expenditure	-7,000,000				
Asset Scrap Value					2,000,000
Product Rights Value					480,000
Working Capital	-1,000,000				1,000,000
Net Cash Flows €	-8,000,000	1,650,000	1,815,000	1,996,500	5,676,150

(3 marks)

NPV Method

Years	0	1	2	3	4
Net Cashflows €	-8,000,000.00	1,650,000.00	1,815,000.00	1,996,500.00	5,676,150.00
6% discount factor	1	0.9434	0.8900	0.8396	0.7921
Present Value €	-8,000,000.00	1,556,610.00	1,615,350.00	1,676,261.40	4,496,078.42
Net Present Value	€1,344,299.82				

(4 marks)

Investment B

Expected Net Cashflows

$$\text{Exp. Net Cash Flow Year 1} = (800,000 \times 0.3) + (1,200,000 \times 0.15) + (1,440,000 \times 0.4) + (1,728,000 \times 0.15) \\ \text{€1,255,200.00}$$

$$\text{Exp. Net Cash Flow Year 2} = (1,200,000 \times 0.3) + (1,800,000 \times 0.15) + (2,160,000 \times 0.4) + (2,592,000 \times 0.15) \\ \text{€1,882,800.00}$$

$$\text{Exp. Net Cash Flow Year 3} = (1,080,000 \times 0.3) + (1,620,000 \times 0.15) + (1,944,000 \times 0.4) + (2,332,800 \times 0.15) \\ \text{€1,694,520.00}$$

(4 marks)

Product 1:	Year 0	Year 1	Year 2	Year 3
Net Cashflows		€1,255,200.00	€1,882,800.00	€1,694,520.00
Capital Cost	-€4,400,000.00			
Residual Value				€800,000.00
Net Cashflows	-€4,400,000.00	€1,255,200.00	€1,882,800.00	€2,494,520.00
6% discount factor	1.0000	0.9434	0.8900	0.8396
Present Value	-€4,400,000.00	€1,184,155.68	€1,675,692.00	€2,094,398.99
Net Present Value	€554,246.67			

(4 marks)

As all projects have positive NPV's they should all be undertaken. On the basis of the NPV criteria project A has the greatest positive net present value should be undertaken first

Since the NPV values depend crucially on the discount rate used, students should outline to the board of Soundair Technologies Ltd. the appropriateness of their choice of discount rates.

Students should also outline limitations associated with using the NPV method and ways to deal with these limitations. Limitations include how risky are the predicated cash flows and hence what is the appropriate cost of capital. Appropriate methods to deal with these include probability analysis and sensitivity analysis.

Question 1 Part (b)

Investment A: IRR Method

Discount Factor = 15.00%

Years	0	1	2	3	4
Net Cashflows €	-8,000,000	1,650,000	1,815,000	1,996,500	5,676,150
Discount Factor	1	0.8696	0.7561	0.6575	0.5718
Present Value €	-8,000,000.00	1,434,840.00	1,372,321.50	1,312,698.75	3,245,622.57
Net Present Value	-€634,517.18				

$$\text{IRR (Approx)} = a + \frac{A}{A - B} \times (b - a)$$

- Where: **A** = NPV at lower discount rate
a = lower discount rate
B = NPV at higher discount rate
b = higher discount rate

By linear interpolation:

$$\text{IRR} = 6\% + \frac{\text{€1,344,299.82}}{\text{€1,344,299.82} - (\text{€-634,517.18})} \times (15 - 6)$$

$$\text{IRR} = 12.11410675\%$$

Thus IRR is probably 12.??%, so try 12%

Discount Factor = 11.00%

Years	0	1	2	3	4
Net Cashflows €	-8,000,000	1,650,000	1,815,000	1,996,500	5,676,150
Discount Factor	1	0.9009	0.8116	0.7312	0.6587
Present Value €	-8,000,000.00	1,486,485.00	1,473,054.00	1,459,840.80	3,738,880.01
Net Present Value	€158,259.81				

Discount Factor = 12.00%

Years	0	1	2	3	4
Net Cashflows €	-8,000,000	1,650,000	1,815,000	1,996,500	5,676,150
Discount Factor	1	0.8929	0.7972	0.7118	0.6355
Present Value €	-8,000,000.00	1,473,285.00	1,446,918.00	1,421,108.70	3,607,193.33
Net Present Value	-€51,494.97				

