The Association of Corporate Treasurers

Examination Paper, Solutions and Examiners Report

MCT ADVANCED DIPLOMA GENERAL EXAMINATION

October 2011

QUESTION 1

You have just received the Excel spreadsheet for the proposed LBO of your Group's healthcare supplies company based in Sweden but with a global reach. You have to make a presentation to your Group Board explaining the key features of the proposed deal and also giving an opinion on whether the deal is acceptable. In preparation you should address the following questions.

Required:

a) **How can this highly leveraged business afford to make retained losses of EUR 89 million in the first four years? Support your answer with figures.**

(3 marks)

b) **What are the known and likely differences between the A, B and C tranches of the term loan and also the second lien, and what are the reasons for those differences? Quantify your answer where appropriate. NB: the "shareholder loan" interest is not tax-deductable under Swedish tax law, but is treated as dividends.**

(4 marks)

c) **Bearing in mind that the mezzanine and shareholder loan balances increase over time, comment on the balance of risk and return, plus the nature of the returns, to these two categories of investors. Quantify your answer.**

(4 marks)

d) **What is the leverage on day one and how would you define and measure "leverage"? Quantify your answer.**

(5 marks)

e) **What annual rate of return would shareholders expect, how would they receive it and how likely are they to receive it? Please support your answer with numerical calculations based on CAPM, allowing specifically for both business and financial risk as at day one.**

(4 marks)

f) **Demonstrate how the private equity shareholders would have valued their investment at EUR 1,000 millions and therefore the acquisition price at EUR 2,950 millions based, for illustration, on the likely value of the business at year 5 and on your assessment of the required equity return from your answer to question 1.e. Support your answer with numerical calculations based on the case.**

(8 marks)

(Total 28 marks)

NB Figures in the tables have been rounded to nearest million so may not add "correctly".

Benelux Healthcare LBO - Proposed Structure

Income Statement	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
EUR millions	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Turnover	747	822	896	976	1,054	1,139	1,230	1,316	1,395	1,479	1,567
Gross profit	400	444	485	533	577	627	681	729	773	819	868
Overheads	(203)	(231)	(250)	(272)	(296)	(324)	(350)	(379)	(402)	(427)	(446)
EBIT	**197**	**213**	**235**	**261**	**281**	**303**	**331**	**350**	**371**	**392**	**422**
Interest receivable		0	2	3	5	7	10	14	14	7	(2)
Term Loan A - interest payable		(19)	(19)	(17)	(15)	(12)	(9)	(5)	(1)	0	0
Term Loan B - interest payable		(36)	(36)	(36)	(36)	(36)	(36)	(36)	(27)	(9)	0
Term Loan C - interest payable		(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(29)	(10)
2nd Lien - interest payable		(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
Mezzanine - interest payable		(53)	(55)	(58)	(60)	(63)	(66)	(69)	(72)	(76)	(79)
Net interest payable		(166)	(166)	(166)	(164)	(162)	(158)	(154)	(145)	(126)	(109)
Profit before tax		**47**	**68**	**95**	**117**	**142**	**173**	**196**	**226**	**266**	**313**
Tax		(10)	(14)	(14)	(18)	(20)	(21)	(24)	(25)	(29)	(34)
Profit after tax		**37**	**54**	**81**	**99**	**122**	**152**	**172**	**201**	**237**	**279**
Shareholder loan		(80)	(86)	(93)	(101)	(109)	(118)	(127)	(137)	(148)	(160)
Retained Earnings		**(43)**	**(32)**	**(12)**	**(2)**	**13**	**35**	**46**	**64**	**89**	**119**

Balance Sheet

Goodwill	2,639	2,639	2,639	2,639	2,639	2,639	2,639	2,640	2,640	2,640	2,640
Tangible fixed assets & investments	152	162	168	174	184	195	206	217	229	241	253
Net working assets	159	181	188	205	221	239	258	276	293	310	329
Closing cash balance	0	24	69	117	166	236	321	428	319	27	(160)
Total Assets	2,950	3,005	3,064	3,135	3,210	3,309	3,425	3,561	3,480	3,219	3,063
Term Loan A	300	300	285	255	210	165	105	45	0	0	0
Term Loan B	525	525	525	525	525	525	525	525	263	0	0
Term Loan C	525	525	525	525	525	525	525	525	525	263	0
2nd Lien	200	200	200	200	200	200	200	200	200	200	0
Mezzanine	400	418	438	458	479	501	524	549	574	601	628
Total debt	1,950	1,968	1,973	1,963	1,939	1,916	1,879	1,844	1,561	1,063	628
Shareholder loan	1,000	1,080	1,166	1,260	1,360	1,469	1,587	1,714	1,851	1,999	2,159
Retained earnings	0	(43)	(76)	(88)	(89)	(76)	(42)	4	68	157	275
Total liabilities and equity	2,950	3,005	3,064	3,135	3,210	3,309	3,425	3,561	3,480	3,219	3,063

Cash Flow

EBIT	197	213	235	261	281	303	331	350	371	392	422
Depreciation	19	19	20	20	21	21	22	23	23	24	24
Change in NWA	(179)	(22)	(7)	(17)	(16)	(18)	(19)	(18)	(17)	(18)	(19)
Capex	(12)	(29)	(26)	(27)	(31)	(32)	(33)	(34)	(35)	(36)	(36)
Tax		(10)	(14)	(14)	(18)	(20)	(21)	(24)	(25)	(29)	(34)
Net Operating Cash Flow	**25**	**171**	**207**	**224**	**236**	**255**	**280**	**297**	**318**	**333**	**357**
Interest received and paid		0	2	3	5	7	10	14	14	6	(2)
Term Loan A		(19)	(19)	(17)	(15)	(12)	(9)	(5)	(1)	0	0
Term Loan B		(36)	(36)	(36)	(36)	(36)	(36)	(36)	(27)	(9)	0
Term Loan C		(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(29)	(10)
2nd Lien		(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
Mezzanine		(34)	(36)	(38)	(39)	(41)	(43)	(45)	(47)	(49)	(51)
Net interest paid		(147)	(147)	(145)	(143)	(140)	(135)	(130)	(120)	(100)	(82)
Cash flow before funding		**24**	**60**	**78**	**93**	**115**	**145**	**167**	**198**	**234**	**275**
Term Loan A		0	(15)	(30)	(45)	(45)	(60)	(60)	(45)	0	0
Term Loan B		0	0	0	0	0	0	0	(263)	(263)	0
Term Loan C		0	0	0	0	0	0	0	0	(263)	(263)
2nd Lien		0	0	0	0	0	0	0	0	0	(200)
Mezzanine		0	0	0	0	0	0	0	0	0	0
Increase / (reduction) in cash		24	45	48	48	70	85	107	(109)	(291)	(187)

