



**SECURITIES & INVESTMENT INSTITUTE MASTERS IN
WEALTH MANAGEMENT
WINTER 2008**

**CHIEF EXAMINER'S REPORT-
FINANCIAL MARKETS**

Introduction

A number of students had obviously not prepared at all for the exam, with their answers being almost single lines rather than discussions or explanations. On a positive note the numeric answers were very well handled and students generally did seem to have mastered the basic concepts. One major concern was that students did not seem to look at the marks available and structure their answer accordingly e.g. one line of text for a 6 mark question.

Detailed Comments per Section

Section A which was designed to test smaller aspects of the syllabus that were not included in other questions.

By far the most popular questions were *Question Nos 4-6* with most students scoring reasonably well in them, averages tended to be over 50% of the available marks, although some students did seem to be relying upon their general knowledge rather than the material included in the textbook

Question 1 was the next most popular however here it was more evident that students were relying upon their own knowledge rather than material provided and thus the scoring was lower as parts were missed in their answers.

Questions 2 & 3 were much less popular although the majority of students attempting them did seem to be quite knowledgeable on the topics. It was disappointing to see that students had no confidence in their knowledge of accounts nor European aspects of the course although both are important in the Financial Services Industry.

Section B was intended to test the mathematical abilities of the students as well as parts of the theory related thereto. They were also expected to be able to think *Question 7* looked at a knowledge of Accounts and how this affects share valuations (which is very similar to bond valuation re discounting etc. as per Chapter 5 in the textbook) Some students struggled with the question, not even being able to work out the number of shares in issue (38m) and the dividend per share, taking the global figure rather than the dividend per share. One really surprising aspect was that students were able to calculate the Net Present Value in Q8 but in Q7b they could not think how to calculate the value – it was basically a NPV for the dividends (most ignored dividends) and deducting this from the purchase price and then calculating the future value of what was left. It appears that students were unable to think about the question and apply their knowledge to it.

Question 8 was much better attempted and most students scored maximum marks for part a) which was a NPV calculation (see above). The discussion on IRR was much poorer, with some calculating IRR rather than discussing it! Here again studying the textbook seemed to be missing from the answer, rather underlying knowledge was being relied upon by a large number of students. Section c) which was also involving NPV was much poorer in the quality of the answers, suggesting that students were happy with the basic concept but as soon as they were required to apply the concepts in a more practical scenario. The last section was even more of a problem for students with many not knowing what Holding Period Return was or how to calculate it, some even calculating Duration.

Section C was a larger question, with more of a case study scenario feel to it, data being supplied and then students could apply it to the questions posed. Overall students seemed to have a reasonable grasp the concept of derivatives but the application was more of a varied response.

- a) Most students had some knowledge of the difference between the two types of contract, although impact on costs and flexibility was more problematic.
- b) For all of the simple strategies, students did have some idea of the concepts but a number did not seem to grasp the difference between actual delivery and cash for the profit nor the difference that European or American could cause. Also far too many could not think beyond the basic fact, e.g. in a long call

they could see no downside protection which would come from selling the shares and buying calls, in short puts they could also have sold the share, purchased gilts and then if asked to purchase the shares when the price fell using the premium and the interest to cover the drop. It could also be a good idea for students to use diagrams to help them explain their answers – to act as an aid memoir for them and to get marks when their answer was unclear.

- c) The answers re warrants and convertible bonds were reasonable, although the depth of knowledge could have been better.
- d) This was a disappointing answer with some students thinking that saying a straddle would be a good strategy but not explaining what it meant, thus losing marks as they had not demonstrated any knowledge other than the name.

Student Guidance

- Try to spend more time preparing for the exam.
- Look at the marks available for the question and try to answer accordingly, if six marks then a more detailed answer than one sentence will be expected.
- Do not be afraid to use diagrams etc. to highlight your answer as they can be awarded marks even if the answer is not fully comprehensive.
- Try to think about the question and then apply your knowledge. There will be occasions when your basic knowledge will allow you to answer, but you do need to think about it first.

The following information is provided for solely for the guidance of candidates and should not be read as providing a model answer, nor, in some instances as the only possible response.

Q1 Discuss how interest rates are affected by inflation

5 marks

1. Any increase in money supply stimulates economic activity beyond its full employment level.
2. This leads to an increase in the demand for money (transactionary demand) and can therefore lead to an increase in interest rates.
3. Whilst this effect may not be certain, the increase in inflationary expectations occasioned by the increase in money supply will definitely lead to an increase in nominal interest rates.
4. In the longer run, the control of money supply under monetarist policy will bring inflation and interest rates down.
5. So long as the authorities expand the money supply in line with the needs of the economy, there will be price stability and interest rates should not be volatile.

