

# Examination Paper, Solutions and Examiner's report

Paper: MCT Exam

APRIL 2009

## MCT General Exam paper

You are required to answer ALL 7 questions.

*Questions 1 and 2 relate to the same company situations. Make sure you read both questions before answering either of them.*

### QUESTION 1

**[Total 15 marks]**

A leading French department store (Sarcomag S.A.) delivered a surprisingly good trading performance (a single-digit reduction in like-for-like sales) over the Christmas 2008 period, given the continuing adverse economic climate. Also, over the last year, under new direction, it has repeatedly reported better than expected sales and has gained market share from its main rivals. Consensus forecast for 2009 pre-tax profit is €118m and post-tax earnings of €79m. Summary financials are given below for the balance sheet and income statement together with a detailed cash flow summary.

Group credit facilities include a term loan of €950m, repayable as follows: 2009 €148m, 2010 €153m, 2011 €649m. The effective EURIBOR-based interest rate on the term loan was 6.47% in 2008, very much in line with the Group's other credit facilities. Total outstanding debt is €1,037m, net debt €995m. The company also has a €250m un-drawn overdraft facility. It is listed on the French stock exchange.

#### **Required:**

- (a) How severe, do you think, is the company's re-financing problem and why? Explain the financial considerations relevant to your assessment and quantify your answer where appropriate, bearing in mind the commercial setting.

**(8 marks)**

- (b) How might the company set about tackling the problem? You will need to consider possible options and then prioritise them in terms of relevance to the company, given the nature of its business and its financial position. Quantify your answer where possible.

**(7 marks)**

**Exhibit 1****Sarcomag S.A.**

<b>Income Statement</b>	<b>€ millions</b>	<b>August 2008</b>	<b>August 2007</b>	<b>August 2006</b>
Sales		1,839	1,774	1,708
Gross profit		267.6	279.5	331.4
EBITDA		264.4	273.7	238.2
Operating profit		176.1	179.8	223.6
Net interest		(70.2)	(66.6)	(161.5)
Profit before tax		105.9	113.2	62.1
Profit attributable to shareholders		77.1	79.0	43.7
Dividends declared		(25.8)	(42.0)	(32.3)

<b>Balance Sheet</b>	<b>2008</b>	<b>2007</b>
Intangible assets	840	843
Freehold properties	46	52
Leasehold properties	278	275
Vehicles, equipment, fixtures etc	369	340
Financial and other assets	102	180
Inventories	238	245
Trade and other receivables	59	66
Derivatives etc	10	3
Cash and equivalents	42	80
<b>Total assets</b>	<b>1,984</b>	<b>2,084</b>
Current overdrafts and loans	145	105
Trade and other payables	470	469
Current tax	30	32
Non-current overdrafts and loans	892	992
Provisions, deferred tax, deferred income	322	323
<b>Shareholders equity</b>	<b>125</b>	<b>163</b>

**(to January 2009)**

Share price (€)	high	0.56	1.23	2.05
	low	0.20	0.29	1.16
	latest	0.34	-	-
Number of shares (m)		874.77	860.4	847.7
Market capitalisation (€m)		297	654	1,359
			(ave)	(ave)

<b>Cash Flow</b>	<b>2008</b>	<b>2007</b>
Profit after tax	77.1	79.0
Depreciation	88.3	93.9
Amortisation and other non-cash	100.0	139.0
Change in working capital	20.4	(0.7)
Cash generated from operations	285.8	311.2
Net interest paid	(66.8)	(66.2)
Tax paid	(27.6)	(17.6)
Net capital expenditure	(125.6)	(96.5)
Dividends paid	(44.4)	(42.0)
Repayment of term loan	(100.0)	-
Share capital movements	(3.6)	(9.9)
Net (decrease)/increase in cash	(82.2)	79.0

## **QUESTION 2**

**[Total 13 marks]**

This question also relates to the company scenario in Question 1 so the information in question 1 is relevant.

The company's shares have fallen by 81% over the last 2 calendar years, compared with the average of 59% for six comparable sector companies. The shares currently stand on a P/E multiple of 3.79, compared with the sector average for five other sector companies, of 6.75, with a range between 7.4 and 5.4.

The company is considering a 1 for 2 rights issue.

### **Required:**

- (a) You are asked to quantify the likely impact of the rights issue on the company's re-financing problem and its financial/credit strength. For the purpose of the question assume that the price of the share offer will not be discounted.

**(8 marks)**

- (b) Discuss whether the offer is, or how it might be made, attractive to existing shareholders or underwriters. Quantify your answer.

**(5 marks)**

### QUESTION 3

[Total 14 marks]

You are given two exhibits as an example of the appraisal of a social housing project from a not-for-profit housing association. You have been asked to review and advise on the project appraisal methodology used. The housing association has only just started using DCF and it is concerned that what it thought was a good project based on a 14-year payback and 7.8% ROCE shows a negative NPV.

For your information; Housing associations are “not-for-profit”, do not pay tax and do not pay dividends to shareholders. A proportion of the capital cost of housing schemes is covered by social housing grants as the government’s way of subsidising the capital cost and hence the rent levels of social housing. Depreciation is provided on the housing stock over an assumed life of 30 to 50 years. Housing associations tend to have creditors in excess of debtors but no stocks other than any properties held for disposal.

**Required:**

- (a) **Comment on the meaning and suitability of the five metrics used in the Project Summary - Outputs (Exhibit 2).**

(5 marks)

- (b) **Comment on any technical errors or omissions in the “Scheme Appraisal” (Exhibit 3).**

(2 marks)

- (c) **Give your responses to the following questions that the Finance Director has put to you;**

- i) **How long should the explicit forecast period be, given that housing can last over 100 years if the property is properly maintained?**
- ii) **Is it appropriate to include a terminal value because it tends to dominate and distort the NPV?**
- iii) **How should the terminal value be calculated given that cash flows can fluctuate severely from year to year because of major repair programmes?**
- iv) **Should loan repayments be included in cash flows?**
- v) **Should the discount rate be based on the marginal cost of borrowing or some other cost?**
- vi) **Is NPV a reliable way of assessing profitability since profits can be negative for a number of years?**

(7 marks)

## Exhibit 2

### Project Summary

### Pinfold Lane Scheme

<b>Inputs</b>	
Period of investment appraisal (years)	30
Capital cost of investment project	£ 868,480
Social Housing Grant Rate	43%
Social Housing Grant (amount)	£ 373,446
Net Cost	£ 495,034
Loan to Net Cost %	85%
Private Finance Loan	£ 420,779
Internal capital subsidy	£ 76,325
Real interest rate	3.5%
Annual inflation rate( RPI %)	3.0%
Interest rate on private finance loan	6.5%
Rent increases (margin over RPI)	0.5%
Management and maintenance inflation(margin over RPI)	1.0%
Major repairs provision (% rebuild costs from year 6)	1.0%
Major repairs inflation (additional % every 5 years)	1.0%
Rebuild cost (% of capital costs)	70%
Rebuild cost inflation (RPI)	3%
Service charges	£ -
Risk margin for investment type	
Discount rate	<b>6.5%</b>
<b>Outputs</b>	
Payback (Years)	14
Discounted payback (Years)	30
NPV	(15,005)
IRR	6.17%
Average Accounting ROCE %	7.80%

