

The Association of Corporate Treasurers

Examination Paper, Solutions and Examiners Report

MCT ADVANCED DIPLOMA GENERAL EXAMINATION

October 2012

QUESTION 1

In September 2005 Vulcani, a manufacturer of speciality chemicals based in Chazilia, was the subject of a management buyout from Grosso Chemico SA, which was making strategic disposals to re-position itself within the sector. Grosso Chemico (GC), in principle, preferred a “friendly” disposal to the existing management team rather than a trade sale to potential competitors. A price of 25.0m cruzitas (CR) was agreed for the total business, which was funded with CR13.7 million of debt and CR11.3 million of equity. Goodwill of CR9.1m was written off to reserves.

At that time the unit production tonnage was well below the capacity of the factory. Five-year projections of production, sales, profits and cash flows were prepared in support of the MBO case and these proved to be very much in line with what was actually achieved in the following years.

Vulcani essentially produces a single family of products based on one core polymer (VPPP), developed by GC’s R&D department over the previous ten years, from the laboratory, through to prototype then to the small 2005 production plant. The chemical formula for VPPP is protected by patents through to the year 2015. The unique physical and chemical properties of VPPP mean that it has almost unlimited end-product applications as a durable, light-weight, low-cost, high-value easily-extruded component e.g. in medical, extreme-temperature, extreme-pressure and highly-corrosive situations.

Two years later, in September 2007, the company was floated for an equity market capitalisation of CR187.5 million with net debt standing at CR1.8 million. Subsequently, the company continued to expand production capacity, unit production tonnage and sales value through to September 2011, very much according to plan. Unfortunately since the majority of product was exported to global markets, the growing strength of the cruzita meant that margins increasingly came under pressure.

It is now mid-2012 and your company, ABC Chemicals, also has a non-core speciality chemicals subsidiary venture for which it has had tentative enquiries as to a possible sale. You have been asked to review the Vulcani valuation, disposal and subsequent performance with a view to informing your company’s current situation, with particular regard to share-holder value.

Summary financial data on Vulcani are given on page 2 together with statistics on various indexes and multiples for the Chazilian Stock Exchange for the relevant period.

	Chazilian All-Share Index	Average All-Share P/E	Chazilian Small-Cap Index	Average Small-Cap P/E	Chazilian Chemicals Index	Average Chemicals P/E
2005	1507	22.2	1520	21.7	2083	24.1
2006	1511	17.6	1521	17.2	2342	28.7
2007	1734	16.3	1753	15.9	2416	17.2
2008	1945	17.2	1970	16.8	2519	20.4
2009	2455	19.9	2516	19.7	2724	20.5
2010	2345	18.6	2420	18.8	1681	12.7
2011	2826	25.4	2901	25.5	2490	24.6

(million cruzitas)		MBO Sept 2005	Sept 2006	Listing Sept 2007	Sept 2008	Sept 2009	Sept 2010	Sept 2011
<u>Profit & Loss</u>	Sales	17.3	23.4	31.3	38.0	43.4	49.0	48.7
	Unit production (tonnes)	380	533	738	853	1,018	1,100	1,067
	Production capacity	1,000	1,000	1,000	1,000	1,500	1,500	2,000
	Gross profit	9.5	10.5	13.9	18.0	18.2	20.7	21.1
	Profit before interest and tax	6.5	7.2	10.2	13.0	12.0	13.4	13.2
	Profit before tax	4.7	6.0	9.5	12.9	11.8	13.1	12.7
	Profit after tax	3.1	5.3	6.6	9.2	8.5	9.4	9.3
<u>Balance Sheet</u>	Fixed assets	10.6	9.7	10.0	13.1	15.0	20.9	24.1
	Other operating assets (net)	5.3	6.7	8.1	8.0	9.3	13.4	17.4
	Total operating assets	15.8	16.4	18.0	21.1	24.3	34.3	41.5
	Net debt	13.7	8.7	1.8	2.9	1.1	4.7	8.1
	Dividend and taxation payable	-	0.9	8.1	5.0	5.4	6.6	5.3
	Equity shareholders funds	2.2	6.8	8.1	13.2	17.8	23.0	28.1
<u>Cash Flow</u>	Trading profit	-	7.2	10.2	13.0	12.0	13.4	13.1
	Depreciation	-	1.1	1.1	1.1	1.5	0.9	1.3
	Net working assets change	-	(0.1)	(1.2)	(0.6)	(1.5)	(3.3)	(4.3)
	Capital expenditure	-	(0.2)	(1.0)	(4.3)	(3.3)	(7.0)	(4.7)
	Interest, tax and dividends	-	(1.8)	(1.9)	(9.9)	(6.7)	(7.7)	(8.7)
	Acquisitions, etc.	-	(1.2)	(0.3)	(0.4)	(0.2)	-	-
	Decrease/(increase) in net debt	-	5.0	6.9	(1.1)	1.8	(3.7)	(3.3)
<u>Share Data</u>	Earnings per share (centaros)	-	6.9	8.6	11.9	11.1	12.1	11.8
	Dividends per share (centaros)	-	-	3.6	4.5	4.8	5.3	5.5
	Share price - high (centaros)	-	-	0	325	269	253	191
	- low (centaros)	-	-	0	240	149	140	115
	Number of equity shares (m)	-	-	76.44	76.44	77.98	78.29	78.45

NB 100 centaros = 1 cruzita

Required:

- a) **Using prospective multiples (use P/E, Sales, EBITDA and Total Operating Assets multiples) and with the benefit of hind-sight, what range of values would you have put on the total EV of Vulcani in 2005? In light of your calculations what do you think of the price paid to Grosso Chemico?**
(8 marks)
- b) **What did the MBO team do to add so much value to the equity in just two years?**
(3 marks)
- c) **What recommendations would you make to your Finance Director, based on lessons learned from the Vulcani case in order to maximise shareholder value from the disposal of your company's subsidiary?**
(5 marks)

(Total 16 Marks)

QUESTION 2

At the end of December 2008 the effects of the “credit crunch” and the economic down-turn were starting to take their toll on companies. In the years leading up to 2008 Mega Foods had been pursuing an aggressive acquisition strategy to achieve volume growth with its associated economies of scale and benefits of increased market share. It is now embarked on a programme of rationalisation following the string of acquisitions. A summary of the company's financials for the period 2006-8 is provided on page 4.

Managing covenants and banking negotiations is now taking an increasing amount of management time and effort. During 2008 the company's banks agreed to amend certain terms of its 2007 senior credit facilities, total amount £2,057 million, and to defer the year-end covenant test by one quarter. The annual financial review also reported that “given the company's substantial leverage and the threat of rising interest rates it has entered into long-dated interest rate swaps, (total amounts £835 million), some of them out to 30 years, but which can be terminated at the option of our counterparties mainly within the next 3 to 5 years”. The Bank of England subsequently reduced Bank Rate to 0.5%, and there were correspondingly lower, but volatile, LIBOR rates.

At the end of 2008 the economic consensus is now that the recession could last much longer than originally anticipated.

Since February 2007 the share price fell from 306 pence to 119 pence in January 2008, to 16 pence at the end of 2008, then reducing market capitalisation to £135 million.

Mega Food Company plc

	2006	2007	2008
	£mill	£mill	£mill
Income Statement			
Sales Revenue	841	2,125	2,604
Gross Profit	244	649	784
General Overheads	(106)	(326)	(609)
EBITDA before Exceptional Items	138	323	175
Depreciation of Tangible Assets	(18)	(45)	(51)
Amortisation of Intangibles excluding Goodwill		(78)	(87)
Amortisation & Impairment of Goodwill			(194)
Exceptionals - rationalisations and discontinued operations	(28)	(153)	46
EBIT	92	47	(111)
Movement on Fair Value of Interest Rate Swaps	8	(31)	(219)
Interest Received	7	27	42
Interest Paid	(56)	(145)	(186)
Profit before Tax	58	(103)	(474)
Retained Profit for Year	47	(63)	(444)