Q2 Discuss five of the areas where European Integration has furthest to go. **5 marks**

There are many areas where harmonisation is a long way from being achieved. Here are some examples.

- 1) Company taxation. Tax rates, which can affect the viability of investment plans, vary from country to country within the EU.
- 2) Indirect taxation (eg Value Added Tax or VAT). Whilst there have been moves to harmonisation, there are still differences between rates imposed by member states.
- 3) Differences in prosperity. There are considerable differences in prosperity between the wealthiest EU economies (such as Germany) and the poorest (eg some of the newly enrolled Eastern European members).
- 4) Differences in workforce skills. Again, this can have a significant effect on investment decisions.

The workforce in Germany is perhaps the most highly trained, but it is also the most highly paid.

5) Infrastructure. Some countries are better provided with road and rail infrastructure than others.

Where accessibility to a market is an important issue, infrastructure can mean significant variations in distribution costs.

Q3 Explain what is meant by “Revenue Expenditure” **5 marks**

Revenue expenditure is expenditure incurred in:

- 1 Acquiring assets to be sold for conversion into cash, e.g. inventory
- 2 Manufacturing, selling, distributing goods, e.g. wages
- 3 Day-to-day administrative expenses, e.g. electricity, telephone
- 4 Maintenance of non current assets, e.g. repairs
- 5 Revenue expenditure is charged directly against profits for the period to which it relates

Q4 Discuss the difference between systematic and non-systematic risk **5 marks**

- 1 non-systematic or specific risk. The risk that can be diversified away is that relating to or specific the particular investment.
2. This kind of risk is called non-systematic or unsystematic risk as well as specific risk. In the case of an equity investment, the company concerned might, for example, lose a major customer, or it might suffer a loss in its share of sales in its particular market. Such events can adversely affect the share price of that particular company.
3. Non-diversifiable risk: systematic or market risk. Suppose that the economy generally is performing poorly. Consumer demand may be weak, affecting companies generally. The international political situation may be seen as fragile.

4. Such factors can affect market confidence and investment values generally. If share prices generally are falling and returns are declining, then a wide and diversified portfolio of shares is very likely to fall in line with the wider market.

5. The risk of this happening affects the whole 'system' – the market. Systematic or market risk cannot be diversified away by holding a range of investments in that particular market.

Q5 Explain the potential risks faced by investors who invest in cash deposits. **5 marks**

1. Inflation risk, since inflation could exceed the interest payable. While an investor is locked in at fixed interest rates, inflation might race ahead due to unforeseen economic conditions, and the purchasing power of the investor's capital could fall.

2. Interest risk, if the rate of interest paid is less than could otherwise be obtained on other low-risk investment products, or the investor is locked in at a fixed rate for fixed terms, when he might otherwise have been able to take advantage of rising interest rates available in the market

3. With a deposit investment, the capital is secure in that the original capital is returned when the deposit is withdrawn, or the account matures, subject to any penalties which will have been made explicit in the terms and conditions of the account. Some degree of capital risk does however exist for the depositor.

4. This is because there is a chance that the deposit taking institution fails, and therefore defaults and will not repay depositors' capital. This happened with the Bank of Credit and Commerce International, which collapsed in 1991.

5. If a UK deposit taker fails, the depositor will have recourse to the Financial Services Compensation Scheme (FSCS), which is administered by the Financial Services Authority (FSA).

Q6 Although most bonds are redeemable, there are a number of variations where redemption is not "normal". Discuss these variations **5 marks**

1. Single-dated bonds – bonds which mature at a pre-set date only.
2. Double-dated bonds – bonds that can be redeemed by the issuer between specified dates. On a double-dated bond, the earlier date specifies when the issuer may redeem, the later date specifies when the bond must be redeemed.
3. Callable bonds – where the issuer of the bond is able to redeem the bond at an earlier date, should they wish to do so. Double-dated bonds may be considered as a subset of callable bonds, though callable bonds may have many other features (e.g. call premiums) and may be callable throughout their lives.
4. Puttable bonds – a more recent innovation, which gives the holder the ability to sell the bond back to the issuer at a premium over the face value.
5. On irredeemable or perpetual or undated bonds, there is no maturity date and the issuer is under no obligation to redeem the principal sum, though he may have the right to do so if he wishes. On these bonds, the coupon will be paid into perpetuity.

Section B Answer Both Questions

Q7 Nawaz Pension Management Ltd is investigating whether or not they should buy some shares in Blades Plc. You have to advise the Board about the price which should be paid for the shares based upon the following information.

Blades Plc.