Interest Rates

LIBOR	4.44% throughout
Cash deposits (margin below LIBOR)	(0.79%) throughout
Term Loan A (margin over LIBOR)	2.00% throughout
Term Loan B (margin over LIBOR)	2.50% throughout
Term Loan C (margin over LIBOR)	3.00% throughout
2nd Lien (margin over LIBOR)	4.75% throughout
Mezzanine (Margin over LIBOR)	8.75% throughout
Mezzanine cash percentage	65% throughout
Shareholder loan (absolute)	8.00% throughout

Covenant Compliance

EBITDA / Cash Interest										
Covenant level (min)	1.2	1.3	1.4	1.6	1.9	2.2	2.4	2.7	3.2	4.3
Projected level	1.6	1.8	2.0	2.2	2.5	2.8	3.2	3.7	4.5	5.3
Net total debt / EBITDA										
Covenant level (max)	11.2	10.1	8.9	7.8	6.8	5.7	4.9	4.0	3.2	2.3
Projected level	8.4	7.5	6.6	5.9	5.2	4.4	3.8	3.2	2.5	1.8
Cash flow / debt service										
Covenant level (min)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Projected level	1.16	1.28	1.28	1.26	1.38	1.44	1.56	**0.74**	**0.53**	**0.66**

QUESTION 2

An article in the Financial Times in May 2011 reported that the London market expected a merger and acquisition boom to take off because conditions should prove fertile for deals.

Among the factors mentioned in the article were the following;
"the resilient FTSE 100 index continues to trade near the 6000 level as many fund managers anticipate that the M&A touch paper could soon spark hefty gains"
"private equity buyers are reported as waiting to pounce as they are under pressure to use their buy-out cash"
"also a number of companies that cut costs throughout the downturn have shifted focus from survival to growth but face a stubbornly slow economic recovery"
"Morgan Stanley cite improved corporate profitability, the slowing pace of earnings growth, robust balance sheets and strong cash generation as reasons to be bullish"
"Sectors which could see M&A activity include clean energy, mining, capital goods, luxury goods, business services, technology and utilities"

Sage is described as one of Britain's largest software developers but also as "troubled". The recently-appointed Chief Executive is keen to sell off under-performing businesses, like the American healthcare division, valued at $500m and tune up the group's capabilities in cloud computing applications. Sage reported a general return to growth for the first time in a year. A disposal of the healthcare division would unpick Sage's largest acquisition which cost $565m in 2006.

	P/E	Net Yield	Actual Annual Return	Beta
FTSE	13.7	3.0%	7.0%	0.98
Alternative energy	35.6	0.1%	0.4%	n.a.
Mining	8.7	1.4%	12.0%	1.33
Capital goods	16.5	2.63%	42.0%	1.21
Luxury goods	28.0	3.15%	37.5%	1.03
Business services	7.3	2.4%	13.0%	0.95
Technology	25.3	1.2%	26.0%	1.01
Utilities	10.5	5.3%	17.0%	0.59
Sage Group	16.1	2.8%	20.0%	0.84

Required:

a) Explain the corporate finance logic that might make acquisitions relatively more attractive and likely at this time, distinguishing between the sound and the unsound reasons that historically have driven M&A activity.

(5 marks)

b) Please refer to and explain each of the above quotations and then make selective use of any of the stock market data that might support your arguments.

(7 marks)

(Total 12 marks)

QUESTION 3

You are Treasury Assistant in a chemicals group whose businesses are mainly within the mature down-stream section of the petro-chemicals value chain. Most of the businesses have been hard hit by the recession of 2008-10 but they are now showing signs of recovery.

Your Group Finance Director and Group Treasurer have asked you to take a fresh look at capital investment appraisal procedures within the Group, bearing in mind the industry characteristics, the current economic climate, plus the finance and treasury considerations and to write a paper setting out how large, new capital investment projects should be presented to the Group Board.

Required:

Set out, in note form, what you think should be the essential content of the "Board Summary for Large Capital Projects", specifically for your Group, bearing in mind that the Board Members are from all the key managerial functions not just finance.

(10 marks)

QUESTION 4

Advent, the national airline in a small LDC (less developed country), has recently been privatised with the Government retaining a 15% equity stake and representation on the Board. You are the treasury member of a newly recruited management team comprising locals with extensive overseas experience, mainly in the US, as well as some suitably qualified specialist expatriates like yourself.

The country is remote and mountainous and has a rapidly growing tourism industry pitched at the cautiously adventurous who want to experience something different but comfortable. Previously the main source of revenue has been based on a single commodity with a volatile price. The small population is well educated. The Government is progressive and is encouraging local enterprise and inward investment; the privatisation of Advent is a step in this process. The currency is now also freely exchangeable.

Advent receives pre-payments for inward tourist travel, which peak in the summer, in foreign currency. Large cash balances build up as a consequence. As bookings are realised cash is spent and pre-payments fall away to zero.

Required:

a) **How would you warehouse these pre-payments? Justify your proposal.**

(4 marks)

The Government representative on the Board arranges a meeting with the Chief Executive and Finance Director to discuss informally a proposal which the

Minister for Development wishes to explore.

The proposal is to use some of the cash from pre-payments to fund investments in (i) corporate tourist assets such as hotels and (ii) equity investment in other domestic state and private entities.

It is proposed that this use of cash which would otherwise be available for operational expenses as bookings are realised is funded by bank short term lines in local currency.

Required:

b) How would you respond to this proposal?

(10 marks)

(Total 14 marks)

QUESTION 5

Triggered in part by the recent financial crisis, the UK Corporate Governance Code was updated in 2010 by the Financial Reporting Council (FRC). In the section on accountability, the Code states that:

> *"the board is responsible for determining the nature (risk appetite) and extent (risk tolerance) of the significant risks it is willing to take in achieving its strategic objectives"*

To evidence compliance with this requirement your company is devising Key Risk Indicators (KRIs) and Key Control Indicators (KCIs):

- KRIs identify the nature (and potential extent) of key risks which the company is willing to assume, ie propensity to take risk.
- KCIs specify the quantum of each key risk which the company is willing to tolerate, ie propensity to exercise control.

The table below, reproduced in the pro-forma for the answer, lists eight generic KRIs with matching generic KCIs, listed (i) to (viii). This list is not exhaustive. The pro-forma provides space for you to list others if relevant for your answer.

