Financial Management
Module 14
August 2014

Solutions

Time Allowed: 3 Hours

Question 1; Part (a)
2 marks for cost of equity and 4 marks for WACC = 6 marks in total.

Cost of Equity (using CAPM) = Rf + [Ba x (Rm - Rf)]
Rf =   0.5%   Ba =   1.5   Rm =   12.5%

Cost of Equity (using CAPM) = 0.5% + [1.5 x (12.5% - 0.5%)]
$$= 0.5\% + [1.5 \times (12\%)]$$
$$= 0.5\% + [18\%] = 18.50\%$$

	#	Market Value	Total Value	After Tax Cost	Pro-portion	% Return
Shares	100,000	€ 24.00	€ 2,400,000	18.50%	64%	11.90%
Debt	1,000	€ 1,050	€ 1,050,000	5.00%	28%	1.41%
Preferred stock	25,000	€ 11.21	€ 280,250	8.00%	8%	0.60%
Total			€ 3,730,250			13.91%

The WACC = 13.91%

Question 1; Part (b)
6 marks for finding PV = 6 marks in total.

Given the earnings after tax is €10,000 now and the Dividend Payout Ratio is 50% paid one year later, the Dividend in year 1 will be €5,000.

Year		Growth	Div	FV	Discount Factor when r = 13.91%	PV
0			€ -	-€ 100,000.00	1	-€ 100,000.00
1	D1 =	30%	€ 5,000.00	€ 5,000.00	0.8779	€ 4,389.387
2	D2 =	15%	€ 6,500.00	€ 6,500.00	0.7707	€ 5,009.346
3	D3 =	10%	€ 7,475.00	€ 7,475.00	0.6766	€ 5,057.230
4	D4 =	10%	€ 8,222.50			€ -
3	P3 =			€ 210,233.25	0.6766	€ 142,233.832
		growing to infinity				€ 56,689.79

Or

$$P_0 = \frac{D_1}{(1+r)^1} + \frac{D_2}{(1+r)^2} + \frac{D_3}{(1+r)^3} + \frac{P_3}{(1+r)^3}$$

$$P_3 = \frac{D_4}{r-g} = \frac{8,222.50}{0.1391 - 0.1} = €210,233.25$$

$$P_0 = \frac{5,000}{(1.1391)^1} + \frac{6,500}{(1.1391)^2} + \frac{7,475}{(1.1391)^3} + \frac{210,233.25}{(1.1391)^3}$$

$$= €4,389.387 + €5,009.346 + €5,057.230 + €142,233.832$$

$$= €56,689.79$$

Question 1; Part (c)
8 marks for IRR = 8 marks in total.

Year	FV	Discount Factor when r = 13.91%	PV	Discount Factor when r = 35.00%	PV
0	-€ 100,000.00	1	-€ 100,000.00	1	-€ 100,000.00
1	€ 5,000.00	0.8779	€ 4,389.387	0.7407	€ 3,703.500
2	€ 6,500.00	0.7707	€ 5,009.346	0.5487	€ 3,566.550
3	€ 7,475.00	0.6766	€ 5,057.230	0.4064	€ 3,037.840
4			€ -		€ -
3	€ 210,233.25	0.6766	€ 142,233.832	0.4064	€ 85,438.795
			€ 56,689.79		-€ 4,253.32

IRR (Approx) = a + A / (A - B) x (b- a)

Where: a = 13.91%   = lower discount rate
       b = 35.00%   = higher discount rate
       A = €56,689.79   = NPV at lower discount rate
       B = -€4,243.97   = NPV at higher discount rate

IRR (Approx) = 13.91% + $\dfrac{€56,689.79}{€56,689.79 - -€4,243.97}$ x (35% - 13.91%)

IRR (Approx) = 13.91% + $\dfrac{€56,689.79}{€60,933.76}$ x (21.0889%)

IRR (Approx) = 13.91% + 0.930351168 x (21.0889%)

IRR (Approx) = 13.91% + 19.6201% = 33.53%

Note: Actual IRR is approximately 32.98709%

Question 1; Part (d)
3 Marks for discussion of options and 2 marks for types = 5 Marks in Total.

Real Options in Capital Budgeting
Given that if they sell the App they may not compete with this App for at least five years they are losing out on the option to develop similar Apps and perhaps also the option to create follow on or complementary Apps.