## Exhibit 3

### Scheme Appraisal

### Pinfold Lane Scheme

£'000	Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>A. Income &amp; Expenditure</b>																																
Rental Income		34.5	35.7	37.0	38.3	39.6	41.0	42.4	43.9	45.4	47.0	48.7	50.4	52.1	54.0	55.8	57.8	59.8	61.9	64.1	66.3	68.7	71.1	73.5	76.1	78.8	81.5	84.4	87.3	90.4	93.6	
Subsidy																																
Service charges																																
<b>Total income</b>		<b>34.5</b>	<b>35.7</b>	<b>37.0</b>	<b>38.3</b>	<b>39.6</b>	<b>41.0</b>	<b>42.4</b>	<b>43.9</b>	<b>45.4</b>	<b>47.0</b>	<b>48.7</b>	<b>50.4</b>	<b>52.1</b>	<b>54.0</b>	<b>55.8</b>	<b>57.8</b>	<b>59.8</b>	<b>61.9</b>	<b>64.1</b>	<b>66.3</b>	<b>68.7</b>	<b>71.1</b>	<b>73.5</b>	<b>76.1</b>	<b>78.8</b>	<b>81.5</b>	<b>84.4</b>	<b>87.3</b>	<b>90.4</b>	<b>93.6</b>	
Voids and Bad Debts		(1.4)	(1.4)	(1.5)	(1.5)	(1.6)	(1.6)	(1.7)	(1.8)	(1.8)	(1.9)	(1.9)	(2.0)	(2.1)	(2.2)	(2.2)	(2.3)	(2.4)	(2.5)	(2.6)	(2.7)	(2.7)	(2.8)	(2.9)	(3.0)	(3.2)	(3.3)	(3.4)	(3.5)	(3.6)	(3.7)	
Management costs																																
Services		(2.5)	(2.6)	(2.7)	(2.8)	(2.9)	(3.1)	(3.2)	(3.3)	(3.4)	(3.6)	(3.7)	(3.9)	(4.0)	(4.2)	(4.3)	(4.5)	(4.7)	(4.9)	(5.1)	(5.3)	(5.5)	(5.7)	(5.9)	(6.2)	(6.4)	(6.7)	(7.0)	(7.2)	(7.5)	(7.8)	
Planned maintenance																																
Major repairs		(2.5)	(2.5)	(2.6)	(2.8)	(2.9)	(3.0)	(3.1)	(3.2)	(3.4)	(3.5)	(3.6)	(3.8)	(3.9)	(4.1)	(4.2)	(4.4)	(4.6)	(4.8)	(5.0)	(5.2)	(5.4)	(5.6)	(5.8)	(6.0)	(6.3)	(6.5)	(6.8)	(7.1)	(7.3)	(7.6)	
Catch-up repairs																																
<b>Total expenditure</b>		<b>(6.3)</b>	<b>(6.6)</b>	<b>(6.8)</b>	<b>(7.1)</b>	<b>(7.4)</b>	<b>(7.7)</b>	<b>(8.0)</b>	<b>(8.3)</b>	<b>(8.6)</b>	<b>(8.9)</b>	<b>(9.3)</b>	<b>(9.7)</b>	<b>(10.0)</b>	<b>(10.4)</b>	<b>(10.8)</b>	<b>(11.2)</b>	<b>(11.7)</b>	<b>(12.1)</b>	<b>(12.6)</b>	<b>(13.1)</b>	<b>(13.6)</b>	<b>(14.1)</b>	<b>(14.7)</b>	<b>(15.3)</b>	<b>(15.9)</b>	<b>(16.5)</b>	<b>(17.1)</b>	<b>(17.8)</b>	<b>(18.5)</b>	<b>(19.2)</b>	
<b>Operating surplus</b>		<b>28.2</b>	<b>29.1</b>	<b>30.1</b>	<b>31.1</b>	<b>32.2</b>	<b>33.3</b>	<b>34.4</b>	<b>35.6</b>	<b>36.8</b>	<b>38.1</b>	<b>39.4</b>	<b>40.7</b>	<b>42.1</b>	<b>43.5</b>	<b>45.0</b>	<b>46.6</b>	<b>48.1</b>	<b>49.8</b>	<b>51.5</b>	<b>53.2</b>	<b>55.0</b>	<b>56.9</b>	<b>58.8</b>	<b>60.8</b>	<b>62.9</b>	<b>65.1</b>	<b>67.3</b>	<b>69.5</b>	<b>71.9</b>	<b>74.4</b>	
<b>B. Capital Cost</b>																																
Private Finance Loan	(420.8)																															
<b>Total scheme</b>	<b>(420.8)</b>	<b>28.2</b>	<b>29.1</b>	<b>30.1</b>	<b>31.1</b>	<b>32.2</b>	<b>33.3</b>	<b>34.4</b>	<b>35.6</b>	<b>36.8</b>	<b>38.1</b>	<b>39.4</b>	<b>40.7</b>	<b>42.1</b>	<b>43.5</b>	<b>45.0</b>	<b>46.6</b>	<b>48.1</b>	<b>49.8</b>	<b>51.5</b>	<b>53.2</b>	<b>55.0</b>	<b>56.9</b>	<b>58.8</b>	<b>60.8</b>	<b>62.9</b>	<b>65.1</b>	<b>67.3</b>	<b>69.5</b>	<b>71.9</b>	<b>74.4</b>	
<b>C. Finance</b>																																
Closing loan balance	(421)	(421)	(421)	(420)	(418)	(414)	(409)	(403)	(396)	(386)	(375)	(362)	(347)	(330)	(310)	(287)	(262)	(233)	(201)	(165)	(125)	(81)	(32)	0	0	0	0	0	0	0	0	0
Cash balance		1	3	4	6	8	9	11	13	15	16	18	20	23	25	27	29	32	34	37	39	42	45	48	51	54	57	61	64	68	72	
<b>Net (Debt) / Cash</b>	<b>(421)</b>	<b>(420)</b>	<b>(418)</b>	<b>(415)</b>	<b>(412)</b>	<b>(407)</b>	<b>(400)</b>	<b>(392)</b>	<b>(383)</b>	<b>(372)</b>	<b>(359)</b>	<b>(344)</b>	<b>(327)</b>	<b>(307)</b>	<b>(285)</b>	<b>(260)</b>	<b>(232)</b>	<b>(201)</b>	<b>(167)</b>	<b>(128)</b>	<b>(86)</b>	<b>(39)</b>	<b>13</b>	<b>48</b>	<b>51</b>	<b>54</b>	<b>57</b>	<b>61</b>	<b>64</b>	<b>68</b>	<b>72</b>	

#### **QUESTION 4**

**[Total 15 marks]**

There are major shifts underway in the global business environment:

As a result of unprecedented losses and financial market disruption banks worldwide are having to recapitalise and to adjust to much tighter liquidity conditions, often with very significant levels of assistance from their governments.