Thus IRR lies between 11% & 12%

By linear interpolation:

$$\text{IRR} = 11\% + \frac{\text{€158,259.81}}{\text{€158,259.81} - (\text{€-51,494.97})} \times (12 - 11)$$

$$\text{IRR} = 11.75449918\%$$

Thus IRR is 11.75%

Investment B: IRR Method

Discount Factor = 15.00%

Years	0	1	2	3
Net Cashflows €	-4,400,000.00	1,255,200.00	1,882,800.00	2,494,520.00
Discount Factor	1	0.8696	0.7561	0.6575
Present Value €	-4,400,000.00	1,091,521.92	1,423,585.08	1,640,146.90
Net Present Value	-€244,746.10			

By linear interpolation:

$$\text{IRR} = 6\% + \frac{\text{€}554,246.67}{\text{€}554,246.67 - (\text{€}244,746.10)} \times (15 - 6)$$

$$\text{IRR} = 12.24313539\%$$

Thus IRR is probably 12.??%, so try 12%

Years	0	1	2	3
Net Cashflows €	-4,400,000.00	1,255,200.00	1,882,800.00	2,494,520.00
Discount Factor	1	0.9009	0.8116	0.7312
Present Value €	-4,400,000.00	1,130,809.68	1,528,080.48	1,823,993.02
Net Present Value	€82,883.18			

Discount Factor = 12.00%

Years	0	1	2	3
Net Cashflows €	-4,400,000.00	1,255,200.00	1,882,800.00	2,494,520.00
Discount Factor	1	0.8929	0.7972	0.7118
Present Value €	-4,400,000.00	1,120,768.08	1,500,968.16	1,775,599.34
Net Present Value	-€2,664.42			

Thus IRR lies between 11% & 12%

By linear interpolation:

$$\text{IRR} = 11\% + \frac{\text{€}82,883.18}{\text{€}82,883.18 - (\text{€}2,664.42)} \times (12 - 11)$$

$$\text{IRR} = 11.96885449\%$$

Thus IRR is 11.97%

(6 Marks)**Question 1 Part (c)**

Only firms with no debt in their capital structure should use the cost of equity to discount project cash flows, and only those projects that are very similar to a firm's existing assets should be discounted using that rate. Firms with both debt and equity should use the WACC as long as they are evaluating a project that is similar to their existing assets. When a firm is making an investment that is very different from its existing investments, then it should not use the company's cost of equity or its WACC.

The cost of debt or the cost of retained profit is never appropriate for use a discount rate. In parts (a) & (b) we calculated the NPV using a discount rate as per the company policy, i.e. all projects lasting five years duration or less at a cost of capital of 6%. WACC would be appropriate as a discount rate when appraising these new marginal investment opportunities.

If a project as is in a totally new area and the board is making an investment that is very different from its existing investments, then the WACC would not be appropriate.

(4 Marks)

Question 2; parts 1 to 4)

By the nature of this question, answers should be in a report format. It should start off by being correctly directed to Mr O'Brien as the Managing Director. A brief introduction should be followed by clearly structured sections dealing with each of the issues outlined in the question. If possible, an outline of its conclusions can be mentioned here. As with all reports a clear line of thinking should emerge, therefore if necessary, calculations and other supplementary material may be appended to the end of the report.

Since no information is given about market trends we may assume that current trends continue. Thus we will assume that 20,000 chips will be required per year in the future.

	Original System	Using EOQ	Using EOQ	JIT
	Imported Chips	Imported Chips	Local Chips	Imported Chips
S = Forecast annual usage	20000	20000	20000	20000
D= Ordering cost per order	€ 25,000.00	€ 25,000.00	€ 15,000.00	-
I = Annual inventory holding charge as a proportion of V	15%	15%	15%	-
V = Cost per unit in stock	€ 250.00	€ 250.00	€ 252.00	€ 259.60
$Q^* = EOQ = \left(\frac{2 \times S \times D}{I \times V}\right)^{0.5}$	5,000.00	5,163.98	3,984.10	-
Numbers of deliveries per year	4	3.87	5.02	-
Annual Ordering Costs = SD / Q	€ 100,000.00	€ 96,824.58	€ 75,299.40	-
Annual Holding Costs = $IVQ/2$	€ 93,750.00	€ 96,824.58	€ 75,299.40	-
Additional wholesale price cost	-	-	€ 40,000.00	€ 192,000.00
Total Cost	€ 193,750.00	€ 193,649.17	€ 190,598.80	€ 192,000.00
Reduction in costs due to change	-	€ 100.83	€ 3,151.20	€ 1,750.00
Inventory costs per unit	€ 9.69	€ 9.68	€ 9.53	€ 9.60