Profit & Loss Account for the year ending 30th April 2008

	£m
Turnover	30
Profit before Interest & tax	18.3
Interest	2
Profit before tax	16.3
Net profit after tax	13.45
Preference Dividend	2
Dividend	8
Retained profit	3.45

Balance Sheet as at 30th April 2008

	Cost (£m)	Depreciation (£m)	Net Value (£m)
Fixed Assets	18	12	6
Land	20	4	16
Plant & Equip.	6	3.75	2.25
Total			<u>24.25</u>

Current Assets

Stock	4		
Debtors	3.2		
Bank	5		<u>12.2</u>

Current Liabilities

Creditors	6.1		
Dividend	8		
Tax	2.85		
Interest on Loans	2		
Preference Dividend	2		(20.95)
Total current assets			(8.75)

Long Term Liabilities

Loan stock	5.6		(5.6)
Total Net Assets			9.9

Financed by:

Ord Shares (5p)	1.9
Preference Shares	5
Retained Profit	3
	<u>9.9</u>

The P/E in the FT is 14:1 (Sector average is 8:1) and the dividend yield in the FT (at 30th April) was 5% (gross). Shareholders want a return of 9% per annum.

In the 6 months interim accounts (dated 31st October 2008) the following data was noted as having changed:

	£m (now)
Fixed Assets	8
Plant	1.3
Bank	1.4
Creditors	6.3
Dividend	0
Pref Dividend	0

- a) Calculate the share price using the following methods:
- i) The net asset value method (as at 31st October 2008). (5 Marks)
 - ii) The dividend valuation model (assuming holding indefinitely). (3 Marks)
 - iii) The Price Earning Ratio. (2 Marks)
 - iv) The dividend growth model (assuming a constant growth rate of 3%). (3 Marks)
 - v) The dividend yield (as at 30th April). (2 Marks)
- b) What would be the required selling price of the share if it is to be sold after 3 years (using the dividend yield price calculated in 4) above as the purchase price)? (5 Marks)
- Total (20 Marks)

Answer requires the recalculation of the figures to allow for the new information

- i) Balance Sheet as at 30th April 2008

	<u>Cost (£m)</u>	<u>Depreciation (£m)</u>	<u>Net Value (£m)</u>
Fixed Assets			8
Land	20	4	16
Plant & Equip.			1.3
Total			<u>25.3</u>
<u>Current Assets</u>			
Stock		4	
Debtors		3.2	
Bank		1.4	<u>8.4</u>
<u>Current Liabilities</u>			
Creditors		6.13	
Dividend		0	
Tax		2.85	
Interest on Loans		2	
Preference Dividend		0	(10.98)
Total current assets			<u>(2.58)</u>

Long Term Liabilities

Loan stock	5.6	(5.6)
Total Net Assets		<u>17.12</u>

Financed by:

Ord Shares (5p)	1.9	
Preference Shares		5
Retained Profit	3	<u>9.9</u>

No. of shares £1.9m div by .05=38m

Asset per share $17.12/38 = £0.45$

ii) Dividend

$£8m/38m = 21p$

Dividend could be grossed up by a student and be awarded marks

Thus if Dividend is 21p and required return is 9%

Then $.21/.09 = £2.33$

Gross yield 5% $5\% = .21/x$

$$X = £6.60$$

iii) P/E Ratio 14.1 (although some students went for the sector figure for some reason)

Net profit after tax £13.45m (Other ways of calculating EPS exist and would be given marks)

No. of shares 38m

$£13.45m/38m = £0.35$ EPS

$.35 \times 14 = £4.96$

v) Dividend is 21p

thus $.21/.09 - .03 = .21/.06 = £3.50$ (Students who grew the dividend would also be given marks)

v) Dividend is 5% therefore if 21p = 5% then $.21 * 20 = £4.20$

b) A basic NPV calculation

If P/P = £4.20 and dividend is 21p for 3 years and required return is 9%

$$.21/1.09 + .21/1.09^2 + .21/1.09^3 + SP/1.09^3 = £4.20$$

$$Sp/1.093 = 4.20 - (.19 + .18 + .16) = 3.67$$

$$SP = 3.67(1.093) = £4.75$$

Q8 You have been asked to evaluate a possible four year investment.

The following information has been supplied.

Initial Outlay:	£109,000
Projected Net Cash Flows	
Year 1	£50,000
Year 2	£40,000
Year 3	£45,000
Year 4	£19,000

The project is deemed to be of medium risk and the company classifies risk on the following basis:

Modest risk	8%
Medium risk	12%
High risk	20%

Calculate:

a) Net Present Value (NPV); **(5 marks)**

b) Another strategy would be to calculate the Internal Rate of Return (IRR) but the company are unsure if this is a wise alternative to use. Advise on the merits and demerits of this alternative evaluation strategy; **(7 marks)**

b) An alternative investment is to purchase “Zero Coupon” bonds for £40,000 which will mature with a value of £50,000 in four years (rated as high risk by the company) and to invest the remaining £69,000 in a term account paying 9% compound (rated as modest risk by the company).