As the impact of these events is currently washing through to the real economy, governments are already seeking to devise frameworks and mechanisms to forestall the reoccurrence of such seismic events and thus promote financial stability, ideally on a global or regional basis. These frameworks and mechanisms usually embrace higher levels of bank capital to cushion losses, more on-bank-balance-sheet liquidity and less maturity transformation between deposits and loans to make banks less vulnerable to financial market disruption, together with more (effective) regulation, less complexity and more transparency.

**Required:**

**(a) In responding to these shifts how might corporate treasury policies change in the following areas?**

- |   |                  |
|---|------------------|
| <b>(i) domestic funding</b>                                     | <b>(4 marks)</b> |
| <b>(ii) funding of overseas subsidiaries</b>                    | <b>(2 marks)</b> |
| <b>(iii) interest risk management</b>                           | <b>(2 marks)</b> |
| <b>(iv) financial evaluation of capital investment projects</b> | <b>(2 marks)</b> |

The character of individual banks is changing eg in terms of ownership, balance sheet strength and business model.

**Required:**

**(b) For corporates which decide to review their banking counterparty relationships what are the key factors to evaluate?**

**(5 marks)**



## QUESTION 5

[Total 15 marks]

Your company is a UK based multi-national, manufacturing specialist chemicals based products.

The company has an ERM function. A major component of this function monitors suppliers of goods and services to the business, including financial services. This component is currently under review because of concerns about continuity of supply and the need to identify problems early so that suppliers can either be assisted or replaced. Because the financial viability of suppliers is a key factor your assistance has been sought regarding the appropriate evaluation methodology. Of particular interest to the review sponsor is the choice between the use of external evaluation agencies and internal fundamental analysis and evaluation.

The initial phase of the project focuses on UK and EU suppliers and the questions below refer to suppliers based in these areas.

### Required:

- (a) For providers of both physical and financial goods/services, how would you strike the balance between using external agencies and internal fundamental analysis? (3 marks)
- (b) Assuming that at least some of the providers of physical goods, eg raw materials, are to be the subject of internal fundamental viability analysis, what evaluation metrics would you propose? (8 marks)
- (c) What types of supplier support might you consider? What might you demand in return for support? (4 marks)

## QUESTION 6

[15 marks]

Buildco is a building materials company which supplies medium size residential and commercial property building contractors.

Buildco has identified two major risks to the company:

- the quality of its receivables (because of sector credit risk); and
- the volatility of short term liquidity needs (because of sector seasonality/cyclicality).

Buildco uses the Risk Management Matrix below as an aid to assessing and deciding how to manage and report identified risks. Once identified, the company considers whether a liquid market exists to “trade” the new risk, as this often helps in deciding how to address the other elements of assessing, managing and reporting the risk.

## RISK MANAGEMENT MATRIX

<b>RISK IDENTIFIED BY ANALYSIS OF BUSINESS</b>	<div style="text-align: center;"> </div>	RI
<b>Tradeability</b>	Liquid / tradeable  Illiquid / Untradeable	
<b>Risk Metric</b>	Quantitative / Statistical  Judgemental	
<b>Time Horizon For Risk Management Planning</b>	1 Day  Economic Cycle	RA
<b>Valuation Of Risk Exposure</b>	Market Value  Book Value	
<b>Evaluation Process</b>	Modelling  Consensus view	
<b>Risk Management Approach</b>	Transfer  Manage	RM
<b>Responsibility For Management</b>	Departmental Delegated  Retained by Board	
<b>Key Reporting Parameters</b>	Numerical Benchmark  Early detection indicators eg % Hedged <span style="float: right;">eg Consumer spending</span>	RR

Key: RI = Risk Identification RA = Risk Assessment RM = Risk Management RR = Risk Reporting

### Required:

For each of the two risks identified, complete the entries for the Risk Management Matrix using the pro-forma provided. For example, specify the degree of tradeability of each risk (eg high, medium, low), the metric you would use to quantify the risk (eg VAR, 95% confidence limit), the time horizon over which you manage the risk (eg 1 year) and so on. Briefly justify your entries.

(15 marks)

## QUESTION 7

[Total 13 marks]

Beloit, producer of a basic commodity product, has annual revenue of EUR4.8bn, 25,000 employees and operates in 25 countries. It has a strong focus on emerging European Markets and its functional currency is the euro.

In mid-2008 Beloit embarked on a two-year EUR600m investment project to modernise its recently acquired Russian production facility, funded by:

- EUR500m intercompany loan from Finance Company at Group level, denominated in roubles (RUB) which is the project revenue currency
- EUR100m Export Credit Agency (ECA) loan which is available in year 2 and paid direct to subsidiary in euros.

The project implementation phase is July 2008 to June 2010. The planned drawdown is EUR25m at the end of each quarter of year 1 and EUR125m at the end of each quarter in year 2:

END Q	1	2	3	4	5	6	7	8
EUR m	25	50	75	100	225	350	475	600

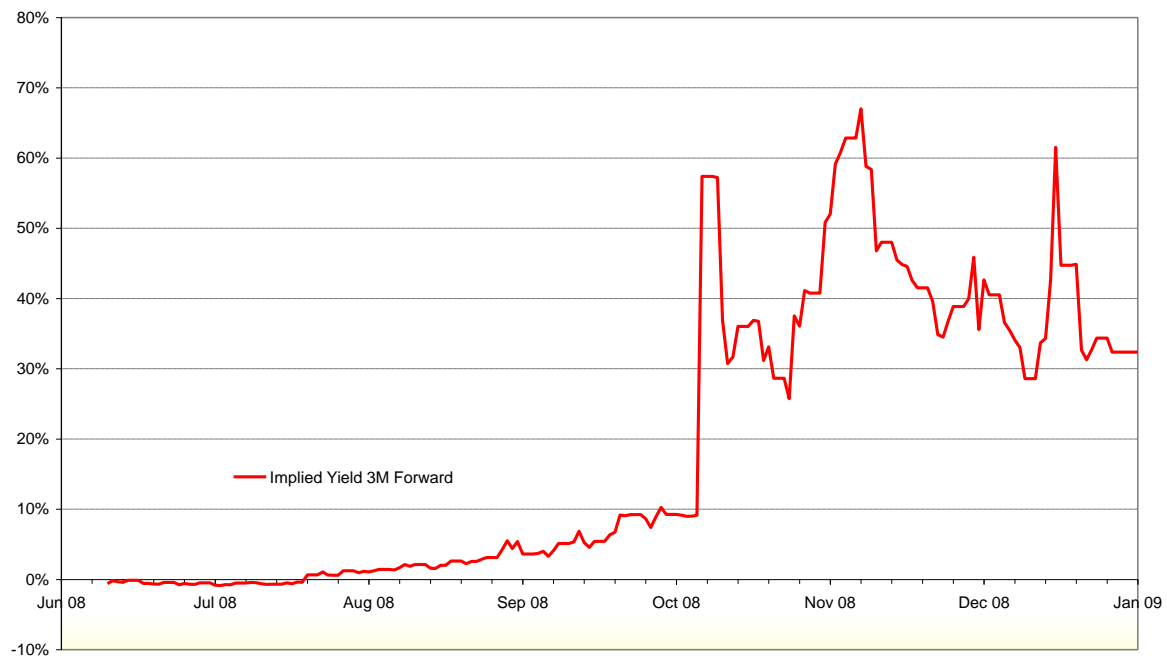
Interest can be capitalised during drawdown, ie during the construction period.