From the table above we can see that using the current system, combining ordering costs and holding costs at €193,750, this is the highest cost alternative. If we are to continue with the current supplier and current system then we should decrease the orders from 4 to 3.87 (on average) per year with a consequent increase in order size from 5,000 per quarter to 5,163.98 a little over every four months approximately. This will cut ordering costs from €100,000 to €96,824.58 enough to compensate for the increase in holding costs from €93,750 to €96,824.58. Thus total costs ordering and holding costs will fall from €193,750 to €193,649.17, a saving of €100.83 per year.

However even greater savings could be made by switching to the local supplier. We could increase the orders from 4 to 5.01 (on average) per year with a consequent reduction in order size from 5,000 per quarter to 3,984.10 every two months approximately. This will cut total costs of ordering and holding inventories by €43,151.20. However to this we must add the additional wholesale price increase of €2. The wholesale cost of these items to rise from €250 to €252 x 20,000 = an increase of €40,000 per annum. This will reduce the total savings of switching to the local supplier to just €3,151.20. This would be the biggest saving of all.

Switching to the JIT system will add a €9.60 increase to the wholesale price, an additional €192,000 per annum. However, as ordering and holding costs are eliminated, in total costs will fall from €193,750 originally to €192,000, a decrease of €1,750.

In describing some of the issues that might arise in the operation of an inventory control system, note should be taken of the following:

1. Arguments for and against adopting EOQ over the current system
2. Arguments for and against using the new local supplier over the current supplier
3. Arguments for and against adopting EOQ over JIT system involving outsourcing

1. Arguments for adopting EOQ over the current system could include:

- Demand for secure chips is assumed known and predictable
- Quantity ordered shows little seasonal variation over time
- While inventory holding costs are increased in the new situation than in the current, reduction in inventory ordering costs is significant by comparison.

Arguments against could include:

- Past assumptions may not hold in the future, demand may change both in quantity and variability.
- Not all possible relevant information is given in the question, other variables not mentioned could impact
- As the average number of secure chips in stock is considerably reduced, there is a higher likelihood of a shortage or stock out
- No mention is made of the effects of a shortage or stock out or the need to maintain a safety stock

2. Arguments for using the new local supplier over the current supplier:

- Reduction in delivery time from two weeks to one should reduce the likelihood of a shortage or stock out
- As demand for secure chips is assumed known and predictable, less inventories in stock is acceptable
- Cost savings compared to current supplier using EOQ or current system

Arguments against could include:

- No information on track record of (un)reliability
- No information on guarantees or quality
- No cost savings compared to current supplier using JIT

3. Arguments for adopting EOQ over JIT system involving outsourcing could include:

(Note: some of the arguments against adopting an EOQ system and could apply even more forcefully against a JIT system, particularly the possibility of a shortage / stock out.)

- Outsourcing involves a reduction in ownership and control
- Morale may suffer as staff may feel that their jobs or prospects are under threat
- Using JIT they would have to rely upon quick response and delivery from their overseas supplier

- Using JIT they would probably be dependent upon on-line or equivalent ordering systems that are vulnerable to attack and breakdown
- No information on back up arrangements that would need to be made in the event of being let down by current suppliers
- No cost benefit by comparison to local supplier

Arguments against adopting EOQ over JIT system involving outsourcing could include:

- Outsourcing carries many benefits as well as risks, particularly but not exclusively costs
- Outsourcing is increasing in both size and scope
- May be used for activities regarded as ancillary to the core activities of the firm
- If we wish to stick with the current supplier, JIT is the lower cost option
- Supplies ordered in as they were needed
- The JIT system as outlined here potentially frees up management and staff time from stock control duties.

Part 5

In reaching conclusions and making recommendations candidates would be expected to take account of the fact that inventory control is an important part of the financial planning and control system. Inventories are often controlled by a variety of departments; each with their own interests in maintaining stocks at a high level. It often falls to the financial management department to ensure that conflicting interests are kept in balance. The goal of financial management in this context is that the investment in total inventory yields the largest possible NPV. Optimum inventory control is however compromised by many real world factors which hinder its achievement.