Balance Sheet

Intangible Fixed Assets	870	2,887	2,531
Tangible Fixed Assets	255	607	803
Total Fixed Assets	1,124	3,494	3,333
Stocks and Debtors etc	291	537	576
Cash and Short-term Investments	8	24	41
Net Assets Held For Sale		31	69
Derivative Financial Instruments	7	9	21
Total Current Assets	306	601	707
Total Assets	1,430	4,095	4,040
Creditors, Accruals, Advance Payments etc.	181	538	541
Short-term Debt	132	113	175
Derivative Financial Instruments	3	26	250
Accrued Interest	4	13	23
Tax & Other Provisions	14	64	28
Total Current Liabilities	334	754	1,017
Non-current Liabilities (Creditors > 1 Year)			
Medium & Long-term Debt	518	1,530	1,633
Deferred Tax, Pension & Other Long-term Provisions	117	350	399
Total Non-current Liabilities	635	1,880	2,032
Share Capital & Reserves			
Issued Share Capital & Premium	766	770	770
Other Reserves	(137)	888	867
Retained Earnings / Profit and Loss	(168)	(197)	(645)
Total Capital and Reserves	461	1,461	991

Cash Flow Summary

Operating Profit	101	72	(41)
Other Non-cash & Exceptional Items	(5)	(12)	217
(Increase) / Decrease in Net Working Assets	(26)	236	(58)
Tangible Asset Depreciation	18	45	51
Net Capital Expenditure	(40)	(68)	(103)
(Tax Paid	(12)	9	0
(Dividends Paid)	(24)	(61)	(55)
(Net Interest Paid)	(40)	(98)	(105)
Internal Cash Flow	(28)	123	(94)
(Acquisitions), Disposals, (Investments)	(393)	(310)	(31)
Increase / (Decrease) in Share Capital	442	(4)	
Increase / (Decrease) in Debt	(21)	191	125
Net Financing Cash Flow	28	(123)	94

Required:

- a) Analyse in detail the company's credit status at 2008, supporting your assessment with appropriate credit metrics. (8 marks)
- b) Assuming that the next few years (2009-2013) are likely to get worse before they get better, what additional actions do you recommend as a priority for returning the company to an acceptable financial position? (6 marks)
- c) Making whatever assumptions you need to, what strategy do you think the company's bankers will adopt towards Mega Food and what will be their considerations in deciding that strategy? (4 marks)
- d) Some companies have fallen victim to "distressed debt investors" or "vulture funds". Using Mega Foods to illustrate your answer what attracts these "vulture funds" to their targets and how do they make such acquisitions pay? (4 marks)
- (Total 22 marks)

QUESTION 3

The statistics in the table below are taken from 2012 US data on the Damodaran website. Data are given for the total market but also for two distinct and mutually exclusive categories based on their differing risk ratings.

	Leveraged Betas	Betas Unlevered for Gross Debt	Unlevered Betas after Cash Adjustment
Total Market	1.15	0.82	0.92
25% sample	1.17	1.06	1.29
75% sample	1.25	0.91	0.99

Required:

- a) Explain the differences between the data across the three columns and the three rows. How do you think the 25% sample differs from the 75% sample in terms of risk fundamentals? (5 marks)
- b) Explain how and why un-levered beta are used in corporate finance applications. (3 marks)
- c) Market-based, after-tax WACCs are widely used to evaluate capital investments and to value businesses. How can a market-based WACC be used to set targets for pre-tax return on capital employed, for evaluation of operating performance? Give a simple numerical example to illustrate your answer. (4 marks)
- (Total 12 marks)

QUESTION 4

Your company Lark plc is considering the acquisition of Alouette SA, a French quoted company in the same line of business. To date Lark has operated solely domestically although a significant proportion of inputs are imported, priced in a variety of currencies. The policy for hedging this transaction risk is to cover it forward 100% when purchase orders are placed. Lark has no other currency risks.

Alouette turnover is half that of Lark and its customer base is France, Germany, Belgium and Holland. Alouette will provide Lark with an established customer base for an innovative product range already successful in the UK. Although quoted, Alouette is in effect controlled by the heirs of the founder and has been in gentle decline for a decade. The recent crisis has pushed it into a modest loss in its last full financial year. With good management and a successful new product range, Lark is confident that it can return Alouette to profit in two to three years.

The founding family are large shareholders. Acquisition discussions to date have raised two issues: some Alouette family members would prefer a shares alternative to a cash offer; Lark has sensed the possibility of building in an element of deferred payment linked to future profitability.

Lark is profitable and has ample debt capacity to raise the additional funding likely to be required for the acquisition.

Lark's Finance Director, to whom you report, points out that the existing currency risk policy will not measure up to the risks presented by the acquisition which are both contingent and dynamic: the acquisition may not happen and as negotiations proceed circumstances may change the nature of the risks.

Required:

Draft a note to the Board, on behalf of the Finance Director, setting out only the currency related risks raised by the acquisition in order that the Finance Director can get agreement about how these can be managed and an authority to act.

You may wish to set out the acquisition-related currency risks on a time line related to the progress (or failure) of the acquisition process e.g. negotiation phase, agreement to completion, post completion.

(16 marks)

QUESTION 5

MainStreet is a major high street retailer. Having exited retail banking 5 years ago, it has now decided to re-enter the market.

Typical financial profiles for a supermarket and a retail bank are shown below, each B/S and P/L item expressed as percent of a balance sheet totalling 100.

RETAILER		RETAIL BANK	
		<i>Notes in []</i>	
FIXED ASSETS	88	FIXED ASSETS	1
STOCK, DEBTORS	8	LOANS <i>[long maturities 1-25 yrs]</i>	74
		(Mortgages, <i>[various credit risks]</i>	
		credit cards, etc)	
CASH & INVESTMENTS	4	LIQUID ASSETS <i>[cushion for maturity mismatch]</i>	25
	100		100
EQUITY	50	EQUITY CAPITAL <i>[cushion for</i>	10
DEBT	30	DEBT CAPITAL <i>loan losses]</i>	2
TRADE CREDITORS	15	FUNDING <i>[short maturities]</i>	88
		(Customer depos 100% to zero	
		Wholesale funds zero to 100%)	
OTHER	5	OTHER	-
	100		100
TURNOVER	170	TURNOVER	-
PROFIT BEFORE TAX	7	PROFIT BEFORE TAX	2

Retail Banks fund their loans to customers with deposits from either retail customers, wholesale sources (eg interbank deposits, securitisation or senior term debt) or a mixture of both.

Retail banks usually prefer to fund with customer deposits because, although contractually 'on call' or very short term, they are behaviourally very "sticky" (except in a crisis). The shortfall, if any, in customer deposits is usually funded by short term (less than 3 months) interbank money because it is usually very liquid (again, except in crisis) and cheaper than long term.

MainStreet's plan is to grow banking profits to between 10% and 15% (say 12.5%) of total profits before tax.

Required:

- a) **What size balance sheet does the retail bank need, relative to the retailer, to achieve MainStreet's plan for increased profits?**
(2 marks)
 - b) **MainStreet's balance sheet is circa £10bn. Based on your answer to 5a), what size of balance sheet would MainStreet need to create for the new retail bank and what level of deposits would it need to build up?**
(2 marks)
 - c) **What deposit funding strategy should MainStreet use? Is this affected by product offering?**
(4 marks)
- (Total 8 marks)**

QUESTION 6

Tern plc is a privately owned UK-based manufacturer of process control equipment for product conveyors, used in such diverse applications as airport luggage movement, postal sorting systems, poultry processing and assembly line production.

Tern prides itself on quality and customer service. Any customer returns due to malfunction are investigated rigorously and quality control in manufacturing is stringent. Production control closely monitors any production process delays due to shortage of components. There is a strong sense of pride throughout the company in the technical reputation of the product and dependability of service.

Recently the company has been purchased with borrowed money by a private equity house which is interested in improving efficiency and exploiting export potential. Domestic markets are expected to grow at only 2-3% in the medium-term, so export markets are the main focus for growth, with export sales expected to account for 50% of turnover in five years.

There is a strong emphasis on cash flow generation and earnings growth. As Treasurer, two of your immediate tasks are to reduce working capital and to protect export turnover from adverse currency movements and counterparty credit risk.

Tern buys mechanical and electronic components domestically and overseas (40:60% mix) and sells finished units domestically. Latest year turnover was £100m, working capital intensity is 21% (stock 16% + debtors 20% - creditors 15%).

Traditionally the financial aspect of the purchasing function and the sales function has been split operationally between the two functions.

Required:

- a) What do you think is the potential for working capital cash economies? Justify your answer by explaining where and how economies might be made.
(6 marks)
- b) What actions would you take to protect export earnings from currency risk?
(3 marks)
- c) What actions would you take to protect against export customer credit risk?
(5 marks)
- (Total 14 marks)

QUESTION 7

Good governance requires boards of companies to define “risk appetite”, ie the nature and extent of the significant risks which it is willing to take in pursuit of its strategic objectives.