When the project was planned, EUR and RUB interest rates were comparable, ie not much interest differential, and the intention was for the Group Finance Company to hedge the EUR/RUB exchange risk on the EUR500m loan using Fx swaps during drawdown and then to undertake a cross currency amortising interest rate swap to match the repayment profile (8 year term, amortising over last five years by EUR100m p.a.). No decision had been made about hedging the ECA loan.

However by Q4 2008 (Q2 of the project) energy prices had declined, Russia had a current account deficit, inflation was at 13% and the rouble came under considerable speculative pressure. The sovereign foreign rating was downgraded to BBB negative outlook, 3 month Mosprime (Moscow Prime Rate) shot up to 21% and held there from November 2008 to January 2009, and the rouble, a freely convertible currency, weakened significantly despite Russian government market intervention via use of Reserves.

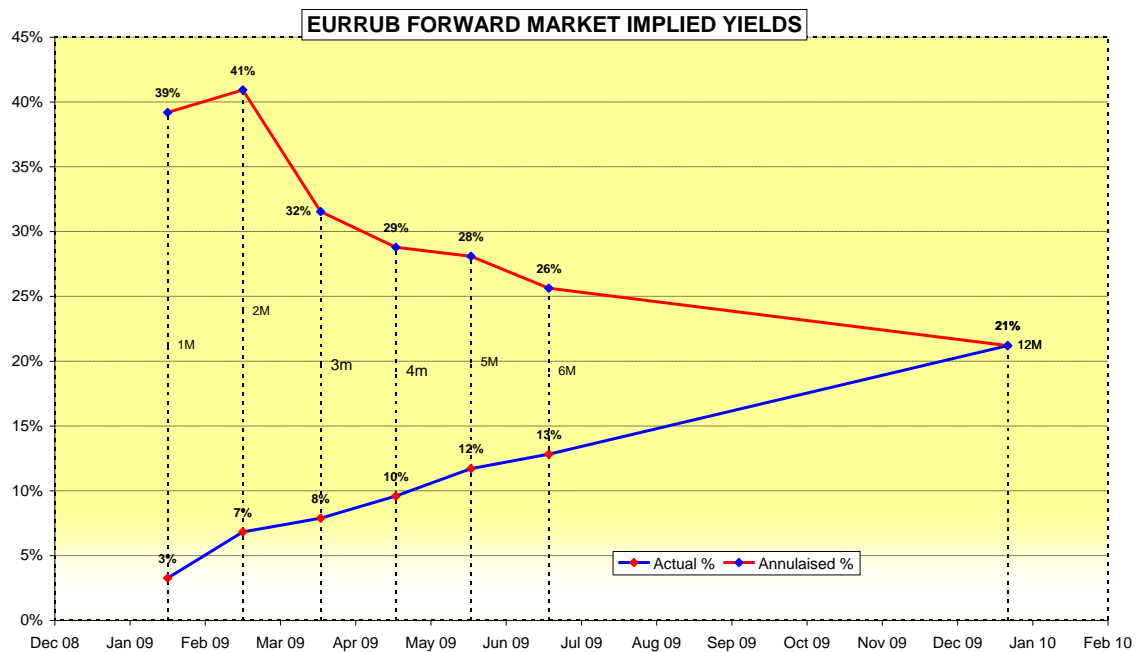
The “Incremental Cost of Borrowing via FX Swap” (Graph 1) shows the 3 month RUB interest rate implied by the 3 month EUR/RUB swap rate at dates during June 2008 to January 2009 (eg 32% at January 2009).

**Graph 1 : Incremental Cost of Borrowing 3 month RUB via Fx swap market**



The “Forward Market Implied Yields” (Graph 2) shows the annualised implied interest rates for various EUR/RUB swap rate tenors at January 2009 (eg 32% for 3 month as shown on Graph 1 and 21% for 12 month).

**Graph 2 : Forward Market Implied Yields**



It is now January 2009.

**Required:**

- (a) With 3 month Mosprime at around 21% why is the yield implied by 3m EUR/RUB swap rates running between 25% and 65% during November and December 2008? (Graph 1)

(2 marks)

- (b) Why do the yields implied by the range of EUR/RUB swap tenors at January 2009 (Graph 2) start at 39% p.a. at 1 month and decline to 21% at 12months?

(2 marks)

- (c) How would you propose managing the EUR/RUB exposure through drawdown and to maturity? Justify your proposals.

(6 marks)

- (d) How would you set the RUB interest rate for the intercompany loan and the ECA funding?

(3 marks)

## MCT General Exam: Solutions

### Question 1

[15 marks, 27 mins]

[Marking : I have 20 points ½ mark for each good point].

#### 1a) Severity of the problem

(8 marks, 14 mins)

- $950/1037 = 92\%$  <sup>1</sup> of debt repayable in 3 years and 649 (63%) <sup>2</sup> in one year in a long-term business is bad news at any time (bad management or an ill-advised leveraged debt structure). <sup>3</sup>
- Spread over 20 years the problem would be much more manageable <sup>4</sup> (€52m per year). Over 10 years - €104m p.a.
- In the current banking environment this is potentially disastrous
  - difficulty of achieving re-financing <sup>5</sup>
  - extra cost and covenants even if it can be re-financed <sup>6</sup>
- Company Strength - Commercial setting  
  
Trading and market position, at least, look strong <sup>7</sup> but the recession gets worse by the month, with no clear end in sight, and will affect retailing. <sup>8</sup> Good new management team. <sup>9</sup>
- Company strength - financial/credit position
- P&L
  - P&L interest cover (08 and 09) 2.6, 2.7 just about OK for an average <sup>10</sup> risk sector
  - Debt/EBITDA 3.8 x - high
  - Debt/Retained Profit = 19.4 years to repay (08) and similar in (09) - too long.
  - General repayment ability is weak-based on P&L (high dividends). <sup>11</sup>
- B/S
  - Balance sheet leverage is very high <sup>12</sup> even for a property based company - 89%
  - Generally not good <sup>13</sup> quality assets for security purposes (intangibles, leaseholds, vehicles, equipment, inventories)
- C/F
  - (See below) Interest cover is good at 3x and dividend cover OK at 1.48 <sup>14</sup> but loan repayments are the problem.