Option pricing analysis is helpful in examining multi-stage projects. Embedded options arise naturally from investment. They are called real options to distinguish them from financial options. Thus the value of a project equals the value captured by NPV, plus the option(s). Thus real or embedded options could potentially transform even negative NPV projects into potentially positive NPV projects!

Expansion options
  • If a product is a hit, expand production.
Abandonment options
  • Firm can abandon a project if not successful.
  • Shareholders have valuable option to default on debt.
Follow-on investment options
  • Similar to expansion options, but more complex (e.g. movie rights to sequel)
Flexibility options
  • Ability to use multiple production inputs (e.g. dual-fuel industrial boiler) or produce multiple outputs

NPV is the most theoretically correct model to use in capital budgeting. Its main drawback, that it doesn't do a very good job of capturing managerial flexibility, is a relatively new concern. Option pricing theory has been increasingly applied to the capital budgeting decision to capture managers' ability to expand on or abandon projects.

Question 2; Part (a)
4 Marks for interest payments on the loan, 5 Marks for after-tax cash outflows associated with Purchasing and 2 marks for after-tax cash outflows associated with Leasing = 11 Marks in Total.

The after-tax cash outflows associated with each alternative:

The interest payments on the loan

Year	Principal Balance	Payment	Interest @ 9%	Principal	Ending Principal
1	250,000	64,273.11	22,500.00	41,773.11	208,226.89
2	208,227	64,273.11	18,740.42	45,532.69	162,694.20
3	162,694	64,273.11	14,642.48	49,630.63	113,063.57
4	113,064	64,273.11	10,175.72	54,097.39	58,966.18
5	58,966	64,273.11	5,306.96	58,966.15	0.03

Depreciation: Straight line, 5 years: €250,000 / 5 = €50,000 per annum.

The after-tax cash outflows associated with Purchasing:

End of Year	Loan Payments	Running Expenses	Deprec-iation	Interest	Total Deductions 2+3+4	Tax Shields 12.5% of (5)	After-Tax Cash Outflows 1+2-6
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	64,273	5,000	50,000	22,500.00	77,500	9,688	59,586
2	64,273	5,000	50,000	18,740.42	73,740	9,218	60,056
3	64,273	5,000	50,000	14,642.48	69,642	8,705	60,568
4	64,273	5,000	50,000	10,175.72	65,176	8,147	61,126
5	64,273	5,000	50,000	5,306.96	60,307	7,538	61,735

The after-tax cash outflows associated with Leasing:
Beginning of period lease payments: €60,000. Tax rate 12.5%.
After-tax lease payment €60,000 x (1-0.125) = €52,500
Plus exit payment of €60,000 x (1-0.125) = €52,500 with final payment

Year	0	1	2	3	4
After-Tax	52,500	52500	52500	52500	105000

Question 2; Part (b)
3 Marks for PV of Purchasing, 3 marks for PV of Leasing and 3 Marks for discussion on choice = 9 Marks in Total.

		Leasing		Buying	
	DF, r =	After-Tax		After-Tax	
Year	6.00%	Cash Outflows	PV	Cash Outflows	PV
0	1.0000000	52,500	52,500.00	-	-
1	0.9433962	52,500	49,528.30	59,585.61	56,212.84
2	0.8899964	52,500	46,724.81	60,055.56	53,449.23
3	0.8396193	52,500	44,080.01	60,567.80	50,853.89
4	0.7920937	105,000	83,169.83	61,126.14	48,417.63
5	0.7472582			61,734.74	46,131.79
		PV of Lease =	€ 276,002.96	PV of Buying =	€ 255,065.39

Since the present value of the after-tax cash outflows for the purchase alternative, €255,065.39, is less than for the lease alternative, €276,002.96, it is less costly to purchase than to lease the equipment.

However there are a number of factors that must also be considered.

Non financial factors such as reliability / security / necessity & ease of upgrades / speed / management time / competence of personnel etc. could also be of equal or more importance.

Financial factors such as the fact that the purchased equipment remains the property of the firm and would have a value despite being depreciated to zero should be considered.

Similarly while we would have to continue to incur running expenses (which may increase as the equipment ages) it would not be unreasonable to assume that they would be less than the annual lease charges.

If we did not end the lease the final payment of €60,000 (€52,500 after tax) would not have to be paid and the NPV would favour the lease.