Risk appetite can be expressed operationally in terms of Key Risk Indicators (KRIs) and Key Control Indicators (KCIs).

- KRIs identify the nature of the key risks which the company is willing to assume, ie propensity to take risk.
- KCI's specify the quantum of each risk which the company is willing to tolerate, ie propensity to exercise control.

The table on page 10, reproduced in the proforma for the answer, lists eight generic KRIs with matching generic KCIs, listed (i) to (viii). For example (i) specifies a firm's exposure to different levels of sovereign risk as a possible KRI. The corresponding KCI suggests that sovereign credit ratings might be used as a control on the level of sovereign risk taken on by the firm. This list is not exhaustive. The proforma provided for the answer 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 individual investment	(ii) individual investment: relative size, technical risk
(iii) constraints implied by desired credit rating of parent company	(iii) credit rating level
(iv) exposures to conventional finance/treasury risks, e.g. funding, liquidity, fx/interest rates, commodity price	(iv) interest cover, leverage, headroom, degree of rate/price hedging
(v) regulation on conduct of business	(v) regulations eg types which are necessary or in contrast unacceptable
(vi) exposures to types of corporate counterparty	(vi) corporate counterparties: credit metrics e.g. liquidity
(vii) exposures to types/sizes of JV	(vii) JV: size limits, financial profile
(viii) exposures to types of product-market	(viii) product-markets: relative size, relevant expertise, market risk

Your company produces patent protected high precision non-contact measuring devices which use advanced laser technology and have application in precision/miniaturised manufacture and assembly.

The company has operated traditionally in developed economies eg Western Europe, USA and Australia. The new Chief Executive has decided to refocus the business on growth markets in Eastern Europe, the Far East and Latin America, initially through the medium of joint ventures which can provide local manufacture and distribution.

As Treasurer you have been asked to help define the KRIs and KCIs which the board might wish to prescribe for the execution of the overseas JV expansion strategy.

Required:

- a) Page 1 of the attached proforma lists the typical KRIs shown on Page 10. For the JV strategy, select what you would consider to be the four most important KRIs. Note the number on the pro-forma eg KRI (#). If there are some not listed which you think should be in the top four, list these on Rows (ix) and (x).

Use page 2 of the proforma in the same way to record your choice of KCIs for each of the KRIs which you have selected.

(4 marks)

- b) In the space under each of the four KRIs and the four KCIs which you have selected, record the reasons for your choice.

(8 marks)

Note: *If you run out of space on the proforma continue your response in your answer book.*

(Total 12 marks)

OCTOBER 2012 MCT GENERAL EXAMINATION

NOTE FORM ANSWERS

QUESTION 1 Multiples valuation and maximisation of shareholder value during a disposal strategy.

(Total 16 marks, 28.8 mins)

1a) Multiples valuation and maximisation of shareholder value during a disposal strategy.

(8 marks, 14.4 mins)

Marking scheme: I have 18 points so 0.5 mark for each good point or relevant correct calculation.

A quick valuation at 2005 using the chemical sector historical P/E gives $24.1 \times 3.1^1 = \text{CR}74.7$ million. So an equity price of CR11.3m is ludicrously low. ²

The detailed multiples below give a range of EV values at 2005 of CR112m ³ to CR147m, average CR124m, ⁴ after applying the prospective multiples at the time of the listing in 2007 to the 2006 ⁵ value drivers.

So the total price paid of CR25m looks too low by between CR87m to CR122m, average CR99m. ⁶

Enterprise Valuation of Vulcani							
	2005	2006	2007	2008	2009	2010	2011
RAW DATA							
Number of shares			76.44	76.44	77.98	78.29	78.45
Share price - high				325	269	253	191
Share price - low				240	149	140	115
Average share price (centavos)			245.3	282.5	209.0	196.5	153.0
Average market capitalisation			187.5	215.9	163.0	153.8	120.0
Net debt	13.7	8.7	1.8	2.9	1.1	4.7	8.1
Enterprise Value			189.3	218.8	164.1	158.5	128.1
Sales	17.3	23.4	31.3	38.0	43.4	49.0	48.7
EBITDA	7.5	8.3	11.3	14.1	13.5	14.3	14.5
Total Operating Assets	15.8	16.4	18.0	21.1	24.3	34.3	41.5
Profit after Tax	3.1	5.3	6.6	9.2	8.5	9.4	9.3
EV MULTIPLES (PROSPECTIVE)							
EV/Sales			4.98	5.04	3.35	3.26	
EV/EBITDA			13.43	16.21	11.47	10.93	
EV/Total Operating Assets			8.97	9.01	4.78	3.82	
P/E Ratio			20.38	25.41	17.34	16.54	
EV BASED ON 2007 PROSPECTIVE MULTIPLES							
EV based on Sales	116.6						
EV based on EBITDA	111.4						
EV based on Assets	147.1						
EV based on P/E plus Net Debt	121.7						
Maximum EV	147			248	210	198	150
Average EV	124		189	219	164	159	128
Minimum EV	111			183	116	110	90

1b)

(3 marks, 5.4 mins)

Marking scheme: I have 7 points so 0.5 mark for each good point.

In the intervening two years the MBO team;

- a) approximately doubled sales, production and profit ¹
- b) contained costs and maintained margins ²
- c) contained working capital ³
- d) constrained capex well below depreciation ⁴
- e) therefore generated £11.9m of cash to pay down debt ⁵

Based on our average EV valuation of CR124m at 2005, using 2007 multiples, management action therefore added $189 - 124 = 65\text{m}$ ⁶ to EV. But paying down 12m debt from cash added 77m ⁷ to the equity value (up from 110m to 187m).

1c)

(5 marks, 9.0 mins)

Marking scheme; I have 16 points so 0.4 mark for each good point.

In summary the MBO team were arguably gifted CR99m and then generated CR77m by delivering the agreed business plan.

- i) Think carefully about the timing ¹ of the sale in relation to stock market valuation multiples and also get lucky! The Vulcani team bought cheaply (first rule of value creation) then they sold at a good price ² (second rule) – the multiples fall steadily after the listing, so the IPO was well timed and/or well ³ hyped. The sector P/E ratios demonstrate the importance of timing and luck.
- ii) Carry out a thorough ⁴ valuation from all different aspects and don't publicly commit to a sale timetable. Grosso Chemico gave away considerable shareholder value in their declared re-positioning strategy (N.B. accountants often start from the balance sheet figure and think that is "value"). A few more "strategic ⁵ re-positioning" disposals like this can have a major impact when big companies lose sight of corporate finance / shareholder ⁶ value issues when they are publicly committed to such disposals..
- iii) Get the disposal timing right regarding the business life cycle. ⁷ This Vulcani business at 2005 seems ready for take-off after probably a long process of investment and development – considerable (potential) ⁸ value had been created – then virtually given away. Grosso Chemico could have kept the business a few more years to realise the sales and profit growth (3 years would have delivered a ⁹ PAT of 21.1m instead of just showing it as a forecast) and hence achieved a better price. With profit of CR9.2m delivered in 2006, and a historical P/E multiple of 20.4, company would have been worth CR188m.

- iv) Hire the best advisors. ¹⁰ The company's investment bankers could have been engaged to get the best price in 2005 (I can't believe this was ¹¹ done). Did GC sell to the management team for competitive reasons? ¹²
- v) Understand and explore corporate ¹³ finance deals. Grosso Chemico could have done a deal with a private equity house, leveraged up the business, ¹⁴ incentivised the management team then IPO'd ¹⁵ as did the MBO team. Grosso Chemico could have, at least, kept an equity or mezzanine ¹⁶ stake to leverage up their final return on the sale.

QUESTION 2 Credit assessment and remedial action for a company in a severe financial crisis.

(Total 22 marks, 39.6 mins)

2a) Credit assessment and remedial action for a company in a severe financial crisis.