NB This table relates to both 1a) and 1b).

Cash Flow	2008	2007
C.F. before capex	258.2	293.6
C.F. before interest & dividends	137.6	197.1
Interest	(66.8)	(66.2)
Cash flow after interest	65.8	130.9
Dividends	(44.4)	(42.0)
Cash available for loan repayments	21.4	88.9

- In 2007 €89m was available for loan repayments, from internally-generated funds, but in 2008 only €21m, <sup>19</sup> so the €100m repayment was met €82m from cash and bank <sup>20</sup> (about half and half). €42m of cash remains.

1b) Tackling the Problem

(7 marks, 13 mins)

[Marking : I have 19 points but the cash flow detail could be in 1a or 1b so give ½ mark for each good point].

- Dividend has already been reduced in 2008. If the dividend were cut totally then the cash available would be €131m (2007), €66m (2008). <sup>1</sup>
- If capex were cut to zero <sup>2</sup> as well (probably impossible) the figures become €228m and €191m - enough to cover the first two years' repayments. <sup>3</sup>
- 2009 Cash Flow Forecast - profit up €12m, <sup>4</sup> total costs equal €1663m so a 2% reduction <sup>5</sup> would save €33m (should be possible). Capex at depreciation <sup>6</sup> level of 90m (down 36m), divis at €26m <sup>7</sup> (down €18m) would give a surplus of €120m <sup>8</sup> assuming other items remain the same.
- Assuming a part of the €42m cash is required for retail trading (say half, <sup>9</sup> ie 1% of sales), this leaves €20m available.
- Finally the €250m O/D facility can be utilised <sup>10</sup>
- So estimated free cash flow of 3 years at €120m p.a. (without further profit growth), plus €250m O/D plus cash of €20m = €630m <sup>11</sup> - still €320m short!
- In addition extra interest cost <sup>12</sup> on re-financing the €950m in full could cost 2% or 3% <sup>13</sup> more ie €19m or €28.5m reducing forecast cover to  $118 + 70 / 70 + 19 = 2.11 \times$  or  $188 / 70 + 28 = 1.92 \times$  <sup>14</sup>

Plus any initial fees. Not good.

Conclusion - the company could meet the next two years' repayments with tight cash flow management but it has to either re-finance <sup>15</sup> part of the loan or raise new share capital <sup>16</sup> of €320m.

In absence of sales growth and given the recessionary squeeze on margins - overhead cost control is crucial to maximise trading profits.

But market cap. has ranged from €489m to €m175 in last 4 months, now only €297m, so will not be easy<sup>17</sup> and debt re-financing is essential.<sup>18</sup>  
NB Divi policy needs to be co-ordinated with equity issue decision.

- Labour costs via reduced employee numbers<sup>19</sup>
- Premises costs via any leases that can be terminated.<sup>20</sup>

## Question 2

[13 marks, 23 mins]

### 2a) Likely Impact

(8 marks, 14 mins)

[Marking : I have 17 points so ½ mark for each good point]

- The company's shares stand at 34p giving a market capitalisation of €297.4m<sup>1</sup> (874.77 million shares)<sup>2</sup> with net debt at €994m (August 2008), EV = 1291.4, market leverage = 77%<sup>3</sup> - very high.
- A (heavy)<sup>4</sup> 1 for 2 rights issue (without a discount but ignoring any beneficial market response), would raise, say, €150m,<sup>5</sup> take market leverage to €814/1291.4 = 65%,<sup>6</sup> and it would reduce the debt by only 15%.<sup>7</sup>

Interest saving @ 6.5% = €9.7m,<sup>8</sup> after tax at 30% = €6.8m, say €7m<sup>9</sup>

New earnings	=	79 + 7 =	86m	<sup>10</sup>	€86m
P/E ratios	=		3.79		6.75
New market cap.	=	86 x 3.79	€325.9m	<sup>11</sup>	€580.5m <sup>12</sup>
New debt	=	995 - 150	€845		€845
EV	=		€1,171		€1,426
Market leverage	=		72%	<sup>13</sup>	59% <sup>14</sup>
Book value		844 / 1120 = 75% - still very high			

PBIT (09) will approximate 118 + 70 = 188 (or 176 + 118 - 106)

Interest reduces to 70 - 7 = 63<sup>14</sup>

Interest cover improves to 2.98 x which is much more acceptable.<sup>15</sup>

If dividends are maintained at the 2008 level the cost to the company would be €38.7 million,<sup>16</sup> (25.8 x 3/2) covered by earnings 2.22 x which is good.<sup>17</sup>



2b) Attractiveness to Shareholders

(5 marks, 9 mins)

[Marking : I have 10 points so ½ mark for each good point]

- Such an issue would almost certainly not be acceptable <sup>1</sup> to shareholders unless a restructuring deal with the banks were announced at the same time.
- A debt re-structuring at the same time would make it a “win-win” situation. <sup>2</sup>
- The potential upside lies in removing the apparent “re-financing” discount <sup>3</sup> on the shares and returning to, say, an average sector P/E ratio ie 6.26 instead of 3.8. <sup>4</sup>

New no. of shares = 1312.16m	P/E 3.79	P/E 6.75
New share price = $325.9/1312.16$ =	0.248	$580.5/1312.16$ = 0.442 <sup>5</sup>

- before; 2 shares @ 0.34 plus 0.34 cash = 1.02
- after, 3 shares (at higher price of 0.44) = 1.32 <sup>6</sup> compared with 3 @ 0.248 = 0.744

This represents a 29% capital gain. <sup>7</sup>

Issuing shares at an earnings yield of 26.4% versus post-tax interest rate of 4.53% will obviously be dilutive of e.p.s. <sup>8</sup>

Prospective e.p.s. (before)	= €79m x 100 ÷ 874.77	= 9.03p
(after)	= €86m x 100 ÷ 1312.16	= 6.55p

Dividends 2008 = 0.0295/share = 6.67% yield. <sup>9</sup>

This is a reasonable yield so an improvement in income for shareholders on the newly subscribed shares, compared with the Euro cash previously held. <sup>10</sup>

But would the dividends be maintained at this level?

**Question 3**

[14 marks, 25 mins]

3a) Suitability of 5 metrics

(5 marks, 9 mins)

[Marking : I have 16 points so ⅓ mark for each good point].

- Payback - of little use <sup>1</sup> Use Discounted payback instead. Flatters this project (and particularly long-term projects). <sup>2</sup>
- Discounted payback - entirely relevant DCF-based measure. <sup>3</sup> Shows when NPV turns positive at a given discount rate. <sup>4</sup> But full value of the project depends on how long it continues after DBE <sup>5</sup> - this example is a good case in point.