TYPICAL KRIs/KCIs	
KRIs: Risks which pose the greatest threat to the company or project	**KCIs: Self-imposed constraints chosen to limit or otherwise influence the amount of risk undertaken**
(i) exposures to classes of sovereign risk	(i) sovereigns: credit rating, political and economic indicators, quantum of exposure
(ii) exposures to size of capex projects	(ii) capex projects: relative size, technical risk
(iii) constraints implied by desired credit rating	(iii) credit rating level
(iv) exposures to conventional finance/treasury risks, eg funding, liquidity, fx/interest rates, commodity price	(iv) interest cover, leverage, headroom, degree of rate/price hedging
(v) constraints implied by regulation on conduct of business	(v) regulations eg types which are unacceptable
(vi) exposures to types of corporate counterparty	(vi) corporate counterparties: credit metrics eg liquidity
(vii) exposures to types/sizes of acquisition, JV, partnerships	(vii) partnerships: size limits, financial profile
(viii) exposures to types of product-market	(viii) product-markets: relative size, relevant expertise, market risk

Precision Castings Plc (PCP), a long established specialist producer of high quality small die-cast engineering components operating solely in the UK, has developed a flexible coupling for household plumbing applications. The product is revolutionising the plumbing trade and has attracted substantial overseas interest. Happily the company has tied up international patent rights but has not got sufficient financial resources to fully realise the overseas market potential. The Chief Executive, a grandson of the founder and the inventor of the new device whose family still owns 25% of the equity, is totally opposed to a trade sale. The Board has decided therefore on an overseas expansion strategy of (A) selective foreign direct investment in manufacturing, complemented by (B) partnerships with overseas entities.

As the recently employed treasurer with a reputation already for opining on risk issues, you have been asked to help define the KRIs and KCIs which the board might wish to prescribe for the execution of the overseas expansion strategy.

Required:

Page 1 of the attached pro-forma lists the typical KRIs shown above. For each of Strategy (A) and Strategy (B) select what you would consider to be the three most important KRIs. If there are some not listed which you think should be in the top three, list these on Rows (ix), (x). Use the pro-forma to record the reasons for your choice of each of the three top KRIs for (A) and (B).

Use page 2 of the pro-forma to record your choice of KCIs for each of the KRIs which you selected for Strategies (A) and (B).

(12 marks)

Note: *If you run out of space on the pro-forma continue your response on your answer book.*

QUESTION 6

Asset based lending (not to be confused with asset backed securitisation) is term and/or revolving finance secured on a mix of property equipment, stock and debtors.

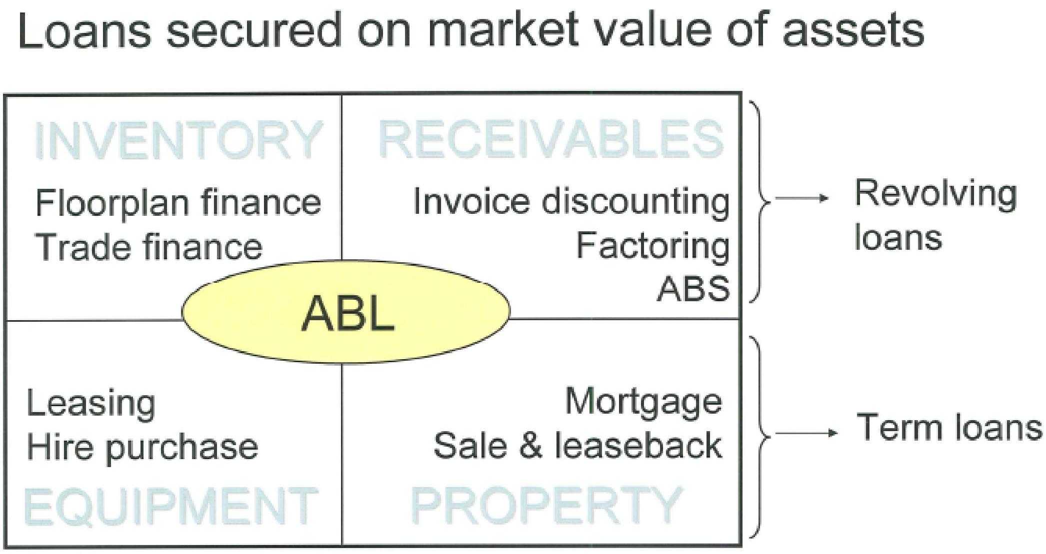
Market value of the assets dictates the size of loan.

Close, on-going monitoring of the business ensures that loans continue to be adequately secured.

ABL is available from commercial banks and non-banks. Commercial banks which specialise in this area bring together in one facility types of secured lending which are typically reside in different arms of a bank.

With the close, ongoing scrutiny of the borrower by the bank, asset value tracking replaces covenant tests.

What is ABL?



Derived from Burdale Financial Ltd

Required:

a) For what types of *one-off business situation* might asset based lending be appropriate and why?

(5 marks)

b) For what types of *firm* might asset based lending be appropriate and why?

(5 marks)

(Total 10 marks)

QUESTION 7

Reflecting on the benefits which had been achieved by centralised cash management in a recent Treasurer Supplement case study, the Group Treasurer responsible commented:

> *"It's the business that is responsible for these improvements; in treasury we just provide the oil to make the cash flow smoothly"*

Your company Polyfax Group was founded in the 1950's. Turnover is now EUR 1 bn. It was the subject of a management buyout in 2007 financed by private equity, resulting in high leverage. It now operates in 24 countries with 74 sites organised into five product-market divisions of which one is a one-product/one-country division (Foam/Canada). These five divisions supply a vast range of polymer foam, sheet and compound products for a range of applications, including automotive, building/construction, furniture and bedding and general industrial use. The manufacturing sites are typically close to the industrial end user. The Group functional currency is euros and sales in 2010 were approx EUR 1 bn, distributed by product division and region as shown below.

Revenue by Division and Region

Regions \ Divisions	Foam	Compounds	Non Woven	Sheet	Foam Canada	Revenue %
UK	5	7	-	2	-	14
West Europe	25	4	8	10	-	47
East Europe	20	-	-	-	-	20
North America	2	2	2	-	4	10
Rest of World	-	9	-	-	-	9
Revenue %	52%	22%	10%	12%	4%	**100%**

Difficult trading conditions and the high level of debt, as well as adverse movements in oil-related raw material costs, have put liquidity under severe pressure.

You are the newly appointed treasurer. The finance director has asked you to initiate and manage a project to centralise cash management throughout the Group.

Required:

a) What key outcome(s) would you set for the project?

(5 marks)

b) What information would you need?

(4 marks)

c) How would you plan to execute the project?

