



**SECURITIES & INVESTMENT INSTITUTE MASTERS IN  
WEALTH MANAGEMENT  
SUMMER 2009**

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

**Comments**

Overall, the percentage passing the exam was under 50% of those sitting it. A significant number of candidates had obviously not prepared at all for the exam, with their answers being very brief (or non-existent) rather than discussions or explanations. It was frankly surprising that some candidates were entered for the exam at all, given their obvious lack of preparation and knowledge. On a more positive note the derivatives question was reasonably well handled by most students and they did seem to have mastered the basic concepts. One major concern was that students still did not seem to look at the marks available and structure their answer accordingly e.g. one line of text for a 3 mark question.

It is essential that candidates are able to take the material in the syllabus, and covered in chapters in the study guide, and apply it to "real world" type scenarios, it is not envisaged that learning the theory "parrot fashion" will suffice to achieve a pass. Some students seemed unaware that the material has to be known but also interpreted to show their understanding of how it can be used. A good example was Question 7 where knowledge of financial ratios was required but this had then to be taken and used in discussing the investment potential of the company. This particular question was very poorly dealt with as candidates seemed to think one ratio per section was all that was required and then a few words at the end, for the marks available and from understanding ratios it should have been apparent to all candidates that it is essential to look at the different aspects from more than one aspect (or ratio). The lack of depth in the early part of the question then meant that the final section had no real content

(and thus limited marks). Some students did try to add more depth by calculating new ratios and these were given credit for doing so. It was also possible for students to make assumptions re share price etc., if they felt that that would help them to suggest a buy/hold/sell recommendation

Candidates did not seem able to apply concepts with which they were familiar in more practical scenarios (where a degree of thought and application was required). This aspect will continue to be tested as it distinguishes those candidates who truly understand and can deal with the concepts and those who have only learned them by rote but do not really have the ability to use them. (this comment is similar to one in the last report and it is thus very disappointing that little notice appears to have been taken by many candidates). A good example was where candidates did not look at the currencies for the SWAP but rather stuck to \$s and the text book definition with no attempt to apply it to the question.

### **Detailed Comments per Section**

**Section A** which was designed to test a variety of small aspects of the syllabus that were not included in other questions.

By far the most popular questions were *Question Nos 3 & 5 with almost all students attempting them*. The average marks for both of them were reasonable considering the numbers of students attempting them and the poor marks from a small minority of candidates. Question 5 in fact had one of the best performances of all questions in this section.

*Questions 2 & 4* were the next most popular with almost two thirds of candidates attempting them. In fact Question 4 was the best answered in this section (as per average mark which was over 3) however Question 2 was the worst average as students did not seem to have grasped the idea that CAPM could be examined, or perhaps they had just decided that as it is covered in depth later it would not be needed for this paper.

*Questions 1 & 6* were much less popular with only just over one third of candidates attempting them. However the majority of students attempting them did seem to be quite knowledgeable on the topics.

**Section B** was intended to test candidates' mathematical abilities as well as the application of parts of the detailed calculations. They were also expected to be able to think, which regrettably some did not do (perhaps because of the exam situation) it is vital that the knowledge of the material is there and understood to allow the practical application from thinking about it.

***Question 7*** looked at a knowledge of Accounts and how this can be used to study the financial health of a company. The biggest problem the majority of candidates had was that they seemed to think that one ratio per aspect was all that was required. The marks available were 3 per aspect, and it is essential, in the real world, to look at the financial health from a number of ratios to decide how a company is placed. It was good to see that the vast majority of candidates did know the ratios that they used, but the limited calculations meant limited marks. The limited calculations also meant that, when the final part of the question was attempted, there was limited information available to base the answer on, with the result that some were only a few lines in length. It was obvious that some students realised at this point that they did require more information and they then calculated it. These students were given credit for these extra calculations. Calculating company share price based on Net Asset Value etc would have been a good idea to allow the recommendation to be made with actual values (some candidates did not make a recommendation!) and this could also have then been used with P/E ratios etc for comments.