(25 marks for the above or similar)

Question 3;

a) OMB must pay a UK supplier £1,200,000 in three months time. What is the cost in Euro in three months' time with a money market hedge?

To obtain such a money market hedge they must determine how much they need to borrow in Euro NOW which when they convert to Sterling it is equal to £1,200,000 in three months time. The cost in Euro in three months time depends on how much they will have to repay for the amount borrowed in Euro now.

The amount of sterling needed to be left on deposit now such that it is equal to £800,000 in three months time is found using:

$$PV = FV / (1 + r) = 1,200,000 / (1 + 0.018/4) = 1,200,000 / 1.0045 = £1,194,624.19$$

Thus we need to deposit £1,194,624.19 now.

To obtain this amount we must buy sterling at the lower rate for Euro of 0.7312 = €1,633,785.82. Thus we need to borrow €1,633,785.82 now.

Thus to determine the amount we need to pay back we use:

$$FV = PV \times (1 + r) = €1,633,785.82 \times (1 + 0.025/4) = 1,633,785.82 \times (1 + 0.00625) = €1,643,996.98.$$

Thus using the money market hedge we will need to repay €1,643,996.98 in three months time.

(7 marks for the above or similar)

b) What effective 3 month Stg. £ / € forward rate does this represent? Confirm this by determining the 3 month Stg. £ / € forward rate using the interest rate parity formula.

Using the money market hedge the effective 3 month Stg. £ / € forward rate = £1,200,000 / €1,643,996.98 = 0.7299

We can confirm this using the interest rate parity formula:

$$F_{a/b} = S_{a/b} \times \{(1+ra) / (1 + rb)\}$$

Where: $S_{a/b}$ = Spot Stg. £ / €

$$(1 + ra) = (1 + r_{\text{Stg. £}}) =$$

$$(1 + rb) = (1 + r_{\text{Euro €}}) =$$

$$\begin{aligned} \text{Thus: } F_{a/b} \text{ the Stg. £ / € forward rate} &= 0.7312 \times \{(1 + 0.018/4) / (1 + 0.025/4)\} \\ &= 0.7312 \times \{(1 + 0.0045) / (1 + 0.00625)\} \\ &= 0.7299 \end{aligned}$$

(4 marks for the above or similar)

c) Given the actual forward rates available to OMB should they use a money market hedge or the actual forward rate? Show your calculations and explain.

Using a money market hedge the effective Stg. £ / € forward rate is: 0.7299. The actual Forward rate if buying Stg. £ in 3 months' time is the lower rate for Euro of 0.7322.

Thus:

Stg. in 3 Mths	£1,200,000
Effective 3 mth rate	0.7299
Cost in € with MM Hedge	€1,643,996.98
Actual Forward Rate	0.7322
Cost in € using forward	€1,638,896.48
Difference	€5,100.50

Hence taking out a forward contract at the actual Stg. £ / € forward rate rather than the effective Stg. £ / € forward rate obtained using a money market hedge will save them €5,100.50.

(3 marks for the above or similar)

Question 3 Part d)

The current ratio shows the excess of current assets over current liabilities. A high current ratio might be good for creditors but is expensive for the company in terms of locking up valuable and costly resources. Liquid assets such as stock, debtors or even cash in the bank has to be financed yet generally do provide little if any return.

Conversely long term assets do generally produce profits but are not liquid. This therefore causes firms to have to make a decision in relation to their allocation of resources. This trade-off between liquidity and profitability leads to an approach to working capital that can be characterised as “conservative” / “prudential” or “matching” / “hedging” or “aggressive”.

Conservative / prudential approach: this would involve financing all the fixed and permanent current assets and a proportion of the temporary current assets out of long term funds. While this is of low risk, as the current ratio is quite high, the use of expensive long term liabilities rather than less expensive short term liabilities is costly to the firm in terms of lost profitability.

Matched / hedged approach: this would quite simply involve matching all the fixed and permanent current assets out of long term funds and all the temporary current assets out of current liabilities. While this is of slightly higher risk, as the current ratio is quite high, the use of less expensive short term liabilities rather than more expensive long term liabilities is less costly to the firm in terms of lost profitability.