Hence the decision is not unambiguous and more information is required to make a decision. With only the information in the question and making the decision solely on NPV grounds then the purchase decision would be the correct one. However it would have to be delivered with a large health warning!

Question 2; Part (c)
1 mark for basic types, 2 x 2 marks for advantages and disadvantages, = 5 marks in total.

Describe the two basic types of leases available and explain the advantages and disadvantages of leasing.

The two basic types of leases available to a business are operating leases and financial leases.

An operating lease is typically a contractual arrangement whereby the lessee agrees to make periodic payments to the lessor, often for five years or less, to obtain an asset's services. The lessee generally receives an option to cancel the lease by paying a cancellation fee.

A financial (or capital) lease is longer term than an operating lease. Financial leases are non-cancellable and therefore obligate the lessee to make payments over a predefined period.

The advantages of leasing are
   • the ability of the lessee to depreciate land, which is prohibited if the land were purchased,
   • the use of sale-leaseback arrangements may permit the firm to increase its liquidity by converting an asset into cash, which can then be used as working capital,
   • leasing provides 100 percent financing,
   • the maximum claim of lessors if a lessee becomes bankrupt is three years of lease payments along with reclaiming the asset,
   • the lessee may avoid the cost of obsolescence if the lessor fails to accurately anticipate the obsolescence of assets and sets the lease payment too low,
   • the lessee avoids many of the restrictive covenants that are usually included as part of a long- term loan, and
   • in the case of low-cost assets leasing may provide the firm with needed financing flexibility.

The disadvantages of leasing are
   • a lease does not have a stated interest cost,
   • at the end of the term of the lease agreement, the lessor realises the salvage value,
   • the lessee is generally prohibited from making improvements on the leased property or asset without the approval of the lessor, and
   • if a lessee leases an asset that subsequently becomes obsolete, it still must make lease payments over the remaining term of the lease.

Question 3; Part (a)
2 Marks for explaining how an FRA could work and 2 marks for how and when profits and losses are recognised and discounted = 4 Marks in Total.

By locking in a rate of interest today on a notional deposit or loan in the future a Forward Rate Agreement (FRA) gives a greater degree of certainty than would otherwise be achieved. As here XYZ will be depositing money for six months they will enter into an FRA such that if rates fall between now and three months' time they will be compensated by the counterparty, (usually a bank). If they are wrong and interest rates rise in the mean time they must compensate the counterparty. The amount of compensation depends on the value of the notional principal and the difference between the contracted FRA rate and the actual interest rate that applies at the start of the FRA.

In many ways an FRA is like a forward contract on interest rates. However unlike a forward rate where the money is handed over at the end in an FRA while the interest received on the future deposit will be received at the end of the deposit period, the FRA is settled at the start of the deposit period.

Thus the compensation, whether paid or received, must be discounted using the current interest rate, to its value as at the start of the deposit period.

For a number of reasons the FRA will not necessarily produce a perfect hedge. E.g. the change in US Dollar and the best interest rate available to XYZ may not change by the same amount. Likewise as the actual discount rate used when calculating the FRA compensation uses US Dollar the compensation may not reflect the actual time value of money for XYZ.

Question 3; part b)
5 Marks for how the FRA will work and 5 marks for how and when the actual profits from the FRA are recognised and discounted = 10 Marks in Total.

Note 1: "3.10 – 3.40% for the 3V9" refers to the rates offered. In this case as XYZ will be making a deposit, it is the 3.1% which is the operative rate.

Note 2: years = six months = 0.5

In June as the EURIBOR rates have fallen the FRA cash flow received will be:

> = (FRA rate – current EURIBOR rate) x notional principal x years /
> ((1 + current EURIBOR rate) x years)

> = (0·0310 – 0·01) x $25,000,000 x 0.5 / ((1 + 0·01) x 0.5)
> = $262,500 / 1·005 = $261,194.03

Hence by entering into the FRA the counterparty will pay XYZ $261,194.03 in June.

Thus in June XYZ will have a total of $25,261,194.03 to invest,
I.e. the original amount $25,000,000 plus the discounted profit on the FRA of $261,194.03

Thus in June XYZ will deposit $25,261,194.03 for 182.5 days at 0·75%
> = PV x ((1 + r) x years)
> = $25,261,194.03 x ((1 + 0·0075) x 0.5)
> = $25,355,923.51.