(8 marks, 14.4 mins)

Marking scheme; I have 21 points so 0.4 mark for each good point

- Even after the share issue to 2006, before the banking crisis, interest cover was only 1.88, ¹ so company somewhat stretched. ²
- At 2008; Net Interest payable = 144m, EBITDA has averaged 211m ³ but exceptionals (201) ⁴
- Net debt plus debt accruals = 175 + 250 + 23 + 1633 – 41 = 2040 ⁵
- Debt/EBITDA ⁶ = 11.66 – astronomical!
- Book leverage = 2040/(2040 + 991) = 67% ⁷ - highly leveraged
- Net debt/EV = 2040/(2040 + 135) = 94% ⁸ - highly leveraged
- Short-term debt is rising, now 175m.
- But also massive exceptional costs, totally £454m ⁹ (likely to continue)
- Also mark-to-market exposure on long-term swaps (already £250m) ¹⁰ is growing, with the threat of continuing very low interest rates – this year's charge to P&L = £219m ¹¹
- This year's loss of £444m wiped out ¹² 30% of Capital and reserves.
- Cash flow insufficient to cover cash interest (11/105) in 2008. ¹³ Before dividends 66/105) ¹⁴
- £2,449million ¹⁵ of shareholder value has been wiped out in two years, and debt plus accrued financial liabilities have increased by ¹⁶ £1,976 million.
- Covenants likely to have been breached (implied in bank's waiver) ¹⁷
- Mega Foods looks like a food manufacturer which, even so, will be affected by the continuing recession. ¹⁸
- Debt above 10 times average EBITDA probably equals EV so worth 100% but equity worthless. ¹⁹

Conclusion; credit rating CCC or worse? ²⁰ ²¹

2b)

(6 marks, 10.8 mins)

Marking scheme; I have 16 points so 0.4 mark for each good point

- Conclusion from the credit assessment in Q2a – drastic action is required without delay! The company probably needs to “lose” 1000m¹⁶ of debt and hence 100m of interest, while maintaining or improving the average recent level of EBITDA and also containing exceptionals during disposals and re-structuring – a big ask!
- Position is therefore too extreme¹ for remedy simply by “normal” good financial management e.g. squeezing costs, working capital and capex, which will, of course, be necessary.²
- Net working capital is close to neutral so no obvious easy³ cash there. Capex could be reduced to save, say, £50m a year⁴ – but small in relation to the size of the debt at £2040.⁵
- Dividends of £55m must be stopped⁶ as unaffordable.
- Reduction of overheads by about 40%⁷ seems to be called for – a big ask and we don’t know the detailed make-up.
- Disposal of businesses or sale of brands is essential (target £400m)
- An equity injection also looks essential⁸ but not easy⁹ or very reliable in a recession (another £400m?) – either a “rescue rights issue”¹² to existing shareholders, to save their investment or equity from new shareholders.¹³
- A sizeable debt/equity¹⁴ swap is a possibility if the banks can be persuaded to take a hair-cut¹⁵ on their debt.
- The volatile m-to-m swap¹⁰ liability almost certainly needs to be bought out before too long to remove the uncertainty and remove the liability but this will be costly, since no sign of higher¹¹ interest rates reducing the liquidity.

2c)

(4 marks, 7.2 mins)

Marking scheme; I have 11 points so 0.4 mark for each good point

From the background information assume that covenants have been breached.¹ Bankers will assess whether the business is likely² to survive and recover or whether it is doomed.³ They will want to see a plan⁴ of action from the management⁵ for returning the company to profitability and solvency via re-structuring and de-leveraging. They will probably insist on a change of management⁶ and strategy as conditions for their co-operation

If the prospects for survival look good they will very likely agree⁷ to refinance, extend facilities, re-schedule, revise covenants⁸ etc but will look for additional fees⁹ and enhanced spreads. It is in their best interests to keep the company alive if at all possible. In extremis they might even take a “haircut” or agree to a debt-equity swap.

If the situation looks irretrievable they will look for an exit¹⁰ i.e. call the loans, take control, liquidate assets etc to retrieve as much money as possible. In less severe situations they might try to off-load their debt or help with re-financing it. They will have made provisions¹¹ against the company’s loans and will just want them off their books.

2d)

(4 marks, 7.2 mins)

Marking scheme; I have 21 points, but this is a non-core question that could be answered in different ways so I have written a fairly full answer - so give 0.4 mark for each good point – but answer must relate to Mega Foods.

Vulture funds (corporate) buy distressed assets, ¹ mainly bonds and loan portfolios, ² but also, in some cases, distressed corporate equities ³ (“vulture investing”). They gamble on the acquiring the assets at less than their ultimate realisable value, ⁴ so there is very little further down-side but good up-side attraction ⁵ - from asset security, capital gain potential, preferred cash distributions or attractive cash yields. ⁶ Their returns can come from over-discounted traded securities, business turn-arounds or pure arbitrage around complex merger or re-capitalisation situations. ⁷

They may wish to exert some degree of control, ⁸ especially in corporate situations eg change in management or business strategy. Their profit would then come from asset disposals e.g. real estate, brands, whole businesses or successful re-organisation. ⁹ This can involve them in private equity-type ¹⁰ activities eg debt-for-equity swaps, taking the company private, re-leveraging.

In the Mega Foods situation one or other of the banks ¹¹ involved may want to off-load for a variety of reasons e.g. balance sheet ¹² re-building, re-balancing their portfolio, and be prepared to sell at a discounted price. ¹³ If the company had bonds they would now be “junk” that could not be held by some investors, and would be heavily discounted. ¹⁴ Banks are also increasingly putting pressure on distressed companies to re-structure their debt or sell out – very attractive opportunities for the “vultures” when those distressed companies cannot get bank or ¹⁵ capital market funding. The company also needs to de-leverage so it is ripe for a debt-equity swap, ¹⁶ with the possibility of using the whole array of hybrid ¹⁷ instruments that take the immediate pressure of the company and the remaining secured creditors.

Mega Foods is distressed because of a disastrous market-domination-driven acquisition strategy ¹⁸ funded largely by debt and premised on booming economic conditions. There is almost certainly a sound core ¹⁹ business in there but ruthless action is required on serious cost-cutting, disposals and re-structuring, almost certainly under new management with a new strategy – just the kind of opportunity with plenty of up-side that vulture funds ²⁰ are attracted to, especially if they can get an equity stake, or total control, ²¹ as a condition of their bailing out either the company or the banks. As a result the lenders get out, the top management are put out and the shareholders lose out!

QUESTION 3 Geared and Ungeared Betas, WACC, ROIC

(Total 12 marks, 21.6 mins)

3a)

(5 marks, 9.0 mins)

Marking scheme; I have articulated 19 points partly for teaching purposes so 0.4 mark for each good point, provided candidates identify the issues

The Damodaran procedure for ungearing beta clearly does it in two stages ie for gross debt then for cash. ¹ This is often (usually) done in one step for net debt.

So the levered beta for the total market goes from 1.15 ² (in theory this average is 1.0 across the whole market) to 0.82 ³ as debt is “stripped out” thereby reducing financial risk ⁴ then it rises again to 0.92 as cash is “stripped out”, so increasing ⁵ financial risk. Despite the differences in the US data the ratio of unlevered to geared beta (0.92 / 1.15) is still 0.80, ⁶ the “rule-of-thumb” that we generally suggest to candidates, although this does depend on the level of gearing ⁹ and the tax rate.

The 75% sample has a higher levered ⁷ beta than the 25% sample – more risky, but it has a lower un-levered beta ⁸ – inherently less risky. The final unlevered beta (0.99) for the 75% sample is lower than the levered beta (1.25), which is the “normal” situation where there is positive net debt. ¹⁰ The ratio of un-levered to levered beta is 0.79, indicating slightly higher than average ¹¹ gearing.

The 25% sample sees unlevered beta rise ¹² from 1.17 to 1.29 because they have ¹³ net cash rather than net debt, so this is how this 25% sample was identified – un-levering increases the risk, ¹⁴ the opposite of what is “normally” expected. In addition the “debt effect” is less ($1.06/1.17 = 0.91$) and the “cash effect” is greater ($1.29/1.06 = 1.22$) than for the 75% sample. For the 75% sample, ¹⁵ with net debt the equivalent ratios are 0.72 for the debt effect and 1.09 for the cash effect.

The 75% sample shows lower risk inherent business ¹⁶ risk than the 25% sample (un-levered beta 0.99 versus 1.29) so those firms are able to take on more financial risk via more debt ¹⁷ (good finance theory and practice). The 25% sample does the opposite by holding net cash. The two groups actually end up by switching risk positions. One might conclude, therefore, that they are less risk averse than the 25% sample, ¹⁹ who seem more cautious.