(5 marks)

(Total 14 marks)

GENERAL EXAMINATION - NOTE FORM ANSWERS

OCTOBER 2011

QUESTION 1 **50.4 mins (28 marks]**

Required:

1a) How can this highly leveraged business afford to make retained losses of EUR 89 million in the first four years? Support your answer with figures.

<u>Marking scheme</u> I have nine points so ⅓ mark for each good point.

5.4 mins (3 marks)

Because net cash flows [1] are positive [2] (+ 165 mill) better by [3] 254 mill. than the accounting losses. Due to accrual of interest [4] on the mezzanine [5] (79 mill) and shareholder loan (360 [6] mill) NB some cash leakage to capex versus depreciation (33 mill) [7] and working capital (62 mill), [8] also Term Loan A repayments of 90 mill. [9] Run out of cash and you go bust!

1b) What are the known and likely differences between the A, B and C tranches of the term loan and also the second lien, and what are the reasons for those differences? Quantify your answer where appropriate. NB The "shareholder loan" interest is not tax-deductable under Swedish tax law, but is treated as dividends.

<u>Marking scheme</u> I have 12 points so ⅓ mark for each good point.

7.2 mins (4 marks)

Risk/return hierarchy built in. [1] - Also structure aids syndication [2]

Maturities	- A years 2 to 8 [3]	(amortising)
	- B years 8 and 9	(back ended)
	- C years 9 and 10 [4]	(back ended)
	- 2nd lien year 10 [5]	(bullet)

NB Expectation is that the structure would be re-financed before year [6] 8, so tranche A is the only [7] real repayment expected and required. Interest rates to match increasing risk [8] because of longer maturities and associated likely sub-ordination [9] re. interest payments.
LIBOR + 2% increasing to 4.75% [10] (6.44% to 9.15%), with increasing maturity, risk and subordination.

Also likely that there is progressive subordination [11] in event of bankruptcy, especially regarding the second lien. [12]

1c) Bearing in mind that the mezzanine and shareholder loan balances increase over time comment on the balance of risk and return, plus the nature of the returns, to these two categories of investors. Quantify your answer.

<u>Marking scheme</u> - I have 12 points so ⅓ mark for each good point.

7.2 mins (4 marks)

Mezzanine expects total return of 13.19% [1] of which 65% is cash paid [2] (8.57%). This is lower than the cash interest on the second [3] lien but higher than the rates on the Term Loan tranches. So this is quasi-equity, [4] the highest risk category of debt but with a P.I.K. [5]-style accrued payment at the end.

Shareholder loan, which really is (quasi)- [6] equity, the truly risk capital, receives a notional 8% [7] accrual but no running cash [8] returns. Since this is much more risky than the mezzanine the expected return would be higher than the [9] 13.19% but totally dependent on exit via [10] IPO, trade sale or re-financing before year 10, OR returns from earnings/cash flow after year 10 - the long haul! [11] [12]

1d) What is the leverage on day one and how would you define and measure "leverage"? Quantify your answer.

<u>Marking scheme</u> - I have 15 points so ⅓ mark for each good point.

9.0 mins (5 marks)

NB Leverage is about the risk to lenders but in LBOs there are several categories of debt plus some instruments with debt and equity features so no single definition of leverage!

			balance sheet		EBITDA	
		tax deductible	%	cumulative	multiple	cumulative
senior debt	1,350	[1] Y	45.76	[3] 45.8	5.81	[5] 5.81
junior debt	200	Y	6.78	52.5	0.86	6.68
quasi-equity (mezz)	400	Y	13.56	[4] 66.1	1.72	[6] 8.41
equity (sh'holder loan)	1,000	[2] N	33.90	100.0	4.31	12.71
	2,950		100	NB EBITDA (year 1) = 232 [7]		

Tax deductible debt = [8] 66.1% of balance sheet (typical 66 / 33 ratio) and 8.41 x EBITDA (high enough) [9]

Interest bearing debt (cash) = 52.5% [10] (plus 65% of the mezz) [11] = 61.3%, and 7.80 x EBITDA [12]

Arguably the EBITDA definition is the most relevant [13] for an LBO since debt repayment [14] is crucial but B/S leverage is also relevant to lenders as a guide to asset security. [15]

1e) What annual rate of return would shareholders expect, how would they receive it and how likely are they to receive it? Please support your answer with numerical calculations based on CAPM, allowing specifically for both business and financial risk as at day one.

<u>Marking scheme</u> - I have 15 points so ⅓ mark for each good point.

7.2 mins (4 marks)

Assuming health-care supplies is rated somewhere below [1] average risk, eg unlevered beta [2] = 0.75

Levered beta (day 1) [3] = 0.75 x $\left(1+\left({}^{4}0.79\times\frac{{}^{5}66.1}{33.9}\right)\right)$ = 1.91 [6]

NB 21% tax rate first two years.

Using CAPM re = (3.5 to [7] 4.5) + (1.91 x (4.0 [8] to 5.0))
= 11.1% to 14.1% [9]

Plus a private equity/private company premium of 2 to 3%
= <u>13 to 17%</u> [10]

But the mezz is priced at 13.2% [11] so must be higher than that, probably at least 20% compound! Current market rates suggest about 18%. [12]
No cash dividends [13] before all debt is repaid at year 10 so return depends on exit [14] valuation of the business, hopefully before year 10. Return and value therefore dependent on actual performance, exit route, vagaries of valuation multiples, etc. [15]

About a third ? of LBOs fail, resulting in a total loss to private equity, re-financings may involve a potential loss, while some give spectacularly good returns.

1f) Demonstrate how the private equity shareholders would have valued their investment at EUR 1,000 millions and therefore the acquisition price at EUR 2,950 millions based, for illustration, on the likely value of the business at year 5 and on your assessment of the required equity return from your answer to question 1.e. Support your answer with numerical calculations based on the case.

<u>Marking scheme</u> - I have 16 points so ½ mark for each good point because good understanding is required.

14.4 mins (8 marks)

Shareholders expect no cash dividends so their return depends totally on the expected exit price.

The basic principle is to i) value the exit EV using an appropriate [1] multiple e.g. EBITDA, for the likely or desired exit year (or a growing cash flow perpetuity calculation), (ii) subtract net [2] debt still outstanding to obtain the exit equity value, (iii) discount at the required [3] equity rate of return to obtain the NPV for the initial equity price. Adding the initial net debt gives the entry EV.