- NPV - Allows for the time value of money. <sup>6</sup> Technically the most superior <sup>7</sup> DCF measure, it requires choice of a discount (hurdle rate) <sup>8</sup> of which the NPV value is a function. It quantifies the value added by the project. Decision rule - accept all positive NPV project on face value, so we would reject this one. <sup>9</sup>
- IRR - Calculation can return several answers if cash flows fluctuate between positive and negative. <sup>10</sup> Must be judged against a hurdle rate, <sup>11</sup> an opportunity cost or alternative projects. Useful for comparing similar projects. <sup>12</sup> Do not accept IRR % as the sole decision criterion (could be very small projects). <sup>13</sup>
- Average Accounting ROCE % - Absolute rubbish! <sup>14</sup> Will not approximate IRR. <sup>15</sup> Distorted by all accounting rules that affect profit and also balance sheet asset values. <sup>16</sup> This distortion is exaggerated over the life of a project (ROCE distorted both upwards and downwards!)

3b) Technical Errors & Omissions

**(2 marks, 3 mins)**

[Marking : I have 6 points so 1/3 mark for each good point].

- Up-front investment is the loan, <sup>1</sup> not the total capital cost, but total project flows <sup>2</sup> are included - incorrect and flatters the project.
- The operating surplus is used as the operating cash flow <sup>3</sup>
  - capital expenditures are included (major repairs) - O.K.
  - but working capital not modelled - debtors and creditors <sup>4</sup>
  - no non-cash adjustments detailed. <sup>5</sup>
- No terminal value <sup>6</sup> although the Input refers to 30 years as the appraisal period not the project life.

3c)

**(7 marks, 13 mins)**

[Marking : I have 21 points so 1/3 mark for each good point]

- (i) For appraisal purposes, - long enough to embrace all the major repair cycles once <sup>1</sup>
- after that they can be averaged <sup>2</sup> and dealt with via a terminal value.

Period of forecast is often chosen to prove loan repayment <sup>3</sup> (different issue).

- (ii) Yes <sup>4</sup> (or forecast out to 150 years <sup>5</sup> on the spreadsheet, which covers 90%+ of the value!)

Of course the TV dominates <sup>6</sup> - eg 150/200 years' cash flows versus 30 years cash flows, but if the housing lasts that long all years contribute to the total value. This is not distortion. <sup>7</sup>

(iii) The cash flow used in the TV should be “sustainable cash flow”<sup>8</sup> in this case at year 31. Either average the last few years’ cash flows (which fluctuate between (65.1 and 74.4) or, better still, average the various maintenance items<sup>9</sup> in today’s terms then inflate to year 31.<sup>10</sup>

(iv) Not for the “ungeared”<sup>11</sup> method of analysis which is probably the most appropriate. Include total capital investment cost.<sup>12</sup> Discount using WACC.<sup>13</sup>

As an alternative, for a “geared” analysis<sup>14</sup> include all project flows plus all cash flows related to the loan (drawdown, repayment, interest).<sup>15</sup> Discount using cost of “internal”<sup>16</sup> funds.”

(v) There is a strong argument that it should be based on WACC<sup>17</sup> with an opportunity cost<sup>18</sup> for the internal scarce, risk capital, plus an average cost of company debt. Others argue that internal funds are effectively earned from government grant monies and should carry a zero cost to pass on the benefit to social housing tenants.<sup>19</sup> Others just, implicitly or explicitly use the cost of debt also as the cost of internal funds.

(vi) Confusing project profitability (multi period) with single period accounting profit.<sup>20</sup>  
This is important but a presentation on covenant management issue not a question of the projects profitability.

#### **Question 4 : Impact of Financial Crisis on Corporates [15 marks : 27 mins]**

##### **(a) Impact on Funding, Interest Risk and Capex Policies (10 marks : 18 mins)**

###### **FUNDING (6 marks)**

- Direct impact of disruption on banks:
  - re-capitalisation of banks to make good losses
  - less liquidity eg no securitisation market
  - reduction in maturity mismatch.
- Indirect impact ie regulatory response
  - higher capital adequacy ratio for banks
  - higher levels of liquidity required on bank balance sheets and less maturity transformation.
- Short term impact on funding from banks
  - much less availability from UK banks, even less from foreign banks
  - much higher margins due to increased cost of capital and to pricing to availability rather than risk
  - more scrutiny
  - tighter documentation and monitoring of new facilities
  - strict enforcement of existing facilities to facilitate renegotiation of terms
  - reduction in maturities available.

- Longer term impact on funding from banks
  - less availability and higher margins due to permanent shift in balance sheet structure of lending banks
  - pressure to increase fees (eg commitment, utilisation) to enhance profitability of loans.
- Corporate responses
  - rigorous monitoring of existing facilities to pre-empt renegotiation attempts
  - seek to diversify sources to reduce refinancing risk
  - attempt to negotiate into new facilities the flexibility to improve terms when financial market liquidity eases
  - assess carefully whether the tighter conditions sought by banks can be accommodated in practice by the business
  - reduction in dividend to mitigate funding shortage.

### **INTEREST RISK (2 marks)**

- Continuing volatility but with the prospect of very low rates for a prolonged period
- So if interest cost is significant beware of locking into facilities with margins which could look expensive in the medium term (eg airlines hedging 2009 fuel prices last year)
- Given vulnerability of banks, beware of long term swaps into very low rate fixed rates which may create large counterparty risk on the swap bank as swap rates rise.

### **CAPEX (2 marks)**

- Funding costs are volatile and availability uncertain. Future projects, particularly those with long run-up periods, may require pre-funding and forward hedging. The carry cost of pre-funding may be substantial and forward hedging risky, creating upward pressure on investment appraisal benchmarks.

### **(b) Banking relationships: key factors (5 marks : 9 mins)**

- The Government's current interest in banking institutions is driven by the need to ensure continuing support for the real economy during the recession.
- The evolving policies of Government are sometimes contradictory: reduce bank risk-taking, support distressed businesses.
- Government wants to influence the behaviour of banks but appears to wish to stop well short of nationalisation.
- However banks continue to spring surprises which necessitate further Government support, perhaps making nationalisation of at least some banks a political and possibly also an economic necessity.

- The situation is confused and uncertain. However it is becoming clearer that the Government's long term vision for banks is that they should behave more like utilities than shareholder-value maximising businesses.
- So banks are having to review fundamentally their business models at the strategic level, influenced in part by the forced disposal of subsidiaries for tactical reasons.
- The outcome is that some of the weaker banks have in effect come under Government control while others have managed to remain more independent, at least for the present.
- All banks' lending capacity has declined and the service delivery capability of many has been diminished. Banks which were previously in the "relationship" class may not now be capable of living up to that label.
- So for corporates the factors to be considered include:
  - is a Government dominated bank likely to have larger and more certain lending capacity than an independent? (paradox about the weaker performer having more substance).
  - after the current shake-up has concluded will the bank's delivery capability match the company's needs?
  - is there a need for the company to change its historic bank counterparty policy be it "relationship" or "transaction"?
  - more mundanely what counterparty limits and collateral arrangements are now appropriate?
  - contrary to recent trends, it is now desirable to broaden substantially the number of financial services counterparties.