XYZ has achieved an annualised return of:
> = ($25,355,923.51 - $25,000,000) / $25,000,000 x 0.5 x 100 / 1
> = 2·85% per annum on the original amount of $25,000,000.

Without the FRA XYZ would have achieved an annualised return of just 0.75%.
I.e. without the FRA the return would be
> = PV x ((1 + r) x years)
> = $25,000,000 x ((1 + 0·0075) x 0.5)
> = $25,093,750.

The results can be summarised | | With FRA | Without FRA
| | |
June – | Cash Inflow | $25,000,000.00 | $25,000,000
| Discounted Profit from FRA | $ 261,194.03 | $ 0
| Amount Invested | $25,261,194.03 | $25,000,000

December – | Cash Total | $25,355,923.51 | $25,093,750.00
| Cash required | $25,300,000.00 | $25,300,000.00
| Surplus (Deficit) cash | $ 55,923.51 | $ (206,250.00)
| Effective Annual Interest Rate | 2·85% | 0·75%

Using the FRA has helped to protect the final return. Without the FRA the investment would have produced a return of only $25,093,750. This would not have been enough to meet its requirements of $25.3 million in 9 months' time without dipping into its own funds.

By entering into the FRA, XYZ will have enough to meet its requirements and have a surplus of almost $56 thousand.

Question 3 Part (c)
2 Marks for comparing Share #1 vs. Share #2, 2 Marks for the Portfolio Beta and 2 Marks for the Portfolio Standard Deviation = 6 Marks in Total.

Share #1 vs. Share #2
Yes, this is possible and believable. A share with a high beta might have a higher or lower standard deviation than a share with a low beta. The standard deviation is made up of both systematic and unsystematic risk, whereas beta measures just systematic risk. Share #1 has a high beta and a relatively low sigma, but this might simply reflect that most of share #1's risk is systematic. On the other hand, share #2 has a higher variance, but if most of this risk is unsystematic, share #2 will have a lower beta.

The Portfolio Beta
As the portfolio Beta is a simple weighted average of the individual Betas then yes, the portfolio Beta is both possible and believable.

The Portfolio Standard Deviation
It is possible but not very likely that the portfolio's standard deviation would equal the weighted average of the share standard deviations. For it to be correct shares #1 and #2 would have to be perfectly positively correlated. For two random shares to be perfectly positively correlated is extremely unlikely. It is far more likely that as the shares would be less than perfectly positively correlated the portfolio standard deviation would be less than simple weighted average of the individual standard deviations.

Section B
Question 4; Part (a)
5 Marks for the benefits = 5 Marks in Total.

What are the benefits of going public and floating on the Irish Stock Exchange's markets?

According to the ISE the benefits of going public and floating on the ISE's markets include:

Access to Irish and international investors from a wide pool of institutional and private investors (in Ireland and overseas) at the time of IPO and in further fundraisings to achieve growth and scale.

Increased visibility and profile in Irish and overseas markets – investors, customers, suppliers, finance providers, and employees.

Financial flexibility as shares can be offered as consideration when making acquisitions.

Liquidity for shareholders as a market is established for your company's shares.

Employee incentive mechanisms giving employees a direct stake in the success of your business.

Benefits of Listing on the MSM

The Main Securities Market, the ISE's market for larger, more established companies - Irish and international - covers a broad range of industry sectors including financial services, building, oil and gas, utilities and food.

World-class trading systems with trading the ISE Xetra® by Irish and international investors, settlement in CREST and clearing through the central counterparty, Eurex Clearing AG.

ISEQ® Index eligibility raises your company's visibility and profile with institutional investors. Index-based investing strategies are popular among institutional investors.

Market support from investors, corporate brokers and analysts after flotation will help maintain a liquid and stable market in your company's shares.

ISE products and services for listed companies including information products and investor relations services.

High regulatory standards comprising EU Directive requirements, the Listing Rules of the ISE and best practice corporate governance standards.

Benefits of a quotation on the ESM

The Enterprise Security Market is a market designed primarily for small to mid-sized companies. ESM is regulated by the Irish Stock Exchange plc.

Euro currency trading - Provides access to a wide universe of investors in the UK, Ireland, Continental Europe and the US, that invest in Euro denominated stocks.