Private investors would hope to exit between years 3 and 5. This deal was based on an EBITDA multiple of 12.71 [4] times prospective earnings but growth is expected to fall off a little after year 5 so probably a lower multiple [5] would be appropriate for year 5, based on prospective year 6 EBITDA.

eg	EV (years)	=	[6] 353 x (say) 11	=	3,883 [7]	
	Equity value	=	3,883 - 1,916 [8] + 236 [9]	=	2,203 [10]	
	Discount at 17.11%	=	$2,203 / 1.1711^5$ [11]	=	1,000	entity
	Discount at 18%			=	963	equity [12]
	Discount at 20%			=	885	valuation

The entry equity valuation is obviously very sensitive to the exit year, the [13] estimated EBITDA of that year, the likely exit multiple and the required rate of return.

Sensitivity Analysis (mainly for later students but insights on sensitivity get extra marks)

		EBITDA YR 6 = 353				
Exit multiple		10	11	12	13	14
EV		3,530	3,883	4,236	4,589	4,942
Equity value		1,850	2,203	2,556	2,909	3,262
Required rate of return	14%	961	1,144	1,328	1,511	1,694
	16%	881	1,049	1,217	1,385	1,553
	18%	809	963	1,117	1,272	1,426
	20%	743	885	1,027	1,169	1,311
	22%	684	815	946	1,076	1,207

The table reveals that a multiple of at least 11 is needed to give a compound rate of return higher than the mezz and 12 times EBITDA to get a respectable private equity return.

An exit multiple equal to the entry multiple [14] of 12.71 is needed to give a return of 23%. This looks like a big ask.

Alternatively, if this table is the conservative [15] bank base case the shareholders' forecast EBITDA may be, say, 20% higher. In which case even a 10x multiple [16] gives a good return.

Exit multiple		10	11	12
EV		4,236	4,660	5,082
Equity value		2,556	2,980	3,402
Required return	18%	1,117	1,303	1,487
	20%	1,027	1,198	1,367
	22%	946	1,103	1,259
	24%	872	1,017	1,160

Sensitivity Analysis (2) (mainly for later students)

The effect of a delayed exit is that the higher rates of return are progressively harder to achieve without exit multiples higher than the entry multiple.

EBITDA YR 11 = 446 x (say) 1.05 = 468.3

Exit multiple		10	11	12
EV		4,483	5,151	5,620
Less Net debt		(788)	(788)	(788)
Equity value		3,695	4,363	4,832
Required return	14%	997	1,177	1,303
	16%	838	989	1,095
	18%	706	834	923
	20%	597	705	780

QUESTION 2 **21.6 mins (12 marks)**

Required:

2a) Explain the corporate finance logic that might make acquisitions relatively more attractive and likely at this time, distinguishing between the sound and the unsound reasons that historically have driven M&A activity.

<u>Marking scheme</u> - I have 17 points so ⅓ mark for each good point.

9 mins 5 marks)

Corporate finance theory says acquisitions should only be based on the potential for real [1] savings or improved profit potential eg via new management/improved [2] strategy or [3] real synergies from the combined entities ie they are expected to add real value.

Evidence is that acquisitions often destroy value [4], either through paying too much or not realising synergies.

Otherwise there is no financial logic to acquisitions that simply create [5] a bigger entity, since the assumption is that all shares are correctly and fairly priced [6] (which not everyone agrees is a realistic assumption).

Alternatively, valuation is extremely [7] subjective since it depends on so many key assumptions - and mid 2011 is still a period of great economic (and political) uncertainty [8], which makes valuation particularly difficult. [9] Some companies therefore "may be undervalued."

Bad reasons for acquisitions [10] - wanting to grow for its own sake, for "strategic [11] logic" that doesn't translate into hard financial gains, - for using up surplus cash, [12] to acquire companies [13] with surplus cash, for "bootstrapping" via lower P/E ("cheap") companies etc, etc.

Post the 2008-10 crisis/depression some companies may be relatively weak, therefore represent opportunities for real synergies.

At mid-2011 there may be "over- [14] discounted" companies, there certainly are cash-rich [15] companies, and there may be real benefits of scale during the recession. [16] Investors are also [17] cash rich.

2b) Please refer to and explain each of the above quotations and then make selective use of any of the stock market data that might support your arguments.

<u>Marking scheme</u> - I have 22 points so⅓ mark for each good point.

12.6 mins (7 marks]

The first quotation implies that the FTSE 100 should be below [1] the 6000 level based on general economic and market conditions but that it is being buoyed up by bid expectations. [2] Bids tend to come in at least 20% [3] higher than a company's current price, thereby impounding likely future growth into the share price immediately (an option value element) - hence the boost to the Index. [4]

The second and third quotations refer to the demand from [5] potential acquirors, seeking either to achieve [6] financial return or growth [7] objectives by via acquisition deals. Also having the cash and therefore the ability to acquire. [8]

The fourth quotation refers to recovery of return on assets [9] after the recession, to a more normal level but with slow growth [10] prospects (again) and low gearing/plenty of cash (again). [11]

Why these sectors? - the final quotation.

The implication is that these sectors are relatively undervalued [12] in terms of their profit recovery or growth potential, [13] maybe because the market generally is still worried about a "double-dip" [14] which is holding prices back, whereas some sectors may actually be out of recession, free of the "double-dip" threat and with good prospects, but dragged down by the general sentiment. [15]

Alternatively they may be sectors where rationalisation by acquisition of still weak companies may yield real benefits via market share, product range, etc. [16]

But the table of risk and return metrics does not really give any clues, - [17]

- Some very low P/E ratios (sub 10, no-growth sectors) and some very high P/Es (expected strong recovery from very poor current earnings)

- Very contrasting yields - from utilities on 5.3% to alternative energy yielding only 0.1%

Dividend payout ratio, which can be calculated, vary from 4% for alternative energy to 88% for luxury goods. [18]

The FTSE PE of 13.7 reflects general confidence a little below average. [19]

The FTSE yield is a fairly average 3.0% and the pay-out ratio at 41% also very average so no evidence of obvious over- or under-valuation in the FTSE.
Looking at the actual annual returns achieved over the last year all except alternative energy have achieved returns well above the FTSE (24.6% versus 7%) so is the article saying bet on last year's proven winners? [20]

Looking at the betas the average is 1.0 with two sectors high, two low and two pretty average! No real clues here.

The paragraph on Sage gives clues that the secret is in the detail [21] rather than in broad generalisations; new CE, rationalisation programme, realising cash from disposals, new tech-based development opportunities, return to growth after poor performance - in other words plenty of potential up-side and on a good but not prohibitive PE of 16.1 [22]

QUESTION 3 **18 mins (10 marks)**

Required:

Set out, in note form, what you think should be the essential content of the "Board Summary for Large Capital Projects", specifically for your Group, bearing in mind that the Board Members are from all the key managerial functions not just finance.

<u>Marking scheme</u> - I have 34 points but ⅓ mark for each good point.