i. Calculate the total NPV of this alternative investment **(4 marks)**

ii. An alternative bond from the same company costs £43,000 but pays interest at 5% and matures in four years. What is the holding period return for this bond ? **(4 marks)**

Total (20 marks)

Answer

a)

Yr 1	$50000 / 1.12 =$	44642.86
Yr 2	$40000 / (1.12)^2 =$	31887.76
Yr3	$45000 / (1.12)^3 =$	32030.11
Yr4	$19000 / (1.12)^4 =$	12074.84
Present Value	=	120635.57
Outlay		(109000)
Net Present Value	=	11635.57

b) answer will cover items in the work book which include:

IRR has the following advantages

it properly adjusts for time value of money,

uses cash flows rather than earnings,

accounts for all cash flows,

project IRR is a number with intuitive appeal.

The disadvantages of IRR are

“Mathematical problems”

multiple IRRs, no real solutions,

scale problem,

timing problem

(up to 7 marks)

ci

$$\text{Yr4 } 50000 / (1.20)^4 = 24112.65$$

$$\text{Outlay } = (40000)$$

$$\text{Net Present Value } = (15887)$$

Plus $69000 * (1.09)^4 = 97399.13$ which in today's value is (divide by 1.08 to power 4)

= 71591.27 thus Net Present value is £2591

$$\text{Total NPV} = (15887) + 2591 = (13296) \text{ approx}$$

(up to 4 marks)

cii

If students assume int paid out, then interest equals £2150 per year for 4 years = £8600

$$\text{HPR} = \frac{D + V_e - V_s}{V_s} * 100$$

$$8600 + 43000 - 43000 / 43000 * 100 = 20\%$$

Variations on this are possible e.g. if int compounded or assuming a £50,000 maturity

Section C

Answer All parts of the question

Q9 Dastardly Investments Ltd are debating upon ways to protect part of their portfolio using various derivative products. They have shares in Blatto Plc which its advisors believe may suffer from a period (up to one year) of high volatility in the share price caused by political instability in their main source of raw materials. Dastardly wishes to ensure that the portfolio retains as much of its existing value as possible during this problematic time. It is not sure of the best way to do this and have a number of questions which it wants you to advise it on.

The data you have is as follows. :-

- Share price in Blatto Plc is presently £2.60 and it is thought it could vary by 25% up or down in the period (i.e. possibly moving by up to 50% in a very short period of time)
- The holding is 5 million shares
- Dividend has just been paid and no further dividend is normally paid until October next
- Derivative contracts are per 1,000 shares
- Calls at £2.60 exercise due in 12 months are selling for £160 per contract (European style, American are an extra £100)
- Puts at £2.60 exercise due in 12 months are selling for £140 per contract (European style, American are selling at plus £100)
- Warrants at £2.60 exercise dated November 2010 are selling at 1.6p each
- Convertible bonds are paying 4% pa dated November 2011 and have a conversion detail of 45 shares for the bond plus a payment of £1.00 per share
- The various prices are deemed at present to be fair
- Government bonds due on 1st November 2009 cost £100 and pay 6% at maturity

Answer the following questions (actual numeric calculations are not essential but may well assist the explanation of the answer):

- a) As it is possible to purchase both American and European style options, explain how each works.

Marks 4

Answer

Explanation as to available anywhere, and also the differences that each has, flexibility, cost etc..

b) As their shares in Blatto Plc may fall dramatically in the next twelve months, according to Dastardly's analysts, Dastardly is unsure whether to long or short an option on the shares. Both are thought to offer some protection (both puts and calls). Discuss how the different strategies could offer some protection using

- | | | |
|-----|--------------|---------|
| i | Long puts | marks 4 |
| ii | Short calls | marks 4 |
| iii | Short puts | marks 6 |
| iv | Long Calls | marks 6 |
| v | Mix of above | marks 6 |

Answers- the intention is to make them think about derivatives and not just repeat text book answers. They will therefore be able to explain their strategy and marks will be given if what they suggest does either totally or partially meet the question requirements

i-v

All will explain briefly what it means and then explain how it could be used as a strategy e.g. short a put could be used if they sell the shares and invest in govt bonds and buy back after the volatility has passed and if need be take the premium and interest to balance their position. Each can be used and the numbers may appear as students explain their answers as can diagrams.

c) Someone has suggested that Dastardly Investments Ltd sells the shares and buys either warrants or convertible bonds. Discuss the merits of this strategy.

Marks 6

Answer

This will cover what is a convertible, what is a warrant and how they could sell the shares and buy warrants/convertibles with some of the proceeds and invest the rest in something else e.g. Govt bonds

d) Recommend to the company which you think might be a reasonable solution and say why

Marks 4

Total marks 40

Answer

This is based on the students own answers and thus marks will be allocated based on how they view the work above. A reasonable degree of comment is required.