International quotation on a world-class trading platform (ISE Xetra®) - Using leading technology provided by Deutsche Börse, the ISE's international membership base ensures visibility of your company's shares on trading screens across Europe. Competitive execution costs incentivise liquidity in your shares.

Eligibility for ISEQ® and Eurostoxx indices - Increases the profile and visibility of your company in domestic and international markets.
ISE support and services - Multiple support services from the ISE including ISEQ inclusion, monthly analysis of trading activity and a powerful investor relations tool (developed in conjunction with Thomson Reuters).

Complementary regulatory approach - ESM Rules facilitate a dual ESM/AIM admission - by utilising the same timetable and admission document. The ISE is currently expanding this streamlined approach to dual ISE/NASDAQ or ISE/NYSE admissions.

Highly competitive fees - €4k joining fee and €4k annual fee. No charge for further admission of shares to the market.

Broker services and analyst support - Liquidity and research support from the Irish stockbroking community. Their institutional sales and corporate broking teams utilise their substantial network of contacts with international institutional investors to maintain superior service levels on an on-going basis to Irish companies, regardless of company size.

Question 4; Part (b)
5 Marks for the costs = 5 Marks in Total.

What are the costs (in every sense of the word) of going public and floating on the Irish Stock Exchange's (ISE)'s markets?

Costs of going public and floating are both financial and non financial and would include:

High financial costs of IPOs, with no guarantee of success: Cash expenses of IPO include paying for advice etc. as well as the floatation itself!

Managerial costs both of planning and executing IPO.

Firms need to focus on stock price and deal with shareholders.

In public firms, severe constraints are placed on managerial discretion.
- Have to disclose operating and sensitive data *publicly*
- Must follow public company governance rules set by ISE

Question 4; Part (c)
5 Marks for Compare and contrast = 5 Marks in Total.

Compare and contrast the main differences to achieving a listing on the Enterprise Securities Market (ESM) compared to the Main Securities Market (MSM) of the Irish Stock Exchange (ISE).

According to the ISE the main differences to achieving a listing on the Enterprise Securities Market (ESM) compared to the Main Securities Market (MSM) of the Irish Stock Exchange (ISE) include:

Enterprise Securities Market	Main Securities Market
No specific admission criteria other than the requirement for an applicant to have a minimum market capitalization of €5 million.	Detailed conditions for listing required.
No trading record required.	Normally, a 3 year trading record is required.
No minimum number of shares to be held in public hands.	Minimum of 25% of shares to be held in public hands.
No pre-vetting of ESM admission documents by the ISE.	Pre-vetting of listing particulars by the ISE prior to circulation.
In most instances, no prior shareholder approval of substantial acquisitions and disposals.	Prior shareholder approval required for substantial acquisitions and disposals

Question 5
5 Marks for application to borrowers, 5 Marks for application to savers and 5 Marks for diagram(s) = 15 Marks in Total.

"Explain with the aid of a diagram(s)" requires that the candidate should be able to show with reference to a diagram(s) how if the variable interest rate were to rise above the cap or fall below the floor what the effect would be on the borrower / saver.

Interest rate risk is caused by a lack of certainty about the future direction of interest rate movements.

If you are a borrower you are wary of interest rate rises unless you eliminate this risk by taking out a fixed rate loan. But by taking out a fixed rate loan you eliminate the possibility of benefiting from an interest rate fall.

If you are a saver you are wary of interest rate falls unless you eliminate this risk by taking out a fixed rate saving product. But by taking out a fixed rate saving product you eliminate the possibility of benefiting from an interest rate rise.

Cap – pre-agreed ceiling interest rate written into variable rate loan or variable rate saving product agreements. There may be a bank fee or a difference in rate offered – dependent on the expectations of the direction of interest rate changes. A cap would reduce interest rate risk for a borrower. However as it could prevent a saver benefiting from a higher variable rate why would a saver agree to one? If by agreeing to a cap it resulted in a higher variable rate of interest for the saver (while the variable rate does is below the cap) or the saver might receive a payment of a fee by the writer.

Floor – pre-agreed lower interest rate, which the interest that is charged (offered) will not fall below on a variable rate loan agreements (variable rate saving product). There may be a bank fee or a difference in rate offered – dependent on the expectations of the direction of interest rate changes. A floor would reduce interest rate risk for a saver. However as it could prevent a borrower benefiting from a lower variable rate it is of no benefit to a borrower, except if it resulted in a lower variable rate of interest (so long as the variable rate does not go below the floor) or payment of a fee by the writer.