For further information; on the 25% or 75% samples;

(25% of sectors, 32% of firms) D/E 58%, tax rate 20%, cash % equity 8%, net debt 50%

(75% of sectors, 68% of firms) D/E 14%, tax rate 17%, cash % equity 18%, net debt - 4%

3b)

(3 marks, 5.4 mins)

Marking scheme; I have 11 points so 0.4 mark for each good point

- Used when we want to assess or compare ¹ the inherent business risk of a company or sector independent of the financial risk ² that debt gearing brings. The Hamada formula simply adjusts the levered beta for “tax-sheltered gearing” i.e. both gearing and the tax rate. ³

For example ⁴ three companies from the same sector can be more validly compared to establish typical sector risk;

$$B_u = \frac{B_g}{1 + ((1-t)) \frac{D}{E}} \quad 5$$

Company	Beta	Gearing	Tax Rate	Un-levered Beta
A	0.982	60%	15%	0.65
B	0.809	30%	25%	0.66
C	0.768	20%	35%	0.68
Average	0.853			0.663

Un-levered beta is also used as a guide to the required return on (cost of) un-levered equity. ⁶ e.g. $(0.663 \times 4.5) + 4.0 = 6.9835\%$

Compared with the geared ⁷ cost = $(0.853 \times 4.5) + 4.0 = 7.8385\%$

This un-levered cost of equity is used in the Adjusted Present Value method of valuing companies or projects, the value of the tax shield (D/t) then being calculated separately. ⁸

The un-levered beta is often calculated as a prelude to ⁹ re-gearing a company to a different capital structure e.g. for a typical leveraged structure;

$$0.663 \times [1 + (0.07 \times 4/1)] = 2.5194 \text{ beta}$$
$$\text{cost of equity} = (2.5194 \times 4.5) + 4 = 15.3373\% \quad 10$$

Note that;

- for quoted companies the levered beta can be calculated from market data and then the un-levered beta calculated using the un-levering version of the formula.
- for un-quoted companies or projects the un-levered must be estimated and then the levered beta calculated using the levering version of the formula ¹¹

3c)

(4 marks, 5.4 mins)

Marking scheme; I have 8 points so 0.5 mark for each good point / valid calculation, but a numerical answer is required

N.B. calculation of WACC is not required, but a figure should be assumed!

$$\text{WACC} = \frac{\text{Required after tax return to providers of debt \& equity}^1}{\text{EV}}$$

$$\text{Target for ROCE} = \frac{\text{Operating profit (pre-tax)}^2}{\text{Book capital employed (debt \& equity)}}$$

Therefore;

$$\text{Target for ROCE} = \frac{\text{WACC}}{^3 (1-t)} \times \frac{\text{EV}}{\text{Book Capital}^4}$$

eg WACC = 6%⁵
 EV/Book capital = 1.8⁶
 Tax rate = 25%

$$\text{ROCE Target} = \frac{6\%}{0.75} \times 1.8 = \underline{14.4\%}^7$$

Note that this is considerably higher than the WACC of 6%⁸ because of two key steps in the calculation.

QUESTION 4 Overseas acquisition currency related risks **(16 marks, 28.8 mins)**

4) Currency related issues

Marking scheme: broke down Question into five parts:

- (i) Key background features awareness**
- (ii) Negotiation to agreement phase**
- (iii) Agreement to completion phase**
- (iv) Shares and deferred payment**
- (v) Post completion**

For each of (i) to (v) evaluated the number of points made, relevance and quality of narrative and marked within four bands: clear fail, marginal pass, clear pass, distinction.

Key Background Features

- Existing treasury policy covers only transaction risk on imported parts which are hedged 100% when purchased; it does not cover M&A currency risks
- M&A risks are contingent, ie the deal is not certain to happen
- M&A risks are dynamic, ie the probability of closure and of other dimensions such as timing will change during the negotiations, affecting the nature of the risk and hedging required
- Introduction of shares as consideration instead of cash and the nature and timing of a deferred payment add two large additional uncertainties
- Uncertainty, asymmetric hedge pay-offs suggests the use of options which are out with current policy

- Setting out the steps in the acquisition process on a time line is an obvious and convenient way to respond to this question, eg:
 - Negotiation to agreement: (highly contingent)
 - Agreement to completion: (contingent)
 - Shares and deferred payment: (moderately contingent)
 - Post completion (planned growth)

Acquisition Process

Fx Risks

* Negotiation to Agreement

* Agreement to Completion

* Shares and Deferred Payment

* Post Completion

Pre-transaction

Transaction

Transition

Economic

Negotiation to Agreement

• Relevant Process Steps

- due diligence
- price negotiation
- price components
- agreement

• Fx Risks: Types, Sources

- Alouette share price (EUR)
- GBP/EUR rate
- due diligence reveals that cost structure is uncompetitive relative to other producers (French, EU, elsewhere)
- timeframe

•

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• Riskiness:

- high, but abort is always an option

• Hedges:

- take a contingent (options based) position in shares, currency consistent with risk appetite of Lark
- this will create new counterparty risk and collateral exposures

• Agreement:

- this reduces uncertainty but outcome is still contingent on various parties' approvals

• Points of Note for the Board

- the acquisition process and, if this succeeds, the new overseas subsidiary give rise to new and significant Fx risks
- managing these risks requires the Board to review its appetite for risk and hedging
- Fx hedging will create significant new counterparty risk and collateral exposure
- it will also create the need for new expertise in treasury/finance and corresponding additions to oversight and governance.

Agreement to Completion

- Relevant Process Steps
 - shareholder approval (UK, France)
 - regulatory approval if appropriate (UK, France)
 - funders' agreement
 - execution
- Fx Risks: Types, Sources
 - Alouette share price (EUR)
 - GBP/EUR rate
 - translation risk if acquisition succeeds
 - transaction risk/transfer pricing for intra-group sales if acquisition succeeds
 - timing
- Riskiness:
 - high to medium
- Hedges:
 - contingent, converting to fixed (forwards, swaps), consistent with risk appetite
 - structural hedges for translation risk
- Execution:
 - drawdown funding, ie
 - price if all cash
 - price less share component if relevant
 - price less share component less deferred payment if relevant

• • • •

Shares and Deferred Payment

- Relevant Process Steps
 - monitoring of deferred payment triggers and liabilities
 - payments as appropriate
- Fx Risks: Types, Sources
 - if Lark shares form part of the consideration, then this reduces the amount of funding required at execution and the related Fx risk. However, given the need to relate the Sterling value of Lark's shares to the Euro value of Alouette shares, there is still likely to be a significant GBP/EUR risk.
 - if a deferred payment is included, then this also reduces the GBP/EUR risk at execution; and if the deferred payments are linked to future profits there may be a natural structural hedge.
- Riskiness:
 - medium to low
- Hedges:
 - shares: fix share price equivalence at agreement stage or hedge in market according to risk appetite
 - deferred payment: structural

• •

Post Completion

- Risks: Types, Sources
 - intra-group transactions and transfer pricing
 - net asset exposure
 - P/L consolidation and interest cover
 - dividends: cash flow, parent distributable reserves
 - international competitiveness
- Relevance
 - these risks are new to Lark. Their particular nature and magnitude will emerge as the acquisition process proceeds. The Board need to be aware of these risks and begin to determine policies for their management
 - some of these risks impinge on acquisition process decisions eg net asset exposure and funding.

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QUESTION 5

Impact of new banking subsidiary on high street retailer's balance sheet

(Total 8 marks, 14.4 mins)

5a) Bank B/S relative size

(2 marks, 3.6 mins)

Marking scheme:

- right answer	100%
- right method, answer error	75%
- wrong answer, method	0%

- MainStreet's objective of 10/15% (12.5%) of total profits before tax from banking equates to "1" from banking and "7" from stores:

$$\text{ie } \frac{x}{7+x} = 0.125$$

$$\text{so } x = 1$$

- So if store b/s of 100 produces 7 profit and bank b/s of 100 produces 2 profit, the bank requires a b/s of 50 to produce 1 profit:

$$\text{ie } \frac{1}{7+1} = 12\frac{1}{2}\%$$

5b) Level of funding (2 marks, 3.6 mins)

Marking scheme:

- right answer	100%
- right method, answer error	75%
- wrong answer, method	0%

- Ref 5.a. profit mix, Retail Bank b/s needs to be £5bn if Store's b/s is £10bn.
- Bank equity required would be £500m
- Debt capital and funding for deposits and liquidity would be [88% + 2% =] 90% of £5bn ie £4.5bn. So (subordinated) debt capital would be £0.1bn and (senior) funding (customer deposits and/or wholesale funds) would be £4.4bn.
- This compares with store debt of £3bn.