18 mins (10 marks)

Given the industry setting tight cash management [1] will be absolutely essential so capex will have to be kept to the absolute [2] minimum for maintaining the cash-generating [3] ability of the business, probably less than depreciation [4] overall! (the exception that proves the rule)

New business opportunities will be relatively [5] rare because businesses are based on known [6] technology, although end users may find new applications [7] of the base chemical products.

Market shares will be large, well-established and stable. [8]

Cyclical business

In no particular order;

- Executive summary [34]

- DCF summary of the project is absolutely [9] crucial, probably making use of all key metrics; NPV, IRR, discounted pay-back, profitability index. [10] WACC must be carefully calculated, well articulated and well understood. [11]

- Simple summary of the string of net cash flows [12] can help non-finance [13] people understand the DCF metrics - often overlooked.

- Simple presentation of group or subsidiary company P & L and Cash Flow Statement with and without the project [14] - impact on reported results will be important, maybe critical, [15] as well as DCF metrics.
  Big projects may even have to be delayed or modified because of front-end impact even if superior IRR/NPV. [16]

- Strategic/operational logic [17] for the project, to support the DCF analysis which claims that it will add value, maybe using an appropriate tailored classification [18] of project eg expansion of capacity, "straight" but essential replacement, cost savings, improved efficiency [19] (with different risk ratings).

- Size of capital [20] spend. Reference to the year's agreed capital [21] budget and to availability and source of cash for funding the project. [22]

- Risk [23] summary, again probably referenced against an agreed company classification, plus any mitigants. [24] eg construction, technical, operational, counter-party, supply, office, fx, pricing etc.

- Simple sensitivity [25] /scenarios analysis for impact of key variables on the key financial parameters, highlighting any factors that prove to be critical. [26]

- Simple non-technical [27] description of the project.

- Assessment of economic/business cycle [28] vs planned commissioning [29] date.

- Treasury implications [30] eg tax, fx, commodity risk, [31] cash input.

- Key assumptions, [32] especially macro-economics and technical

- Personnel/treasury requirements. [33]

QUESTION 4 **Total 25.2 mins (14 marks)**

4a) How would you warehouse these pre-payments? Justify your proposal.

7.2 mins (4 marks)

Marking Scheme

Q4a. Expect to see mention of currency, liquidity and counterparty risk for a pass. Missing out one of these, eg counterparty risk, prejudices achievement of a pass mark unless quality of general discussion compensates.

- Issues to consider:
  - Currency risk & liquidity
  - Bank counterparty risk on depos
  - Yield

- Special circumstances
  - Country is single commodity LDC, so potential fx volatility
  - Tourism is exposed to both market risk and environmental events, either domestic or international, which could affect tourist volumes.

- Hedging and liquidity

  - match currency inflows and outflows over the year and hedge net positions; the indication is that these will be significant but short-term

- Bank counterparty risk
  - deposit surpluses after netting with high quality foreign banks
  - if need/want to deposit with local banks, seek to offset against loans
  - manage yield and accessibility by estimating maturity profile and using mix of term depos, money market funds, FRAs.

4b) How would you respond to this proposal?

18 mins (10 marks)

Marking Scheme

Q4b. Expect discussion to capture about five significant points, eg risk appetite, for a pass. Additional marks for quality of discussion.

- Proposal is about investing long-term in risky assets, funding short-term and taking the benefit of the credit risk premium and the liquidity transformation premium, ie behaving like a bank. So one response would be to advise that the banks holding Advent's surpluses should be pressured to intermediate the funds to a local investor.

- As proposed, there is also the fx and re-financing risks associated with the local currency funding.

- Advent is a private company, and if the sums are material then, given the potential volatility of tourism revenues, the liquidity risk looks unacceptable.

- Term investments external to the business just to enhance yield also look unacceptable, given the capital intensive nature of the business.

- However Advent is part-government owned, so other factors could influence the decision. If so, then something should be extracted in return, eg tax break/regulatory waivers/government guarantees.

  However, the question still would be whether a national airline in a small less developed economy has the expertise to manage the liquidity and credit risk and would be better off long term keeping it simple and reducing risk rather than assuming risk, ie a matter of the appropriate risk appetite and risk tolerance . . . cue Q5!

- Extra points for candidates who flag the political pressures bearing on an expatriate technical specialist.

Examiner's Footnote: Using this question as a mini-case study with a group of finance officers from a Chinese privately owned regional airline, rather more emphasis was placed on the political dimension. The view was that accommodating such a request from a regional government might provide tangible economic benefits such as planning permission and additional schedule slots.

QUESTION 5 **21.6 mins (12 marks]**

Required:

Page 1 of the attached pro-forma lists the typical KRIs shown above. For each of Strategy (A) and Strategy (B) select what you would consider to be the three most important KRIs. If there are some not listed which you think should be in the top three, list these on Rows (ix), (x). Use the pro-forma to record the reasons for your choice of each of the three top KRIs for (A) and (B).

Use page 2 of the pro-forma to record your choice of KCIs for each of the KRIs which you selected for Strategies (A) and (B).

(12 marks)

Note: If you run out of space on the pro-forma continue your response on your answer book.

<u>Marking Scheme</u>

KRIs: there is no absolutely right answer to this part of the question. The entries to follow on the Pro-forma for Strategies (A) and (B) are the writer's personal choice of one credible response: actual student responses correlate well for (A), less well for (B). Q5. KRIs: expect choice of the three for each strategy to be credible and to distinguish between the direct investment and joint venture strategies. KCIs: expect to see tolerance for each KRI clearly and realistically expressed.

KRI	**Strategy (A)**	**Strategy (B)**
Pro-Forma	(viii) (ii) (iv)	(vii) (ix) [Patent Law] (i)
Students Responses	(iv) 27% (vi) 21% (ii) 14% <u>Rest 38%</u> 100%	(vii) 29% (vi) 19% (iv) 15% <u>Rest 37%</u> 100%

KCIs obviously relate to choice of KRIs. Students found this part of the question more difficult with a few providing no response.