Aggressive approach: this would involve financing some of the fixed assets, possibly all the permanent and all the temporary current assets out of its current liabilities, i.e. its short term funds. This is of a much higher risk, particularly at the moment when securing any form of finance is difficult and “rolling over” debt not proving easy. However as the current ratio is high, the use of less expensive short term liabilities rather than more expensive long term liabilities is the least costly to the firm in terms of lost profitability.

(6 marks for the above or similar)

Section B

Question 4

Note: in all cases the question should be directed to the newly appointed board member. The theory should be both explained (similar to below) and APPLIED to Ryanair!

Part a)

Option contracts and how they are used to hedge a position.

A hedge is an investment position intended to offset potential losses/gains that may be incurred by a companion investment. In simple language, a hedge is used to reduce any substantial losses/gains suffered by an individual or an organization.

A hedge can be constructed from many types of financial instruments, including stocks, exchange-traded funds, insurance, forward contracts, swaps, options, many types of over-the-counter and derivative products, and futures contracts.

A key feature of an option as a hedging tool is that it provides protection against adverse price risk (an investor has the right to exercise the option if price changes make it optimal to do so) without having to forfeit the right to profit if the price on the underlying commodity moves in the investor's favour (in which case, the investor allows the option to expire unexercised).

Options grant the right but not the obligation to buy or sell in the future a contract at a fixed price, which is called the strike price. Unlike using futures to hedge, hedging with options offers more possibilities for the holders of an option. They may lose their investment in the option when the price moves against them, but when the price moves in their favour they can let the option expire and take advantage of the favourable market price. Therefore the eventual result of option hedging can vary much more than when hedging with futures.

There are costs involved in obtaining an option. The price for an option is called a premium and is based on intrinsic and time value. The intrinsic value is the difference between the strike price and the underlying asset's market price. This will be the profit made by exercising the option or offsetting the option. The time value is determined by the possibility of the price increasing over time. When the maturity date of an option draws near, it becomes more unlikely the price will make significant changes and thus the time value decreases.

The premium of an option can influence the decision to hedge a commodity using options and how and when the hedge will be placed. Similar to hedging with futures, hedging with option

also offers two positions a hedger can occupy, which is either long or short. And just like futures, the basis can play an important part in the final price paid for a commodity.

A long position in option hedging gives the holder of the call the right but not the obligation to buy a futures contract. A holder of a long position expects the price of the futures contract to rise, thereby exercising the option and obtaining the futures contract at the lower strike price, or gaining the profit from offsetting his position.

Short hedging with the use of option is mostly implemented by producers, who want to ensure themselves of a profitable price upon the delivery date. Therefore they will obtain a put with a favourable strike price.

The use of options as a hedging tool is not to make additional profits, but to limit potential losses.

Question 4 Part b)

Financial future contracts and how they are used to hedge a position.

A futures contract is a derivative product that is a type of forward but traded on a futures exchange. It is generally used, like a forward contract to reduce risk. It can though be used to take on risk. This would be speculation! It is as a standardised arrangement between two parties today to buy or sell an asset at a particular time in the future for a particular price agreed today. The difference between a forward and a future contract is like that between buying a made to measure suit and buying “ready-to-wear” (or “Prêt-à-porter” as they say in France). The advantage of buying “made to measure is a perfect fit. The disadvantage is the price you pay for this. The advantage of a futures contract is that it is comparatively cheaper and this may outweigh the fact that it may not be a perfect fit.

It is not necessary that the underlying asset to a futures contract be a traditional “real” commodity. For financial futures, the underlying asset can be an intangible assets or referenced items such as stock indexes and interest rates. Futures for currencies, securities or financial instruments are all traded on futures exchanges.

Like a forward contract, a futures contract can be used to counterbalance risk exposure. It can limit any adverse change in the value of the underlying asset. In theory a futures contract can be used to hedge a position perfectly and completely remove all risk. In reality this is it is difficult to achieve a perfect hedge. They are therefore used not to completely eliminate but to

reduce risk as much as possible. The price of a future contract is determined by the equilibrium between the supply and demand for them. This comes about through the competing buy and sell orders on an exchange at a particular time.