***Question 8*** was designed to test the PV and NPV calculations in the syllabus and for a good number of students this proved a blessing as they were able to score full marks in some parts. The most disappointing aspect was that students did not always read the question e.g. the bond is to be sold (not held for the full 10 years) which required a slightly different calculation. Also the question on RPI linked bonds proved to be more of a problem for some candidates, as it required a more specific calculation (although some got full marks).

**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 two types of contract (US and European), although impact on costs and flexibility was more problematic as far

as explanations given were concerned. Candidates must remember to demonstrate their knowledge even when they think it is very basic. A good analogy would be sitting a driving test and making sure that the examiner sees you looking in your mirror by exaggerating your movement.

- b) For all of the simple strategies, students did have some idea of the concepts but a number did not seem to grasp what they looked like, nor the difference that European or American could cause. 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. Another tip could be the use of your own figures to demonstrate the impact to given situations, it is perfectly permissible to say that you will demonstrate the results of your proposal using figures that you create. Please stick to simple numbers for your own ease.
- c) The answers re warrants and CFDs were reasonable, although the depth of knowledge could have been better.

### **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.
- Don't be afraid to use your own data if it helps you to explain your answer.
- If unsure of something from what you are reading, say what you assume and if it appears reasonable you will get credit for it
- 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 still need to think about it first.
- Answer the question not just from your memory of the textbook but as if a client had asked you.

## Section A

It was not essential that every point given here was included as a demonstration of depth in the subject could achieve high marks e.g. Q4 has more than 5 possible points as a potential answer and only some were required for a good mark

Q1 Discuss how the capital market line and the efficient frontier can be combined to produce the optimum portfolio for any investor. *(5 marks)*

Answer can include discussion re:-

Explanation of what the efficient frontier is (can have diagram)

What the CML is and how it is created (again can have diagram)

Combination of the two and moving along the line to meet risk requirements rather than above / below the line.

Q2 European Economic & Monetary Union is the policy goal of many countries within the European Union. Discuss the various aspects of this policy. *(5 marks)*

Answer can include discussion on:-

Common Currency – euro

European Central Bank- issuing euro, monetary policy, lender of last resort, exchange rate

Centralised policy- surrender of economic policy etc.

Economic integration- removing trade barriers, labour, capital – still on going- harmonising tax rates etc.

Q3 Apparently very profitable companies can become bankrupt. Explain how the profit figure is affected by cashflow considerations *(5 marks)*

Answer can include:

Explain difference between profit and actual payment

Depreciation

Accruals – expenses and credit

Credit sales/prepayments

Buying assets/raising finance

Cashflow statement uses

Q4 Discuss how a split capital investment trust can be structured *(5 marks)*

Answer can include discussion on:

Single portfolio of investments

Different class of shares and entitlements

Tailor returns to appeal to different investors

Income shares

Stepped Pref. shares

Zeros

Capital shares

Q5 Explain five of the key features of a Real Estate Investment Trust (5 marks)

Answer can include:

- UK resident, close ended, listed but not AIM
- Not closely held- max 10%
- Property letting – ring fenced and min 75%
- Min of 90% of ring fenced profits distributed
- Withhold basic rate tax
- Taxed as property income at marginal rate
- Measure of affordability of loans- interest cover test
- Other distributions taxed as normal dividends
- Ratio of int. on loans less than 25:1

Q6 Explain how  $R^2$  is used to calculate the remaining systematic risk of a fund (5 marks)

Answer:

- It is the square of the correlation coefficient and indicates the proportion of total risk of fund (systematic )
- i.e. cannot be diversified and thus diversification achieved
- Formula can be shown for extra marks
- Closer to one the better
- $1 - R^2$  gives proportion of total risk that can be eliminated through further diversification
- Mark also available for demonstrating via formula

## Section B Answer both Questions

### Q7

Bio Hazard Controls plc is a growing company which has had the following results for the past two years

Profit & Loss Account for the year ended 31 <sup>st</sup> December	2008 £000s	2007 £000s
Turnover	3,573	2,320
Cost of sales	<u>2036</u>	<u>1206</u>
Gross profit	1,537	1,114
Marketing & distribution costs	679	394
Administration expenses	322	186
Other operating costs	<u>214</u>	<u>116</u>
Operating Profit	322	418
Interest Payable	<u>140</u>	<u>80</u>
Profit before tax	182	338
Tax	<u>49</u>	<u>91</u>
Profit for year	133	247
Dividends	<u>53</u>	<u>99</u>
Retained Profit	80	148