Advanced Diploma General Examination - Pro-Forma for Question 6, October 2011
Candidate Number: ________________

PRO - FORMA		
Key Indicators	**Strategy (A)** **Manufacturing**	**Strategy (B)** **Partnerships**
KRIs: Risks which pose the greatest threat to the company or project	*KRI (viii)* *Need to invest in several large markets where there are wholesale intermediaries to limit the marketing effort.*	*KRI (vii)* *Choice of partner and legal/ financial structure probably the major risks.*
(i) exposures to classes of sovereign risk		
(ii) exposures to size of capex projects		
(iii) constraints implied by desired credit rating	*KRI (ii)* *With limited investment capacity, unwise to risk all on*	*KRI (ix)* *Respect for and enforcement of patent law.*
(iv) exposures to conventional finance/treasury risks, eg funding, liquidity, fx/interest rates, commodity price	*one large project if overseas operations are a new area; also wish to access several large markets rather than just one.*	
(v) constraints implied by regulation on conduct of business		
(vi) exposures to types of corporate counterparty	*KRI (iv)* *Because overseas operations are a new area.*	*KRI (i)* *Risks of political instability and economic failure.*
(vii) exposures to types/sizes of acquisition, JV, partnerships		
(viii) exposures to types of product-market		
(ix) other: patent law		
(x) other:		

Candidate Number: ________________

PRO - FORMA		
Key Indicators	**Strategy (A)** **Manufacturing**	**Strategy (B)** **Partnerships**
KCIs: Self-imposed constraints chosen to limit or otherwise influence the amount of risk undertaken	*KCI (viii)* • *Minimum size of (residential) plumbing supplies market* • *Established, efficient wholesale distribution network*	*KCI (vii)* • *Consider only entities which are well established, have substance and have a track record of working equitably with foreign companies.*
(i) sovereigns: credit rating, political and economic indicators, quantum of exposure		
(ii) capex projects: relative size, technical risk		
(iii) credit rating level	*KCI (ii)* *Limit on size of individual country investment;*	*KCI (ix)* *Ensure that country is covered*
(iv) interest cover, leverage, headroom, degree of rate/price hedging	*Perhaps mitigated by regional inward investment incentives.*	*by patents. Check with local patent lawyer on enforcement record.*
(v) regulations eg types which are unacceptable		
(vi) corporate counterparties: credit metrics eg liquidity		
(vii) partnerships: size limits, financial profile	*KCI (iv)* *Centralise decisions at Group,*	*KCI (i)* *Apply minimum sovereign*
(viii) product-markets: relative size, relevant expertise, market risk.	*minimise local discretion,* *monitor closely, "stay close to the business" eg working capital build-up.*	*rating test, stability of outlook.* *Check for history of remittance restrictions and discrimination against foreign partners.*
(ix) other: patent law		
(x) other:		

QUESTION 6 **Total 18.0 mins (10 marks)**

Required:

- In general, where a business has a mix of assets which have predictable and stable market value but a stream of future earnings of a quality unattractive to a senior debt lender, either because of a one-off adverse event (6.a.) or because it is a persistent characteristic of the business (6.b.)

6a) For what types of *one-off business situation* might asset based lending be appropriate and why?

9 mins (5 marks)

<u>Marking Scheme</u>

Q6a. Expect three credible one-off situations described to pass.

eg:
- Turnarounds
- Restructuring
- Acquisitions
- Buy-outs
- Refinancings
- Ring-fenced project
- Start-up business (eg dentist)
- Working capital cycle disruption

6b) For what types of *firm* might asset based lending be appropriate and why?

9 mins (5 marks)

<u>Marking Scheme</u>

Q6b. Expect three credible types of firm described to pass.

eg
- Capital intensive
- Property intensive
- Rapid growth
- High leverage
- Underperforming
- Seasonal
- Rental/leasing (eg tools)

This type of financing is topical because as new bank regulations bite from 2012, the cost and availability of funding from regulated banks may both change for the worse, opening the door wider for non-regulated financiers of which some already operate in ABL

QUESTION 7 **Total 25.2 mins (14 marks]**

Required:

7a) What key outcome(s) would you set for the project?

9 mins (5 marks)

Marking Scheme

Q7a. Expect to see 4/5 credible outcomes, including debt reduction for a pass.

Awareness of the overarching need to generate cash in private equity financed highly leveraged buy-outs, especially one in trouble, will help students to realise and express in their responses the urgency of involving the whole management team and enthusing them to get fully behind the project. Key outcomes include:

- Increased visibility of cash
- Increased visibility and understanding of cash flows and uses of cash
- Reduction in cash balances at subsidiary level
- Offset against debt where possible
- Reductions in uses of cash, eg stock, debtors

Overall, significant reduction in debt (rather than just an increase in yield on cash balances).

7b) What information would you need?

7.2 mins (4 marks)

Marking Scheme

Q7b. Expect to see at least three classes of information, including debtor/creditor terms by division/region, banking arrangements.

- Revenues by division and country (summarised in question to help identify areas of greatest potential)
- Working capital levels/creditor terms/debtor terms by division and country
- Banking arrangements locally
- Understanding of management structure and management incentivisation.

7c) How would you plan to execute the project?

9 mins (5 marks)

Marking Scheme

Q7c. Expect to see at least three major elements, with the involvement and incentivisation of business managers featuring.

- Involvement of the businesses (Charles Barlow of Coates quote at start of question)

- Pressing home understanding of private equity imperative to save cash to reduce debt and to get quick results because of the need to sell the group as a whole or piecemeal in order to exit

- Altering managements' performance incentivisation to include cash conservation

- Altering management information systems to highlight levels and uses of cash

- Enlisting help of banks to make cash movements more efficient

- Monitoring subsidiary management follow through with suppliers, customers and banks at local level.

Examiner's Report

Advanced Diploma - October 2011

OVERVIEW

	General Exam	Case Exam	Combined
Marks	46.6%	50.9%	50.9%
Questions	8	8	16
Students	16	17	17
Pass #	6	9	15
Pass %	38%	53%	45%

These average marks and pass rates are lower than average across both papers, but especially for the General Examination.

<u>Corporate Finance and Funding Summary (both papers)</u>

Overall my biggest concern is the lack of understanding of corporate finance principles and concepts. Candidates have some formulae, some facts and some practical knowledge but no reliable conceptual framework and a seeming reluctance or inability to rehearse the fundamental theories of corporate finance.

On the purely corporate finance question I passed only 4 out of 17, average mark 43%.

<u>Treasury and Risk Management Summary (both papers)</u>

As a general observation, students were better - and in some cases noticeably very good - at discussing treasury risk in broad terms eg General Exam Q4 Part 4b.

However there was less appetite for the more quantitative/operational elements eg Case Exam Q6 and Q7.

Examiner's Report - General Examination

<u>Question 1 (28 marks), average mark 42.4%, passes 6/16</u>

This was a six-part question based on a leveraged buy-out, which required both good understanding of the financing principles and dexterity with the numbers.

Question 1a. "How can the business afford to make losses?"
(average mark 36%)

- cash flow yes, but cash flow after everything.

Weak answers were as follows

- "because shareholders know they have to wait for their returns until medium term"
- "because LBOs are always like that"
- "because the interest on the mezzanine and shareholders' loan is mostly capitalised"
- "because the covenants are not breached" but substantial cash outflows were ignored, so very few candidates thoroughly analysed net cash flow.