The party agreeing to buy the underlying asset in the future assumes a long position, and the party agreeing to sell the asset in the future assumes a short position. If you know that you will be making a purchase in the future of a certain asset, you should take a long position in a futures contract to hedge your position. For example, suppose that you know that in 3 months' time you will have to buy US dollars to pay a supplier. By buying the futures contract today, you can lock in the price offered on the futures exchange today for dollars in three months' time, (or thereabouts if not a perfect hedge). This reduces your risk because you will be able close your futures position and buy the US dollars you will need in three months at the price agreed today.

If you know that in the future you will be selling a certain asset, you should take a short position in a futures contract to hedge your position. For example, suppose that you know that in 3 months' time you must sell US dollars you will make from an export sale. By selling the futures contract today, you can lock in the price offered on the futures exchange for the euro-dollar exchange rate in three months' time, (or thereabouts if not a perfect hedge). This reduces your risk because you will be able close your futures position and sell the US dollars you will receive in three months at the price agreed today.

Thus the uncertainty about the future price of an item is reduced which makes trading easier. Futures contracts can be very useful in limiting the risk exposure that an investor takes on in business. The main advantage of participating in a futures contract is that it removes or reduces risk by locking in the price of whatever you are buying or selling.

Question 4 Part c)

A currency swap is a type of foreign exchange derivative involving the exchange of obligations to repay a loan in one currency for another on a notional loan. It is a foreign-exchange agreement between two institutions to exchange aspects (namely the principal and/or interest payments) of a loan in one currency for equivalent aspects of an equal in net present value loan in another currency.

Currency swaps are motivated by comparative advantage. A currency swap should be distinguished from an interest rate swap, for in currency swap, both principal and interest of loan is exchanged from one party to another party for mutual benefits.

The advantages of using currency swaps:

Advantages:

Often a corporate financial manager has a relative funding advantage in one country over another. By using arbitrage, it may be possible to secure cheaper finance than by borrowing directly in the other country.

Where it is not possible for the corporate financial manager to borrow directly in a currency, currency swaps may secure finance in that currency. This could be because of not having a credit rating in that market.

They might help to circumvent foreign exchange controls or financial or government restrictions.

With a currency swap a corporate financial manager can hedge foreign exchange risk, often for longer periods than would be possible using the forward market.

Even when it is possible to obtain them, using long term forwards is typically more expensive than using currency swaps.

They may allow the corporate financial manager to restructure the debt profile of the company while not having to actually issue or redeem debt.

The disadvantages of using currency swaps:

A currency swap is the exchange of obligations to repay a loan in one currency for another on a notional loan.

Disadvantages:

As a currency swap is an exchange of obligations, if the counterparty defaults the corporate financial manager's firm may be obliged to continue to make the original payments in the original currency. It is therefore usually less risky for the corporate financial manager to arrange the currency swap with a bank than with another corporate body, however even banks are not immune to failure. This is often referred to as "counterparty risk"

A currency swap can be on a notional fixed loan in one currency to a floating loan in the other or both could be fixed or both floating. With a floating to floating swap if the two floating rates are not pegged to the same index then what is often referred to as “basis risk” may be present.

Also because the corporate financial manager is obliged to make the payments on the swap, sometimes, due to favourable currency movements, you would have been better off not swapping than swapping. This is often referred to as “exchange rate risk”.

It may not be possible to continue to exchange currency obligations due to changes in economic policy in a country. This is often referred to as “sovereign risk”.

Where the currency swap is undertaken for hedging rather than speculative reasons, unless it is a perfect hedge there can be “residual risk”.

Question 4 Part d)

An Interest Rate Swap is an agreement between two parties (known as counterparties) where one stream of future interest payments is exchanged for another based on a specified principal amount. Interest rate swaps often exchange a fixed payment for a floating payment that is linked to an interest rate (most often the LIBOR). A company will typically use interest rate swaps to limit or manage exposure to fluctuations in interest rates, or to obtain a marginally lower interest rate than it would have been able to get without the swap.

Interest rate swaps are simply the exchange of one set of cash flows (based on interest rate specifications) for another. Because they trade OTC, they are really just contracts set up between two or more parties, and thus can be customized in any number of ways.

The advantages of using Interest rate swaps:

Flexibility. They can be designed to suit the particular requirements of the customer concerning the time period, amount etc.

Low cost. Transaction costs such as the fees of swap banks and legal fees are usually low, largely due to the degree of competition among swap banks.

Arrangement/reversion. Swaps are usually easy to arrange and to reverse. A swap bank may be prepared to act as a counterparty to the swap agreement and so it may not be necessary to find another company to act as a counterparty.