*Note: For the funding dimension of (a) there is a relevant article in The Treasurer, April 2008, pp 22-24, about the bond market, although it has probably been overtaken by events.*

**Question 5 : Risk of Suppliers' Continuing Viability [15 marks : 27 mins]**

**(a) External agencies or internal fundamental analysis? (3 marks: 5 mins)**

- Continuity and future viability: therefore forward looking evaluation is required.
- Presumption in favour of external agency if quality providers available because of lower cost due to economies of scale.
- However, internal resource required in two situations:
  - when no external agency of quality is available
  - when the supplier is of such significance to the sustainability of the business that the evaluation becomes a necessary core skill and the agency evaluation becomes a "second line of defence"

- “Significance” would be a function of
  - materiality
  - supplier switchability
  - product/service substitutability
  - volume

**(b) Internal fundamental analysis**

**(8 marks : 15 mins)**

The analysis required is similar to the assessments of viability made by, for example, lending banks or rating agencies. These assume that continuity and future viability depend on the generation of sustainable cash flow to service and repay current debt and to finance growth. So ideally the analysis should include a non-financial evaluation of the business to identify future sales and profitability prospects and a financial evaluation to assess future cash flows.

A basic framework for business evaluation is shown below:

**Business Analysis**

Macro-environment  eg PEST model	The Industry  eg Porter model	The Firm & Management  eg SWOT model
Key Success Factors/Profit Drivers		Major Risks
Management		
Summary		

The macro-environment, the industry and the firm analyses could be based on PEST (Political, Economic, Social, Technological), Porter and SWOT models to provide the substance for success Factors/Profit Drivers, Major Risks and so on.

A basic framework for financial credit evaluation is set out below:

<b>FINANCIAL ANALYSIS</b>	<b>Historical Analysis</b>				<b>Projection</b>	
<b>Accounts date</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr4</b>	<b>Yr 5</b>	<b>Yr 6</b>
<b><u>Basic Profile</u></b>						
<b>Sales Growth</b>						
Sales Growth						
<b>Profitability</b>						
EBITA % Capital Employed						
<b>Capital Intensity / Asset Utilisation</b>						
Net Working Assets % Sales						
Fixed Assets (tangible) % Sales						
<b><u>Credit and Cash Flow</u></b>						
<b>Gearing &amp; Leverage</b>						
Gross Debt / Equity (Tangible Net Worth)						
<b>Servicing &amp; Repayment</b>						
EBITA Interest Cover (Net)						
Net Debt/ EBITDA						
Net Debt / Cash Retained Profit						
<b>Cash Flow Ratios</b>						
Cash Profit % Sales						
Net Capex / Depreciation						
Internal (Free) Cash Flow % Total Assets						

Combining the non-financial analysis (ie business evaluation) with the historical

level, trend and volatility of the financial ratios enables an assessment of future viability. Depending on the importance/sophistication of the assessment required the ratio analysis can be enlarged or simplified.

**(c) Supplier support to ensure future viability (4 marks : 7 mins)**

Suppliers which are short of borrowing capacity could be assisted on a carefully selective basis by:

- providing quicker payment
- longer term supply contract to enhance credibility of supplier's business plan to its lenders
- letters of credit against future deliveries which can be used to underpin working capital facilities
- trade loan

The *quid pro quo* could be a discount on product cost, guaranteed response to volume spikes in product orders.



## Question 6: Buildco Working Capital

[15 marks : 27 mins]

### Corporate risk management matrix:

(15 marks : 27 mins)

Risks Identified by Analysis of Business	Receivables Quality	Short Term Liquidity	RI
Tradeability	• medium	• low	
Risk Metric	• rating score based on sustainable cash flow eg “expected” loss	• projected (stock & debtors-creditors) % sales & 12m volatility	RA
Time Horizon for Management Planning	• review period eg 6 mths • periodic assessment	• annual • economic cycle	
Valuation of Risk Exposure	• size of debtor book & distribution of ratings	• projected headroom absorbed	
Evaluation Process	• credit risk assessment by underwriter	• rolling 12m projection	RM
Risk Management Approach	• credit insurance • factoring	• headroom on overdraft facility	
Responsibility for Management	• debtor control + • credit insurer	• treasury: liquidity/cash manager	
Reporting of Results eg Key Parameters	• debtor days by debtor • exceptions daily (ie late debtors)	• working capital movement: historic/projected • facility headroom ~ v ~ forecast	RR

Key: RI = Risk Identification RA = Risk Assessment RM = Risk Management RR = Risk Reporting

The Debtor Book risk analysis could be taken a stage further. While credit insurance can mitigate this risk, the real test is when the credit risk insurer surprises the insured by suddenly withdrawing cover in the face of a downturn, as is happening currently (January 2009).

**Question 7 Russian Project : Currency Hedging [13 marks : 23 mins]**

**(a) Disparity between actual and implied rate (2 marks : 3.5 mins)**

The yield implied by the EUR/RUB swap rate is high and volatile relative to Mosprime because additional factors are priced into the interest rate eg

- inflation: probably higher than 13% and uncertain
- currency risk: a sovereign ratings downgrade, were the “negative” outlook to be realised, could lead to restrictions on RUB trading
- bank spread: will be high for a volatile currency.

**(b) Why are yields implied at 1 month so much higher than yields at 12 months? (2 marks : 3.5 mins)**

The problems which began in October 2008 and continued into Q1 2009 are seen by the market as relatively short term and likely to be resolved within a twelve-month time frame.

**(c) Hedging the EUR/RUB exposure to maturity? (6 marks : 11 mins)**

Drawdown: sell EUR forward to create certain RUB costs which are capitalised to the project; negative is highish RUB interest cost, but achieve certainty on funding in EUR.

Repayment period: assuming a return to some sort of normality, cross currency amortising interest rate swap for intra-group loan and ECA funding.

**(d) Setting RUB interest rate and ECA funding interest rate. (3marks:5 mins)**

Pricing needs to be at arms length. So use the RUB rate, risk adjusted, which relates to the cross currency interest rate swaps.

## MCT General Exam: Examiner's Report

### OVERVIEW

The examination is in two parts. The first exam is a normal closed-book examination (the General Exam) designed to test knowledge and understanding across the whole syllabus. There were seven questions, all compulsory, designed to test the three core specialisms: Corporate Finance, Risk Management and Strategic Treasury Management.