Cash savings from capitalisation of interest was usually spotted.

Question 1b. "What are the differences between the different tranches of debt"? (average mark 71%)

Different tenor, amortisation, interest and subordination facts were reviewed but not comprehensively by many and without much comment on the risk-return hierarchy.

Question 1c. "Comment on risk and return to mezzanine and shareholder loan." (average mark 53%)

Risk and level of return OK but method and timing of delivery of return badly covered and often not well understood.

Question 1d. "What is leverage and how would you define it?"
(average mark 27%)

Define and measure "leverage" in an LBO - virtually no-one referred to EBITDA leverage, only Balance Sheet leverage. On B/S leverage most plumped for one definition, missing the subtleties of quasi-equity and senior/junior/second lien debt, which means "leverage issues" are different for different lenders. Very few candidates identified that there are different definitions of "debt and equity" from risk and tax perspectives inherent in quasi-equity instruments.

No-one really articulated what leverage metrics are trying to achieve.

Question 1e. "Calculate the required equity return using CAPM and how it is delivered." (average mark 55%)

On the straightforward question of calculating CAPM-based equity returns most started with ungeared beta and used the gearing formula correctly - but, typically, assumed ungeared beta of 0.8 or 1.0 (some much higher) without any discussion of what might be the most appropriate level for this company given the sector risk. Also most assumed 30% tax rate without referring to the actual rate for this company (21%). Many ignored the private equity risk premium given. Overall a rather mechanical, unthinking application of CAPM. The mechanics of returns to shareholders via valuation and exit at year 5 poorly understood.

Question 1f. "Demonstrate the calculation of the initial equity value."
(average mark 29%)

Hardly anyone went for the simple and most widely used multiples valuation eg EV/EBITDA. Quite a few attempted a DCF/sustainable cash flow valuation but did it badly. The answers to this part question were very disappointing especially as the valuation methodology was virtually all given in the question.

Overall Question 1 was very disappointing - answers displayed only a shallow knowledge. Candidates knew facts but didn't understand the corporate financing principles behind LBOs.

Question 2 (12 marks), average mark 44.3%, passes 5/16

Question: "Explain the corporate finance logic and the practical considerations regarding M&A activity?"

Candidates were given some messy data and contrasting quotations about likely M&A activity, given the mid-2011 economic/equity climate.

Question 2a (average mark 54%)

"Corporate finance logic for acquisitions, sound and unsound reasons for making them" - most hardly addressed the theory and empirical evidence on M&A activity relative to shareholder value enhancement. But reasonably well done overall.

Question 2b. (average mark 37%)

The various press quotations about share prices reflecting likely M&A activity and the factors increasing the likelihood of M&A activity - generally badly done with very few addressing the fundamental question of why some sectors or companies were seen as undervalued or whether it was all "broker hype." The "messy" data on P/E, yield and beta was very badly handled, if at all - this was the "outside the box" test

Question 3 (10 marks), average mark 46.7%, passes 8/16

Question: “What should a summary capital expenditure proposal contain?

This was straightforward and generally reasonably well answered overall, but many answers were partial rather than comprehensive. A comprehensive scope and summary format was requested by the question.

One candidate answered a different question eg “who should be involved in preparing the case for new capital projects” and one “what are the key issues for evaluating project financings.” It is essential that candidates always read the question carefully.

Generally a good balance was achieved between the need for strategic operating, technological, accounting and financial metrics/implications of new capital projects by at least half the candidates. References to the mature chemical industry context got extra marks.

Question 4 (14 marks), average mark 52.6%, passes 11/16

This question was about Advent, a recently privatised airline in a small, progressive one-commodity LDC trying to promote tourism.

Part 4a was a straightforward question about the short-term investment of airline prepayment cash surpluses built up by summer holiday bookings over the preceding months. Two approaches were adopted by students: one was the traditional SLY (security, liquidity, yield) policy; the other was to match incoming revenues with outgoing expenses and focus on the net amount. However, many who adopted the latter approach neglected to mention counterparty risk, possibly because they assumed that the net amount would be negligible, and therefore missing the point.

Part 4b described a scenario where the Government, still holding 15% of the equity, proposed that Advent invest these prepayment surpluses in tourism projects such as hotels, or in other development projects designed to develop the economy. This raised fundamental questions about appropriate risk appetite, shareholder interests and business-government relations.

This question was well answered, in particular Part 4b.

Question 5 (12 marks), average mark 50.1%, passes 8/16

This question was about risk appetite, specifically:
- KRIs (key risk indicators) identifying the nature of the risks that a company is prepared to assume when looking at new areas of business and
- KCIs (key control indicators) identifying the company’s tolerance limits for each risk assumed

The company involved was a domestic manufacturer with a world-beating new product but very limited capital resources, wishing to expand overseas with a

mixed strategy of direct investments and joint ventures.
This was seen as a testing question by examiners. However the KRI piece elicited a lot of very good answers with hardly any below pass level. The KCI piece proved to be the testing part, with two nil responses and one scoring nil.

Question 6 (10 marks), average mark 50.3%, passes 10/16

This question was about asset-based lending (ABL), a topical area given the constraints placed on conventional bank lenders by the emerging bank regulatory framework.

After summarising the features of ABL, Part 6a asked students to identify one-off situations (eg triggered by an unexpected event) where ABL could be an appropriate solution. Part 6b asked students to identify types of firms whose characteristics might pre-dispose them to ABL solutions. Ring-fenced projects, turnarounds and working capital starved firms were favoured responses to 6a Capital intensive, property intensive and rental businesses were favoured responses to 6b. Overall, both parts of this Question were well answered.

Question 7 (14 marks), average mark 48.2%, passes 10/16

This question described a company which is a leveraged management buyout, funded by private equity and which recently has been experiencing difficult trading conditions and rocketing raw material costs. Part of the remedy proposed is to implement a centralised cash management system.

Part 7a asked students to define the desired outcomes of the project, Part 7b asked for the information required to design the system and Part 7c asked about project execution.

An important part of understanding this question is to recognise the all-important task of generating cash in a leveraged, private equity funded firm, particularly one suffering commercial setbacks. Recognising this imperative should prompt students to mention the importance of mobilising the whole of management in support of this project and to that end incentivising them to promote cash conservation. As the quote introducing centralised cash management at the start of the question says:

"It's the business that is responsible for these improvements; in treasury we just provide the oil to make the cash flow smoothly"

Some students did not pick up sufficiently enough (if at all) on this dimension but nonetheless, the pass rate on the question overall was good.