Collar – combination of Cap and Floor. There may be a bank fee or a difference in the rate offered – dependent on the expectations of the direction of interest rate changes.
So for example a company who wishes to borrow money and buying a collar will have a band of tolerance across a minimum and maximum cost of borrowing. If rates rise above the cap rate, it is compensated by the writer of the collar. If rates fall through the floor, it will compensate the other party.

In practice, for such a company when borrowing if the premium for buying the cap equals the premium at which the writer will buy the floor from the company, no up-front payment will be made by either party. This will result in a zero cost collar. Any variation in the cap/floor rate will produce a net payment one way or the other.

Caps, floors and collars can be considered and priced as if they were all options.

Question 6 Part (a): "The term structure of interest rates and the normal yield curve".
3 mark for showing understanding of a yield curve and 2 marks for explaining the normal yield curve = 5 marks in all.

The term structure of interest rates, also known as the yield curve, is a very common bond valuation method. Constructed by graphing the yield to maturities and the respective maturity dates of benchmark fixed-income securities, the yield curve is a measure of the market's expectations of future interest rates given the current market conditions. Bonds, issued by governments with stable finances, are considered risk-free, and as such, their yields are often used as the benchmarks for fixed-income securities with the same maturities. The term structure of interest rates is graphed as though each coupon payment of a non-callable fixed-income security were a zero-coupon bond that "matures" on the coupon payment date. The exact shape of the curve can be different at any point in time. So if the normal yield curve changes shape, it tells investors that they may need to change their outlook on the economy.

There are three main patterns created by the term structure of interest rates; Normal, flat and inverse.

Normal Yield Curve: As its name indicates, this is the yield curve shape that forms during normal market conditions, wherein investors generally believe that there will be no significant changes in the economy, such as in inflation rates, and that the economy will continue to grow at a normal rate. During such conditions, investors expect higher yields for fixed income instruments with long-term maturities that occur farther into the future. In other words, the market expects long-term fixed income securities to offer higher yields than short-term fixed income securities. This is a normal expectation of the market because short-term instruments generally hold less risk than long-term instruments; the farther into the future the bond's maturity, the more time and, therefore, uncertainty the bondholder faces before being paid back the principal. To invest in one instrument for a longer period of time, an investor needs to be compensated for undertaking the additional risk.

As general current interest rates increase, the price of a bond will decrease and its yield will increase.
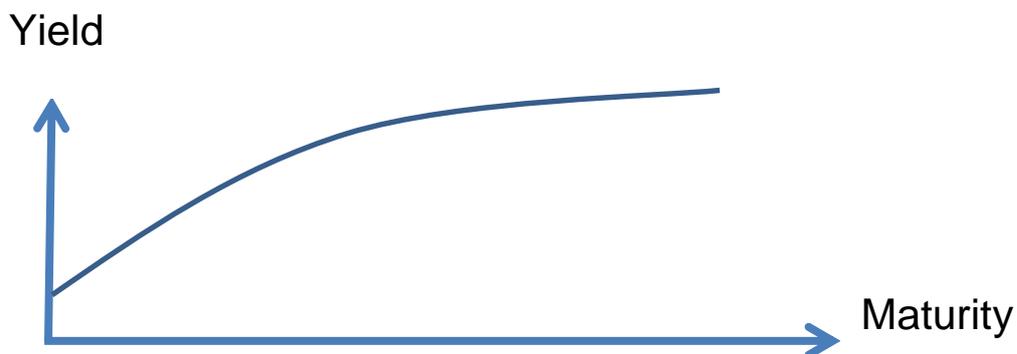
A flat yield curve usually occurs when the market is making a transition that emits different but simultaneous indications of what interest rates will do. In other words, there may be

some signals that short-term interest rates will rise and other signals that long-term interest rates will fall.

Inverted Yield Curve: These yield curves are rare, and they form during extraordinary market conditions wherein the expectations of investors are completely the inverse of those demonstrated by the normal yield curve. In such abnormal market environments, bonds with maturity dates further into the future are expected to offer lower yields than bonds with shorter maturities. The inverted yield curve indicates that the market currently expects interest rates to decline as time moves farther into the future,

Question 6 Part b)
Why the separation of the roles of the Chief Executive Officer and the Chairman is considered desirable.
1 mark for role of the Chairman, 1 mark for role of the CEO and 3 mark for why it's appropriate to separate the roles = 5 marks in all.