Balance Sheet as at 31 <sup>st</sup> December	2008	2007
Fixed Assets		
Tangible Assets	1190	950
Current Assets		
Stocks	509	205
Debtors	607	290
Cash & bank	18	63
Current Liabilities		
Creditors (falling due within one year)	<u>852</u>	<u>437</u>
Net Current Assets	282	121
Total Assets less current liabilities	1,472	1,071
Non Current Liabilities		
Creditors (due after one year) Loans	<u>822</u>	<u>501</u>
Net Assets	<u>650</u>	<u>570</u>
<u>Capital &amp; Reserves</u>		
Called up share capital (£1 each)	500	500
Profit & loss account	<u>150</u>	<u>70</u>
Equity Shareholders' Funds	<u>650</u>	<u>570</u>

To be able to evaluate the company as a potential investment , you have been asked to calculate for both years the following ratios

- a) To be able to evaluate the company as a potential investment, you have been asked to calculate, for both years, the ratios which will permit you to comment on Bio Hazards' prospects in the following areas:

- i) Profitability *(3 marks)*
- ii) Liquidity *(3 marks)*
- iii) Asset efficiency *(3 marks)*
- iv) Gearing *(3 marks)*

- b) Using your calculations above, plus any other calculations you wish to make, comment on Bio Hazard Controls plc's overall prospects as an investment stock and recommend whether it should be given a rating of buy, hold or sell by a stock market analyst.

*(8 mark)*

*(Total 20 marks)*

## Answers

- a. Can include the use of the following ratios to cover the four areas required, although many other ratios are acceptable

Return on Investment	21.9	39
Gross profit	43	48
Net Profit	9	18
Return on Equity	20.5	43.3
Earnings per share	26.6	49.4
Acid test ratio	.7	.8
Debt ratio	35.4	33.2
Interest Cover	2.3	5.2
Dividend Cover	2.5	2.5

- b. Using the calculations above, plus any other calculations they wish, candidates can comment on Bio Hazard Controls plc's prospects. The actual comments will depend upon the calculations made by the candidate.

**overall total 20 marks**

Potential answer -marks awarded for their calculations being used (thus any mistakes in part a were not punished in part b if used correctly) :-

Profitability	deteriorated
Liquidity	increased stock holding by increasing working capital
Asset efficiency	Asset turnover has decreased, perhaps relaxed credit control, requires more calculations than already done
Gearing	Substantially increased borrowings

Overall not looking good

Share price could be assumed from a calculation of book value/net asset value etc and then a P/E calculated to say how high/low it is etc and assumptions made re sector or whatever.

- Q8 a) The UK Investment Manager of Thistle Investment Fund has decided to move into bonds for her main portfolio. She therefore has asked you for some assistance. Two similar bonds (both from AAA rated companies) are available to her and she has asked you to say which provides better value on a purely financial basis. Both are deemed to be modest risk and Thistle has a required rate of return of 7% for both bonds, which have just made an interest payment.

- i) A 10-year bond paying 5% annually with a face value of £100 and costing £85 today which would be sold after 5 years. (The bond will be held for exactly 5 years then sold, it is anticipated that the required rate of return at the time of sale will be years will be 8%) **(5 marks)**

ii) A 5-year bond paying 3% annually for the next two years, then 5% for the following two years and then 6% for the remaining year. It will pay £100 at maturity and is costing £85 today. **(5 marks)**

b) They can also invest in an 4% index-linked bond which matures in four years. The RPI at issue date was deemed to be 100 and at last coupon payment it was 125. For the next four years it is believed that the Government target rate for inflation of 3% pa will be achieved each year. Investors will therefore want a return of at least 6.5% pa. What is the maximum that they should pay? **(5 marks)**

c) An alternative could be to purchase a annual coupon paying bond (par £100) paying 6% pa and costing £96 which matures in 4 years. Calculate if stripping the bond make them more money than holding it till maturity. The bond would then be assessed as medium risk and this would mean a required return of 8% and the interest would be low risk and thus discounted at 6% **(5 marks)**