Swap agreements may be reversed before the maturity date of the agreement by re-swapping with other counterparties, as mentioned above. However, there will be financial consequences if a swap is reversed.

The disadvantages of using Interest rate swaps:

The main disadvantage of swap agreements is the risk that the counterparty to the agreement will default on its commitments.

However, a swap bank will often be prepared to act as a guarantor to both parties to the agreement (as in this problem) for a fee.

Question 4 Part e)

The difference between transaction and translation risk in international trade.

Transactions risk is that exposure to exchange rate risk faced by a firm that is vulnerable to an adverse change in the value of any of its cash flows as a result of exchange rate movements. Almost every firm is exposed to exchange rate risk to some degree, even if it operates strictly in one country and has cash flows in only one currency. Such a firm will face exchange rate risk if (1) it produces a good or service that competes with imports in the home market, or (2) it uses as a production input an imported product or service. This exchange rate risk cannot be eliminated, but it can be hedged (transferred to a third party) using financial contracts.

Translation and economic risks relate to those additional complexities involved with operating internationally if they have affiliates or subsidiaries on the ground in a foreign country. One such complication arises when MNCs translate costs and revenues denominated in foreign currencies to report on their financial statements, which, of course, are denominated in the home currency. This type of risk is called translation exposure or accounting exposure. In other words, foreign exchange rate fluctuations affect individual accounts in the financial statements.

Question 4 Part f)

The difference between economic risk and political risk in international trade.

Economic risk is the chance that changes in macroeconomic conditions like exchange rates, will affect an investment, usually one in a foreign country. It includes the overall impact of foreign exchange rate fluctuations on the firm's value. A firm faces economic risk when exchange rate changes affect its cash flows, even those cash flows not specifically tied to transactions in other currencies. What can managers do about these risks? MNCs manage their economic risks both by using sophisticated currency derivatives and by matching costs and revenues in a given currency.

Economic risk is one reason international investing carries more risk than domestic investing. Economic risk may also add opportunity for investors.

For investors, political risk can simply be defined as the risk of losing money due to changes that occur in a country's government or regulatory environment. Acts of war, terrorism, and military coups are all extreme examples of political risk. Expropriation of assets by the government – or merely the threat – can also have a devastating effect on share prices. Political risk is also known as "geopolitical risk," and becomes more of a factor as the time horizon of an investment gets longer.

Unlike economic or financial variables, political risk is more difficult to quantify. While it is possible to calculate political risk "scores" or other quantitative-looking benchmarks, it's important to remember that these are ultimately based on qualitative judgments. As with other kinds of risk, the only tried and true method for mitigating political risk is diversification.

(For an elaboration of the above or similar 3 x 5 marks)

Question 5 Part (a)

In the context of Corporate Governance Codes and regulations, discuss the factors that should be taken into consideration for the appointment of non-executive directors (NEDs) to the board of a listed Plc.

The board should include a balance of executive and non-executive directors (and in particular independent non-executive directors) such that no individual or small group of individuals can dominate the board's decision taking.

The board should not be so large as to be unwieldy. The board should be of sufficient size that the balance of skills and experience is appropriate for the requirements of the business and that changes to the board's composition can be managed without undue disruption.

To ensure that power and information are not concentrated in one or two individuals, there should be a strong presence on the board of both executive and non-executive directors.

The board should identify in the annual report each non-executive director it considers to be independent. The board should determine whether the director is independent in character and judgement and whether there are relationships or circumstances which are likely to affect, or could appear to affect, the director's judgement. The board should state its reasons if it determines that a director is independent notwithstanding the existence of relationships or circumstances which may appear relevant to its determination, including if the director:

- has been an employee of the company or group within the last five years;
- has, or has had within the last three years, a material business relationship with the company either directly, or as a partner, shareholder, director or senior employee of a body that has such a relationship with the company;
- has received or receives additional remuneration from the company apart from a director's fee, participates in the company's share option or a performance-related pay scheme, or is a member of the company's pension scheme;
- has close family ties with any of the company's advisers, directors or senior employees;
- holds cross-directorships or has significant links with other directors through involvement in other companies or bodies;
- represents a significant shareholder; or
- has served on the board for more than nine years from the date of their first election.