5c) Funding strategy

(4 marks, 7.2 mins)

Marking scheme: evaluated number of points, relevance, quality of narrative and marked within four bands: clear fail, marginal pass, clear pass, distinction

- £4.4bn is required specifically to fund customer loans and a liquidity buffer on b/s as a protection against the bank's conventional maturity mismatch position

(which is part of the economic rationale for the existence of retail banks.)

- Banks have traditionally financed customer credit with customer deposits first and then made up any shortfall with short term money market funding. The latter wholesale funding is currently problematic for most banks and there is both a strong regulatory drive and a commercial precautionary drive to revert to traditional core customer retail deposits which are more stable.
- So customer deposits would be the preferred source of funding. This would be the most prudent strategy . . . a liability-led bank.
- Under normal market conditions, bank credit card and mortgage assets are readily securitisable. Currently this is not the case, 'though in the fullness of time these markets will recover to some extent – as has the covered bond market already (covered bonds recognise mortgage assets as collateral)
- So, as for most of the smaller new banks emerging from the wreckage of the credit crunch, MainStreet's focus will be on competing strongly for customer deposits and accepting the levels of growth that this will allow.
- Re. product offering, low risk loan products, eg prime residential mortgages, have lower risk weightings for capital adequacy purposes than higher risk loan products, eg consumer finance. So consumer loans of 100 (eg for cars) might require twice the amount of equity and debt capital as would be required for 100 of prime mortgage loans.

However assuming that the profit on mortgages and on consumer loans is directly related to risk, for a given level of profit the Bank might require twice the level of mortgage loans when compared with the level of consumer loans.

So, if as suggested earlier, the Bank limited itself to consumer deposits for funding loans and if customer deposits are the limiting factor for growth, then the Bank might want to focus on higher risk products to get the best returns on available customer deposits.

QUESTION 6

Conserving cash for planned debt paydown by reducing working capital and protecting high growth export sales from currency and credit risk

(Total 14 marks, 25.2 mins)

6a) Working capital cash reduction

(6 marks, 10.8 mins)

Marking scheme: Noted whether or not W.C. improvements had been quantified as context for comments on (i) stock, (ii) debtors, (iii) creditors. Then for each of (i) – (iii) noted number of points made, evaluated their relevance and the quality of accompanying narrative and marked within four bands: clear fail, marginal pass, clear pass, distinction.

- The pressure to reduce working capital would be expected, given the recent purchase by a private equity company keen to reduce debt as fast as possible in anticipation of an exit in, say, five years.
- Good customer service often requires high stock levels. High quality standards can often mean high levels of rejection during manufacture, increasing the production cycle time and the W.I.P. Given the traditional focus on customer service and quality one suspects that there may be opportunities to rebalance the relationship between these two very important features of the business and cost, without necessarily diminishing the former's contribution to the company's success.
- And if any peer group companies exist it would strengthen the Treasurer's case if he/she could confirm this suspicion by identifying a better performing comparable business.
- In the absence of a benchmarking company and on the basis that "you can always find 10%" the table below suggests some target improvements.

	Current		£m	Improvement	Target		£ Saving
	WC/Sales %	Days			£m		
Stock	16%	58	16	(20%)	12.8		3.2
Debtors	20%	73	20	(10%)	18.0		2.0
Creditors	(15%)	(55)	(15)	15%	(17.2)		2.2
	21%	76	21		13.6		7.4

- "Stock" consists of bought in raw materials and components, work in progress on the shop floor and finished goods in store. These are all areas managed by the company and therefore provide the best opportunity for savings hence the 20% target. (Customer service and quality are part of the constraint).

- Economies here will involve liaison with:
 - product design, eg standardisation of components, quality specifications
 - procurement, eg cost, delivery times, sourcing
 - production, eg the production process, bottlenecks, work-in-progress sitting on the shop floor, rejects/ re-runs due to too slack or too strict quality control
 - sales , eg delivery times quoted, levels of finished goods held in stock.
- Debtors is probably the most difficult area hence the 10% target:
 - there seems to be a close relationship with customers (service, quality). Some may have considerable buying power and there is also going to be a big increase in sales to new customers overseas (also an opportunity to change terms!)
 - discounts for early payment is a commonly used tool and factoring may also be a possibility – both reduce debt levels but both have direct cash costs, particularly the latter, to offset against interest savings
 - factoring, mentioned by several candidates, does not really address the underlying issue of terms of trade and is more about liquidity management than funding
 - probably the best approach is a co-ordinated push by sales and debtor control to “manage” debtors down by re-negotiating terms.
- Creditors (other companies’ debtors!):
 - exercising buyer power by highlighting the policy of the new owners to dramatically increase sales so holding out the possibility of increased purchases for longer credit terms
 - as for Stock, standardising components to reduce number of suppliers and increase volume to those remaining
 - and as for Debtors, initiate a co-ordinated push by procurement and creditor control to “manage” out creditors days by re-negotiating terms
 - buyer power gives some edge to Term, hence the 15% target.
- Procurement and Sales:
 - opportunity to add momentum to the working capital reduction initiative by institutionalising collaboration/sharing of ideas between the financial staff in these two outward facing functions.

6b) Export earnings currency risk

(3 marks, 5.4 mins)

Marking scheme: Noted whether comments referred to structural hedging, financial hedging, other; noted the number of relevant points made, quality of narrative and marked within the four bands as for 6a.

- If domestic sales increase to 2½% p.a. over the next five years and exports climb to 50% of turnover

YEAR 5	Domestic Sales	£113m
	<u>Export Sales</u>	<u>£113*m</u>
		<u>£226m</u>

- 60% of component input imported, assume equivalent to 10% sales

YEAR 5	<u>Imports</u>	£23*m
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- Significant transaction exposure with some opportunity for netting imports* and exports* (subject to changes in sourcing policy).
- Structural hedges:
 - invoice in GBP where possible
 - net imports and exports where possible
- Financial hedges:
 - 100% forward on order confirmation
 - if “price list” sales seek variation clause

6c) Export credit risk

(5 marks, 9 mins)

Marking scheme: Noted whether comments referred to types of risk evaluation, types of hedging, other; then as for 6b.

- Sovereign risk:
 - assess via credit rating
 - relationship bank's reports
 - monitor press for current hot spots
- Customer risk:
 - assess via credit rating if available
 - credit agency (Dun & Bradstreet equivalents)
 - fundamental analysis if risk is material to company well-being
- Hedging risk:
 - use payment terms and export credit agencies to manage risk
 - payment terms:
 - open account, normal payment terms
 - shorten payment terms
 - documentary credit (release documents against payment)
 - letter of credit from buyers bank
 - l.c. confirmed by UK bank
 - payment in advance
 - ECAs (government sponsored export credit agencies): these exist in many countries to assist exporters, eg ECGD in UK, Coface in France, Hermes in Germany. They provide variously insurance against sovereign and corporate credit risk
 - in some countries commercial insurance companies provide similar services, sometimes as an alternative to government schemes, sometimes as the only option
- Control:
 - set/monitor limits by country and customer, in conjunction with prescribing payment terms
 - highlight material concentrations of risk in geographical regions subject to upheaval and with global companies operating through "other name" subsidiaries in different countries.

QUESTION 7

Prescribing risk appetite by defining KRIs and KCIs for overseas growth by Joint Venture

(12 marks, 21.6 mins)

7a) Four most important KRIs (and KCIs)

(4 marks, 7.2 mins)

Marking scheme: The eight typical JV KRIs/KCIs which appear in the text of Q7 and on the Pro-Forma attached to the General Exam Paper are listed below in the table entitled “Pro-Forma (Truncated).” KRI/KCI (ix), which is blank in the text of Q7 and on the Pro-Forma attachment, now has a reference to “patent law” which was added by the Examiner before marking the Paper and is marked with an asterisk. The Examiner expected to see at least three of the six KRIs marked with an asterisk* in answers to 7a. Candidates who chose three of the six scored full marks.

- The three most popular choices were (i), (iv) and (vii) all asterisked.
- Only three candidates volunteered a personally determined KRI/KCI and all three related to patent law.