**Total 20 marks**

Answer- some allowance was made if assumptions were made which were reasonable, and thus other answers could be accepted. Minor mathematical errors did not mean loss of all marks. (Rounding differences were accepted as correct)

a.i  $5/1.07 = 4.67$   
 then 4 more =4.37  
               =4.08  
               =3.81  
               =3.56 total 20.49  
 Selling price= $100/1.07(5)=71.30$  plus 20.49 (five years discounted income) making 91.79

a ii  $3/1.07= 2.8$   
 then = 2.62  
       = 4.08  
       = 3.81  
       = 4.28  
       =71.30 total = 88.89

b.  $4 \times 125/100 = 5$  last payment  
 $5 \times 1.03 = 5.15/1.065 = 4.84$   
 $5 \times 1.032 = 5.30 = 4.67$   
 $5 \times 1.033 = 5.46 = 4.52$   
 $5 \times 1.034 = 5.63 = 4.38$   
 $125 \times 1.034 = 140.69 = 109.36$   
 total is 127.77

- c. as is  $6/1.07 = 5.61$   
 $= 5.24$   
 $= 4.9$   
 $= 4.58$   
 $= 76.29 = \text{total } 96.62$
- as is  $6/1.06 = 5.66$   
 $= 5.34$   
 $= 5.04$   
 $= 4.75$  value  $= 20.79$   
 $= 73.50 = \text{total } 93.29$  so not profitable

### Section C Answer All parts of the question

Diamond Investments Fund Managers who run a sterling-based Unit Trust, called Diamond Growth Fund, believe that the value of shares in Broomfield Group SA will be subject to a degree of volatility over the next 4 months whilst a court case is ongoing re problems with their recent takeover of Albion Plc. The share price has fallen to €1.20 but it could fall to €0.60 if they lose or rise to €2.30 if they win. As the case progresses and evidence is heard the share price is likely to fluctuate quite dramatically. In order to be able to take advantage of the movements and thus profit irrespective of the outcome.

Once the case is settled, Diamond Investments will want to purchase approximately 2 million shares in Broomfield Group, as in the long term, they see the prospects for outstanding growth.

- a) Explain how a long straddle could be used to meet their requirements. **15 marks**

answer can include:

Diagram 3 marks  
 explanation of what it means and how it would work 4 marks

- b) Discuss how Warrants and CFDs could be used to try to achieve the same objective **5 marks**

Answer can include  
 What a warrant is  
 What a CFD is  
 The drawbacks  
 How they could operate in this scenario

- c) As Diamond Investments is based in the UK, they also want to protect themselves against the depreciation of Sterling. To do this they are considering using a SWAP. Discuss how a SWAP can be used in this situation **5 marks**

Answer  
 Covers the details of what a SWAP is, how it works etc (Using given currencies)

d) At the end of the year the fund has the following statistics:

Opening value (on 1<sup>st</sup> January 2008) £1.20 per unit

Closing value (on 31<sup>st</sup> December 2008) £1.30 per unit

Portfolio beta was calculated to be 1.3

Standard Deviation of the fund was 8

The Risk Free rate was calculated to be 7.5%

The benchmark funds were deemed to have a return of 8.25%, Beta of 1.1 and a standard deviation of 9

Calculate for the fund and the benchmark

The M2 ratio

The Sharpe ratio

The Treynor measure

Comment on what your calculations are telling you

**15 marks**

**Total marks 40**

Answer

M2 = [SD benchmark x (rp-rf)/sdp]+rf

$$9 \times (8 - 7.5) / 8 + 7.5$$

$$.56 + 7.5$$

$$8.26$$

$$9 \times 8.25 - 7.5 / 9 + 7.5$$

$$9 \times 0.08 + 7.5$$

$$8.22$$

Sharpe  $rp - rf / sdp$

$$8 - 7.5 / 8 = .06$$

$$8.25 - 7.5 / 9 = .08$$

Treynor

$Rp - rf / bp$

$$8 - 7.5 / 1.3 = .38$$

$$8.25 - 7.5 / 1.1 = 0.68$$

The comments will depend on the results made by the student above but both fund and benchmark calculations are required to allow comments to be made.