The role of the Chairman is to act as the leader of the board of directors and to be responsible for the successful carrying out of the policies set by the board. The Chairman has the most important role in external relations with all the stakeholders and investors in the company.

As a direct employee of the company, the Chief Executive Officer (CEO) is the highest ranking executive director. The CEO is therefore personally accountable to the board for both all decisions made by all the executive management and the results of those decisions.

Thus these two positions are the most dominant on the board of directors. Should these two positions be held by the same person then that person could have such a powerful influence on decision-making that other board members would not feel comfortable to confront or call to account such a strong director. Likewise it may also be easier said than done for all aspects of an issue to be well thought-out before decisions are made.

Should the dominant director also play a key role in selecting non-executive directors, these NEDs may feel compromised in vigorously offering the challenge needed for long-term success. It would not be unreasonable to suspect that maximising shareholder value might be sacrificed and that they might manage the company for their own personal benefit rather than in the interests of all shareholders. Many examples of Poor corporate governance that led to the setting up of the Cadbury Committee were in companies run by domineering chairmen and chief executives, such as Asil Nadir (Polly Peck) and Robert Maxwell (Mirror Group).

Reasons given by listed companies for defying the code include that given by Morrisons in the UK, that basically no one understood the supermarket business better their CEO who they also made chairman. While that was somewhat acceptable while the group was performing strongly once the results began to slip this blatant breach of the Combined Code was no longer deemed acceptable and the company followed the code and separated out the roles of CEO and Chairman to two different people.

Question 6 Part c)
5 marks for discussing the pecking order for financing = 5 marks in all.

Finance theory would suggest that a firm should aim to maximise shareholder wealth. It can do this by choosing a debt-equity mix that minimises its WACC and taking on all positive NPV projects. As debt is generally cheaper than equity, there should be a preference towards debt in the capital structure. Yet as retained earnings are simply a form of equity, why in reality does the proportion of equity in the form of retained earnings in the capital structure seem so high? Similarly it has been observed that firms that seek to increase the amount of debt in the capital structure often see a rise in the value of the firm in the stock market. The pecking order for financing argument tries to explain this.

The pecking order for financing argument explains why profitable companies that do not need external finance only borrow a little. They are simply not looking at optimal debt equity ratios. They can use their retained earnings to fund all potential growth opportunities without recourse to the capital markets.

The pecking order for financing argument is that managers do not try to reach the theoretical optimal capital structure. They prefer to use internally generated undistributed profits than go to external sources of finance. Managers seek to use internally generated funds first because this avoids the time consuming and burdensome task of seeking external finance. Unfortunately it also however avoids the discipline involved in justifying why an external investor should lend or invest in the firm.

Only if a firm needs more funds than are available from retained earnings for potentially profitable investments, will it go to the capital markets.

According to the pecking order for financing argument because debt is first in the pecking order of externally raised finance the firm will only go to the stock market to raise fresh equity finance as a last resort. Thus internally generated equity is at the top of the pecking order and externally generated equity at the bottom.

Managers and others have suggested that choosing to issue new shares is a last resort because of the negative "signalling" effect. The argument is that due to asymmetric information, the stock market will feel that a new equity issue is a signal that managers know the shares are overvalued. Hence a new shares issue could be a danger signal that the firm is or will be in trouble. The market might suspect that management is trying to bolster the firm's capital structure in advance of bad news ahead.

Again according to the pecking order for financing argument managers choose External debt over external equity because obtaining external debt is cheaper, it is quicker to obtain, it requires less information to be publicly released and debt is less burdensome on management to obtain than issuing new shares on the stock market.

Finally issuing new ordinary shares is more expensive than issuing new debt capital, which in turn is more expensive than simply using retained earnings. The costs of new issues of debt and rights issues of shares can be very expensive, whereas retained earnings are available without issuing costs.

Question 6 Part d)
5 marks for discussing how the form of payment will affect the likelihood of a successful acquisition = 5 marks in all.

There are some essential strategic considerations to think about when choosing the form of payment.

Cash, shares or a combination?
1. With pure cash deals, there is no doubt on the real value of the bid (without considering an eventual earnout). The contingency of the share payment is removed.