Except for smaller companies, at least half the board, excluding the chairman, should comprise non-executive directors determined by the board to be independent.

A smaller company should have at least two independent non-executive directors.

The board should appoint one of the independent non-executive directors to be the senior independent director. The senior independent director should be available to shareholders if they have any queries.

Appointments to the Board

Main Principle

There should be a formal, rigorous and transparent procedure for the appointment of new directors to the board.

Appointments to the board should be made on merit and against objective criteria. Care should be taken to ensure that appointees have enough time available to devote to the job.

The board should satisfy itself that plans are in place for orderly succession for appointments to the board and to senior management, so as to maintain an appropriate balance of skills and experience within the company and on the board.

There should be a nomination committee which should lead the process for board appointments and make recommendations to the board. A majority of members of the nomination committee should be independent non-executive directors. The chairman or an independent non-executive director should chair the committee, but the chairman should not chair the nomination committee when it is dealing with the appointment of a successor to the chairmanship. The nomination committee should make available its terms of reference, explaining its role and the authority delegated to it by the board.

The nomination committee should evaluate the balance of skills, knowledge and experience on the board and, in the light of this evaluation, prepare a description of the role and capabilities required for a particular appointment.

(For an elaboration of the above or similar 9 marks)

Question 5 Part (b)

Given recent corporate governance scandals and reports on corporate governance discuss the effectiveness of the new June 2010 Corporate Governance code.

Students should demonstrate knowledge of the actual effectiveness of the new code which would include a discussion of recent corporate governance scandals.

They should be able to highlight recent empirical research on corporate governance such as Grant Thornton Annual Corporate Governance Reviews.

(For an elaboration of the above or similar 6 marks)

Question 6 Part (a)

In advance of a merger or acquisition evaluate critically the information required for, and issues that should be covered by due diligence

It is critical that a company is diligent in respect of all aspects of a proposed acquisition. The due diligence process is carried out by predators as it is essential that they are aware of the likely value of targets and exactly what they will acquire in respect of assets and obligations if the planned acquisition of a target proceeds.

Due diligence is in essence a risk management exercise where the predators' corporate finance advisors and corporate lawyers will be retained to assess the risks of the proposed acquisition.

Their work will include:

- placing an indicative value on the acquisition target company.
- assessing the income streams of the target.
- assessing any outstanding legal claims against the target.
- determining if there is any latent tax liability outstanding due to non-compliance by the target.
- confirming proper title of for all assets to be acquired can be obtained
- reviewing all contractual obligations entered into by the target to be assumed by the predator if the acquisition proceeds
- assessing the earnings potential of the target in the post-acquisition period

Due Diligence - Information required

- Financial Statements & Working Files
- Asset Register & Depreciation Policy
- Aged Accounts Receivable and Payable Summary
- Inventory Summary
- Existing Contracts – Sales, leases, licencing etc.
- List of shareholders and shareholdings
- Budget projections and underlying assumptions
- Company's industry and general economic environment
- List of major customers and sales breakdown
- Organisational Chart and Job Discriptions etc.

Due Diligence Workload

- ensure that all debtors are collectible in full
- confirm title of all non-current assets
- acquire current independent expert valuation of all land & building assets
- confirm state of repair of all plant & machinery assets
- ensure that all inventories are saleable at their carrying value
- ensure that there are no legal or other contingent liabilities
- confirm that no other hidden liabilities e.g. contingent liabilities
- confirm tax clearance certificates have been received
- have liabilities been properly quantified e.g. deferred tax
- confirm the security/prior charges over assets

(For an elaboration of the above or similar 9 marks)

Question 6 Part (b)

Outline briefly six contributing factors which explain why shareholders of acquiring companies rarely benefit from takeovers. In your answer, you should refer to recent examples of acquisitions where there was no clear evidence of any benefit arising for the acquiring company shareholders.

Contributing factors include:

- If the bid is contested - the price paid can be higher than the company originally intended to pay, thus reducing shareholders wealth.
- Predicted synergies / economies of scale don't materialise.
- Acquiring company management may lack knowledge and expertise in the business they have acquired.
- Acquiring company management may be undertaking the acquisition for Agency reasons.
- Quality of assets may be lower than expected.
- (Clash of) cultural issues.
- If the takeover is financed by cash, the firm may be drained of liquidity and face a high level of gearing.

(For an elaboration of the above or similar 9 marks)