PRO-FORMA (TRUNCATED)	
Key Indicators	Key Indicators
KRIs: Risks which pose the greatest threat to the joint company	KCIs: Self-imposed constraints chosen to limit or otherwise influence the amount of risk undertaken
(i) exposures to classes of sovereign risk * 17	(i) sovereigns: credit rating, political and economic indicators, quantum of exposure
(ii) exposures to size of individual investment 10	(ii) individual investment: relative size, technical risk
(iii) constraints implied by desired credit rating of parent company 2	(iii) credit rating level
(iv) exposures to conventional finance/treasury risks, eg funding, liquidity, fx/interest rates, commodity prices * 15	(iv) interest cover, leverage, headroom, degree of rate/price hedging
(v) regulation on conduct of business 9	(v) regulations eg types which are necessary or in contrast unacceptable
(vi) exposures to types of corporate counterparty * 7	(vi) corporate counterparties: credit metrics eg liquidity
(vii) exposures to types/sizes of JV * 14	(vii) JV: size limits, financial profile
(viii) exposures to types of product-market * 3	(viii) product-markets, relative size, relevant expertise, market risk
(ix) Other <i>respect for patent law</i> * 3	(ix) Other <i>enforcement of patent law</i>
(x) other	(x) other
Total: 20 x 4 = 80	

- The numbers on the right hand side of the KRI column (17, 10, etc) report frequency of choice by candidates.

7b) Reasons for Choice

(8 marks, 14.4 mins)

Marking scheme: Evaluated the reason quoted by each candidate for each KRI and KCI (eight evaluations per candidate) in terms of relevance and quality; then marked within four bands: clear fail, marginal pass, clear pass, distinction and aggregated per candidate.

- Reasons for selecting a risk and self-imposed constraints on assuming the risk are summarised below for the four most popular KRIs/KCIs.

(i) KRI: Exposure to classes of sovereign risk

- many of the countries in the regions of high growth identified are LDCs and are intrinsically more risky politically and economically than the more developed countries where the company is accustomed to operate
- initially the company will be on a steep learning curve and extra vulnerable as it learns how to do business in a JV in an unfamiliar environment
- in some countries the conduct of JV is heavily influenced by domestic government sentiment and subject to seemingly arbitrary change
- availability of financial services and funding is likely to be better in the more politically and economically stable countries.

(i) KCI:

- minimum investment grade rating for country
- no record of expropriation or imposition of discriminatory taxes/constraints on foreign businesses
- GDP development in line with a peer group of developing countries
- limit equity exposure and maximise local debt
- limit on size of investment so that cost of exit would not be terminal.

(iv) KRI: Exposures to conventional finance/treasury risks, eg funding, liquidity, fx/interest rates, commodity prices

- banking/financial sector may not be able to provide adequate range of services
- volatile fx, interest, raw material prices difficult to hedge
- restrictions on capital, dividend flows
- trapped cash risk.

(iv) KCI:

- presence of foreign banks, ideally the parent relationship bank
- existence of developed banking system for basic cash movement, bank debt, currency exchange, basic hedging, trade finance
- freedom to remit to parent
- JV agreement on dividend, funding contributions by both parties, risk appetite.

(vii) KRI: Exposure to types/sizes of JV

- if too big, failure could be terminal for company, if too small may squander valuable and scarce senior management time
- if % stake is too small, lose control; if too big, too much risk concentration

(vii) KCI

- if resources allow, the aim should be a diversified portfolio of JVs with companies which have an adequate financial profile and strong distribution in the relevant business sectors
- Presumption would be in favour of 51% stake to retain control
- If a minority stake is the only possibility and the market is attractive, minimise equity exposure to conserve resource for a majority stake opportunity.

(ii) KRI: Exposure to size of individual investment

- risk of JV failure is significant, especially during the learning phase. If the investment is material then exit may be seriously damaging in terms of both financial cost and senior management time/energy. This suggests setting a max level of investment
- however the product is high technology so scale must be sufficient to support costly physical and human resource. This suggests setting a minimum scale of operation.

(ii) KCI:

- specify minimum turnover necessary to support threshold level of physical and human resource
- if this minimum turnover implies a level of investment which exceeds the maximum suggested above under KRI, then either the JV is abandoned or a JV partner is found which already has spare suitable physical and human resource.

Examiner's Report Advanced Diploma - October 2012

OVERALL SUMMARY OVERVIEW

	General Exam	Case Exam	Combined
Marks	46.9%	49.6%	50.3%
Questions	7	8	15
Students	20	19	39
Pass #	7	6	13
Pass	35%	32%	33%
Range of marks %	27.6% to 68.5%	34.6% to 63.6%	

This was a disappointing set of results overall. We understand, however, that there were quite a few candidates who have not been studying currently but who decided to take the exams and generally did not achieve good results. The distribution of marks reflects these two constituencies. Looking at the distribution of the marks on the two papers the whole distribution is about 5 marks lower than average; 34% achieved pass marks of 50 or above, 51% were in the 40s and 15% in the 30s.

There were, however, two very good candidates with marks consistently in the 60s.

I have detailed the results by question, which show that some questions had very low pass rates and very low average marks;

General exam	marks available	passes out of 20	average mark
Q1	16	5	36.9%
Q2	22	11	50.5%
Q3	12	9	42.7%
Q4	16	6	41.1%
Q5	8	10	48.2%
Q6	14	7	44.7%
Q7	12	20	67.4%

Case exam	marks available	passes out of 19	average mark
Q1	10	14	62.4%
Q2	14	12	50.1%
Q3	13	11	53.4%
Q4	12	2	33.2%
Q5	10	9	47.7%
Q6	9	17	69.0%
Q7	16	7	45.4%
Q8	16	8	45.5%

Corporate Finance and Funding Summary (both papers)

Overall the quality of answers on the eight corporate finance and funding questions across the two papers (105 marks out of 200) was not as good as in recent years. The average mark was 47.8% and there were 9 passes plus 2 marginal passes out of 20 candidates. Two candidates were at distinction level but 3 of the fails were bad fails, with marks in the 30s.

Treasury and Risk Management Summary (both papers)

There were seven questions on treasury and risk management across the two papers (95 marks out of 200). As for CF&F the results were significantly worse than in previous years. The average mark for the 20 candidates was 48.7% and there were 7 passes plus 7 marginal passes. At distinction level the two CF&F distinctions were joined by a third candidate. There were 4 bad fails but mainly not the same as those in CF&F.

EXAMINER'S REPORT GENERAL EXAMINATION

Question 1 Multiples valuation and maximisation of shareholder value during a disposal strategy.

(Avg 37%, Pass 5/20)

The answers to this question were generally terrible, with very little substance and an aversion to using the data given on the question, with values for multiples being assumed instead of calculated.

Part 1a was mainly the number-crunching bit and was very badly done (average mark 28.1%, 4 passes). Some candidates strangely used multiples from year 7 when asked to value the company in year 1. The term “prospective multiples” was apparently not understood by most. And most candidates did not / could not calculate EBITDA for year 1 because depreciation was not explicitly given – however it was given as 1.1 for the next three years! Several candidates applied P/E ratios to EBITDA – they should know by now the difference between earnings as in P/E and EPS (UK terminology) and earnings as in EBITDA (US terminology).

Part 1b asked how management had created value in years 2 and 3 during the MBO period. The answers were generally much better here (60%, 15 passes) but, while sales, capacity utilisation and costs were well covered, cash flow generation and the resultant re-gearing was often neglected. Though specifically asked about years 2 & 3 quite a few, incomprehensibly, commented on years 4 to 7.

Part 1c asked about the key lessons on shareholder value management when carrying out disposals, based on the example in the question. This, again was very poor (37%, 3 passes). Many candidates simply gave conventional answers on efficient management of the business, which was a relatively limited part of the question, and missed out the big “corporate finance” issues that this case was mainly about and which were badly handled by the disposing company.

Question 2 Credit assessment and remedial action for a company in a severe financial crisis.

(Avg 51%, Pass 11/20)

Part 2a - most students did enough, or nearly enough, to pass (average mark 55%, 13 passes) but not many gave comprehensively good answers – they all tended to miss something in this complex and far from routine company situation e.g. the extreme m-t-m swap exposure, cash flows, covenant default.

Disappointingly, despite good analysis, only two out of twenty actually gave a rating on the back of their analysis.

Part 2b (50%, 10 passes) asked what remedial action was required, given that their analysis should have indicated that drastic steps were needed to rescue the company, not just routine, good financial management. For some candidates it was almost as if the credit rating was an isolated, theoretical thing with no real meaning or implications.

The two least impressive, content-free recommendations were:
“Write a business plan” and “pay down debt”

The weakest answers did not get much beyond improving margins, squeezing working capital and cutting dividends and capex. Others were much fuller, better answers. Despite their damning credit assessment in Q2a not many quantified just how much debt had to be reduced (about £1,000 million in my estimation). Through disposals, cash-flow management, new capital, debt-equity swap etc nor how much profit needed to be improved (about a £40million reduction in overheads).