Thus, a cash offer preempts competitors better than securities.
2. With a share deal the acquirer's capital structure might be affected and the control of the acquirer modified. If the issuance of shares is necessary, shareholders in the acquiring company might prevent such capital increases at the general meeting of shareholders. This risk is removed with a cash transaction.
3. The balance sheet of the buyer will be modified. The acquirer should take into account the effects on its reported financial results.

For example, in a pure cash deal (financed from the company's current account), liquidity ratios might decrease.

On the other hand, in a pure stock for stock transaction (financed from the issuance of new shares), the company might show lower profitability ratios (e.g. ROA).

However, economic dilution is more important than accounting dilution when making the choice.
4. The impact of taxes could be a vital element affecting the likelihood of a successful acquisition and should be evaluated with the guidance of competent tax and accounting advisers.
5. Transaction costs, particularly for larger transactions, should be considered. These could include fees for preparation of a proxy statement, an extraordinary shareholder meeting and registration.
6. Finally, paying cash or with shares is a way to signal value to the other party. For example acquirers tend to offer stock when they believe their shares are overvalued and cash when undervalued.

The form of payment and financing options are tightly linked. If the buyer pays cash, there are three main financing options:

- Cash on hand: it consumes financial slack (excess cash or unused debt capacity) and may decrease debt rating. There are no major transaction costs.
- It consumes financial slack, may decrease debt rating and increase cost of debt. Transaction costs include underwriting or closing costs of 1% to 3% of the face value.
- Issue of stock: it increases financial slack, may improve debt rating and reduce cost of debt.

If the buyer pays with stock, the financing possibilities are:

- Issue of stock (same effects and transaction costs as described above).

- Shares in treasury: it increases financial slack (if they don't have to be repurchased on the market), may improve debt rating and reduce cost of debt. Transaction costs include brokerage fees if shares are repurchased in the market otherwise there are no major costs.

In general, stock will create financial flexibility.

Question 6 Part e)
5 marks for discussing internal hedging techniques available to large Irish firms to manage their foreign currency exchange risks = 5 marks in all.

Internal hedging techniques
Internal hedging means using techniques available within the company or group to manage exchange-rate risks. These techniques do not operate through the foreign exchange markets and therefore they avoid the associated costs. However, this does not mean they are costless.

Invoicing in the home currency
Here, the company simply invoices in its own currency. The exchange rate risk is not avoided; it is merely transferred to the customer. This technique may not always be possible, given that the company may well be competing with local industries invoicing in the local currency, and, as such, the overseas quote may become uncompetitive.

Bilateral and multilateral netting
This is a form of matching appropriate for multinational groups or companies with subsidiaries or branches in a number of overseas countries. Bilateral netting applies where pairs of companies in the same group net off their own positions regarding payables and receivables, often without the involvement of a central treasury department. Multilateral netting is performed by a central treasury department where several subsidiaries are involved and interact with head office.

Leading and lagging
This method involves companies settling accounts in foreign currencies either at the beginning or at the end of their allowed credit period, according to their expectations of future exchange rate movements.

Question 6 Part f)
1 mark for explanation of Working capital, 4 marks for relationship = 5 marks in all

The relationship between working capital and profitability.

It is very possible if not probable that as working capital in a firm increase so does profit. This is because the level of working capital: stocks, debtors and creditors should follow the level of business which in turn should be generating profits. As a business expands in terms of fixed assets it will usually require additional working capital too. Also as profit increases it allows working capital to be increased too.

However it is not working capital per se that generates profits or profits that generates working capital. What is important is how and in what proportions working capital is used. A company needs to exercise control over working capital. Particularly when credit markets are tight, a company's liquidity is as important as its profitability. Changes in working capital will usually change a company's liquidity.

Depending on the nature of a business, its working capital requirements will be different. Unlike a typical service company, a manufacturing company may need substantial levels of stocks. It may also have high levels of debtors and creditors as well. However a decision to use "Just In Time" methods of production, if implemented successfully, could result in lower levels of stocks. Also producing in smaller batches could result in the reduction of finished goods.

Therefore it is not necessary to have higher working capital to have higher profits. In fact in companies with loose financial management that carry high stocks and are too generous with giving credit while not taking advantage of credit available for them will not be as profitable as ones that are more tightly managed.