The second part is based on a case study (the Case), based on a real company, which students are given to study a week in advance. This exam is designed to test knowledge and understanding in depth, in the context of a real-life situation. Again, this is a closed-book exam. There were eight questions, all compulsory. The nature of the questions is driven in large part by the issues peculiar to the case company, so there is not necessarily the same balanced division of questions by core specialism as with the General Exam. However, in selecting and framing the Case Exam questions the Examiners attempt to range as widely as possible over the syllabus.

The results for the Exam and the Case plus the combined results are tabled below.

	<b>General Exam</b>	<b>Case Exam</b>	<b>Combined</b>
Average Marks	51.4%	54.4%	53.3%
Pass Rate %	50%	71%	63%

# The General Exam - April 2009

---

## **CORPORATE FINANCE & FUNDING: Questions 1 - 3**

**[42 marks]**

- On the unadjusted marks only two out of eight were clear passes, four were “marginal” fails (40-49%) and two were clear fails.
- The average percentage mark achieved was only 44%.
- Answers generally revealed a very shallow grasp of the principles of corporate finance and funding - a very disappointing result.

### **Question 1**

This question asked candidates to a) assess the severity of a re-financing problem facing a French department store group and b) propose practical solutions. The last two years' financials were given, including cash flows, together with (strong) forecasts for the current year. The biggest maturity amounted to €649m in year three.

The average mark achieved was 50.8%, with five passes out of eight. Part 1a) was reasonably well answered (57%), part 1b) less so (44%). In part a) very few candidates assessed balance sheet, profit and loss and cash flow aspects of the company's position.

The weakest aspects of part b) were two-fold. Firstly, there was generally a failure to qualify the various elements of company cash flows in relation to the required debt repayments. Secondly there was an alarming failure to generate practical solutions involving difficult trade-offs or even to show an understanding that a solution had to be found in this crisis situation. Too often their final word seemed to be a “throwaway” line like “shareholders may not like a dividend cut”, “no one wants to lend because of the low rating”, and “reducing capex is bad for the future of the company”. Going bust for not finding a solution is also bad for the company!

## **Question 2**

This question was based on the same company as Question 1, but focused on the company's proposed rights issue. Share price information showed that the company's shares had fallen much more than those of a peer group and stood on a much lower P/E rating, arguably because of the refinancing problem.

Question 2a) asked candidates to quantify the impact of the rights issue on the company and Question 2b) focused on how the offer could be made attractive to shareholders.

This was answered very badly, with no passes and an average mark of 26.4% (29% on 2a) and 23% on 2b). There was very poor understanding of rights issue logic and maths. Virtually no candidates worked out the full impact on debt and equity levels, and gearing, or on interest, earnings, dividends and the related credit and shareholder metrics.

It was no surprise therefore that candidates could not evaluate the likely impact of the issue on EV and market capitalisation. Example of horrors - a number observed that "dilution will occur" - but dilution of what? Share price and market cap. were assumed to be the same ex-post as ex-ante. Dividends were assumed to stay the same despite the increased number of shares.

Everyone missed the point that a well pitched rights issue plus debt refinancing package deal might solve the financing problem, returning this successful trading company to a satisfactory financing structure and thereby having a disproportionately beneficial impact on the share price and EV.

NB. This is the most important question for future students to revise if they have similar strengths and weaknesses as the last two exam sittings.

## **Question 3**

Question 3 covered classic technical stuff on dcf metrics for appraisal of capital projects (3a) but candidates were asked to relate the issues to a not-for-profit housing association (parts 3b) and 3c)), together with some more advanced technical questions.

The average mark was 53% with four passes out of eight, but most of the marks and the passes were picked up on the absolutely straight-forward Question 3a (70%).

The mark on the “applied” questions was around 42% with only two passes. The answers were weak on the practical aspects, and were “theoretical” in the worst sense of the word.

On an important theoretical issue the question asked if debt flows should be included and most answered yes, often without qualification. No one discussed the pros and cons of geared versus ungeared methods of analysis, which is quite worrying.

#### **Question 4**

The scenario for this question was the banking and financial markets crisis of 2007/2008 and the regulatory changes being imposed on banks to help prevent a re-occurrence.

The bank regulatory changes highlighted were more capital, more on-balance-sheet liquidity and less maturity transformation.

Students were asked (a) to suggest how these changes might impact corporate treasury policies for:

- (i) domestic funding
- (ii) funding of overseas subsidiaries
- (iii) interest risk management
- (iv) financial evaluation of capital investment projects.

Given that the character of individual banks is changing in terms of ownership, balance sheet strength and business model, students were also asked (b) to flag the current key factors for evaluating banking relationships.

This question was very well answered which, given its topicality, might have been expected. In terms of exam technique, it was noticeable how closely the bullet points against each part correlated with the allotted marks! It was generally recognised that bank debt would be scarce and expensive in the medium to long term and that in terms of bank relationship capability there was now much greater diversity across banks.

### **Question 5**

This question, about assessing the continuing viability of suppliers of goods and services to a multi-national chemicals manufacturer, also had a strong flavour of topicality! Students were asked about (a) how they would strike the balance between internal fundamental analysis and the use of external agencies for viability assessment; (b) the metrics which they might use for internal fundamental viability analysis if that were required and (c) what sort of supplier support they would be prepared to volunteer to ensure continuity of supply.

All parts of this question were rather poorly answered, and the fail rate was high. For part (a) one would expect a presumption in favour of external agencies, if available, except in the case of suppliers whose failure could be terminal for the company. Only a few students got anywhere with this part. For part (b) few students showed any significant understanding of how future viability might be assessed. Part (c) responses were no better, so overall a disappointing result.

### **Question 6**

Happily, this question was much more to students' taste and provoked very good and in a few cases exceptionally good responses. Marked earned here helped to compensate for Q5.

Students were required to map onto the Risk Management Matrix a profile describing how they would manage (i) receivables credit risk and (ii) short-term liquidity risk for a building materials company supplying medium size residential and commercial building contractors.

This question was prompted by press coverage about the reductions in trade receivables insurance cover resulting from the recession. Trade receivables insurance is an obvious element in the answer to (i), but the discussion could be taken a step further by arguing that the real risk with this solution is when the cover is removed!

### **Question 7**

This question held to the theme of topicality established in preceding questions. It was based on a large project investment made by a major European producer of a basic commodity product in Russia. The implementation phase is 2008 - 2010 and by January 2009 the company had intended to execute EUR/RUB cross currency

amortising interest rate swaps to hedge the project investment fx risk.

However at that time Russia had developed a large current account deficit, had been downgraded to BBB and was desperately trying to prop up the Rouble. Mosprime 3m was up to 21% and yields implied by the EUR/RUB forward market implied short-term rouble yields as high as 40%.

The question required students to [(a) and (b)] explain the massive shift in implied yields and to [(c) and (d)] suggest how to manage the EUR/RUB exchange risk during drawdown and amortisation.

This was a testing question and a good indicator of who would pass the exam. The answers to parts (a) and (b) were generally very good, but students fared less well with parts (c) and (d) which carried two-thirds of the marks.