Part 2c, on the banks’ strategies and range of available actions, was patchy – some good, some weak answers. The weaker candidates seemed to know very little about the practicalities of managing bank relationships, especially in crisis situations. Overall good marks (53%, 14 passes).

Part 2d was a more open-ended, but inviting, question on “vulture funds”, somewhat tangential to the core subject of this question and not directly “on-syllabus”. Even allowing for a wide definition of “vulture funds” and their

activities, most candidates didn't have much to say on this topic and did not relate their answers very much to the case study in question (41%, 9 passes).

Question 3 Geared and Ungeared Betas, WACC, ROIC

(Avg 43%, Pass 9/20)

In 3a candidates were asked to explain differences in a given data set containing levered and un-levered betas for the population of US companies, divided into those with net debt and those with net cash (these two groups not identified as such – that was for them to work out). These were really interesting empirical data which, unfortunately and strangely, many candidates chose to ignore in favour of a general discussion of the theory of betas and WACC (which they just love to write about and do so even if the question is not about WACCs).

To be fair almost half identified that one category of companies was cash-rich (low levered beta) and that they tended to be in high risk sectors (high un-levered beta). Also that the debt-rich category with high levered betas were in low risk sectors – great stuff, just as the theory suggests!.

For too many candidates beta seems to be simply an element in various formulae, which they can quote, but the underlying risk issues, for which beta is simply a metric, seem to escape them.

Despite these failings the average mark was 55% with 11 passes.

In question 3b candidates were asked to explain the use of un-levered betas in corporate finance. As in 3a, this was done well by about half of candidates, badly by the other half (average mark 48%, 10 passes).

Part 3c (deriving a pre-tax target rate of return on book capital from WACC) was the easiest part-question on the whole paper and only one person gave a correct answer (only 4 marks on offer but average score 23%, 3 passes) – which is disgraceful!

All that is needed is to understand the principles behind the following formula and demonstrate it with some numbers of your choice;

Pre-tax target ROCE = $(WACC / (1 - t)) \times (EV / \text{Book Capital})$
e.g. $7\% / 0.7 \times 1000 / 500 = 20\%$

Or some simple, clear thinking - a WACC of 7% and EV of 1,000m means the company must earn 70m after tax or 100m pre-tax. If book capital is 500 then then the target rate of return on book capital must be $100/500 = 20\%$.

Instead I read lots of rubbish about $EVA = NOPLAT - (WACC \times \text{capital employed})$, which was irrelevant and is actually incorrect even though it is presented as correct in many shareholder value discussions. Oh, and there were lots of detailed WACC calculations when all that was necessary was to assume a WACC and demonstrate how to use it correctly.

Also many candidates did not heed the instruction to “give a simple numerical example to illustrate your answer.”

Question 4 Overseas acquisition currency related risks

(Avg 41%, Pass 6/20)

Lark plc, a UK manufacturing company trading domestically, is considering the acquisition of French company Alouette. Lark’s only fx activities were the import of some inputs which are hedged 100% when ordered. Candidates are asked to identify the currency risks which the acquisition will raise so the Board can agree a policy for their management.

This was a challenging question. The key to responding well, heavily trailed in the text of the question and in the “Required”, was to realise the contingent and dynamic nature of the fx risks and explore how that played out as the acquisition process moved through negotiation/agreement, approval/completion and post completion. A further complication was the possibility of Lark shares and deferred payment instead of cash as consideration for some of Alouette’s shareholders.

This question was clearly beyond the competence of some candidates, with a third scoring less than 35%. For the rest, a noticeable feature was over emphasis on fx hedging instruments rather than on the sources and nature of the fx risks. At a deeper level, many candidates seemed to have a somewhat sketchy understanding of the acquisition process itself, particularly the

share/deferred payment element.

Marks on this question ranged from 6% to 71%. All but one of the six passes also featured in the 11 passes/marginal passes for the paper overall.

**Question 5 Impact of new banking subsidiary on high street retailers
balance sheet (Avg 48%, Pass 10/20)**

A topical question, with trusted high street retailers exploiting their good names to attract retail deposits away from the banks.

Summary typical financial profiles were provided for a high street retailer and a retail lending bank. For a retailer with a bank subsidiary Part 5.a (2 marks) required a very simple calculation to establish the size of bank balance sheet, relative to a retailer's balance sheet, required to deliver 12½% ($\frac{1}{8}$) of combined total profits. To do this candidates needed to read and interpret the two financial profiles and perform a very simple calculation (average mark 45%, 10 passes). Having established the relative size of bank B/S, for a further 2 marks Part 5b required another simple estimate of the funding required for the bank (average mark 56%, 11 passes). Note that the marking scheme allowed for candidates to get 5a wrong but still pass 5b, since marks were allowed for "method".

Even compared with retailers, banks are very low margin businesses. So to deliver $\frac{1}{8}$ of combined profits the bank needs £4.5bn of funding (eg deposits) compared with £3bn for the retailer. For 4 marks Part 5c (average mark 46%, 11 passes) asked candidates to devise a funding strategy for the bank. Usually, this would be a decision about a mix of deposits, wholesaler funding and securitisation as flagged in the text of the question. In these difficult times the prudent policy would be 100% customer deposits.

This question is deceptively simple. It tests two skills which are very important professionally: the ability to read and interpret material (numbers and text) which are related to but not part of our everyday experience and to do ball-park simple calculations in order to broadly scope an issue. The question was a good discriminator: individual marks ranged from 0 to 95% and there was an overlap of nine candidates between the eleven who passed this question and the eleven passes/marginal passes for the whole paper.

Question 6 Conserving cash for planned debt paydown by reducing working capital and protecting high growth export sales from currency and credit risk.

(Avg 45%, Pass 7/20)

Part 6a (6 marks) invited candidates to explore the potential for reducing working capital investment in a manufacturing company and to explain how the improvements proposed might be achieved (average mark 43%, 9 passes).

Working capital is a “bread and butter” topic for treasurers and so the pass rate was very disappointing. Two features deserve comment. Despite being provided with the current level and composition of working capital only eight out of twenty candidates made any effort to quantify likely savings. And quite a few candidates seemed to have little understanding about the dynamics of the manufacturing process – specifically the fact that “stock” includes stores of raw materials and components, work-in-progress sitting on the shop floor at various stages in the process which may take anything from hours to weeks and finished goods sitting in a warehouse either waiting to be despatched or in anticipation of future orders.

So suggesting that “just in time” (JIT) arrangements with suppliers reduces “stock” to zero or thereabouts is a gross over-simplification.

Pursuing the theme of conserving cash, part 6b required candidates to explain how they would protect earnings from currency risk, given the declared intention of the business to increase exports from zero to 50% of turnover within five years. The three marks allocated to this part reflected the straight forward nature of the issue (again “bread and butter”) so the responses were disappointing-average mark 43%, 9 passes. However, structural hedging and netting did feature well, picking up on the 60% of inputs which were imported.

For 5 marks part 6c asked for proposals to protect against export credit risk. Responses were expected to cover risk evaluation of customers and sovereigns and risk management by choice of payment terms, limits and export credit agencies/commercial insurers. Responses were better here (average mark 48%, 13 Passes).

Question 7 Prescribing risk appetite by defining KRIs & KCIs for overseas growth by joint venture

(Avg 67%, Pass 20/20)

The last question on a Paper is sometimes a step too far for a few but in this case the pass rate was 100%, with several candidates scoring some badly needed marks!

For 4 marks Part 7a required candidates to select from a pro-forma list of typical key risk indicators(K.R.Is) and key control indicators (K.C.Is) the four most appropriate ones for a company planning to expand in high growth markets, eg Eastern Europe, the Far East and Latin America, through the medium of joint ventures. Again, this is a topical issue which also featured in the Global Spirits Case Exam. Sovereign risk, size/type of the joint venture and traditional types of treasury risk (fx, funding, liquidity) featured strongly in the responses and the average mark was 95% with 20 passes.

For a further 8 marks candidates had to justify their choice of KRI & KCI. A common thread running through responses was to cope with the step change in sovereign risk related issues by limiting the size of individual jv exposure and diversifying across a wide range of countries – a portfolio approach to LDC risk management which again has parallels in the Global Spirits Case. Part 7b (average mark 53%, 15 passes) was a better discriminator than 7a.

Summary of Questions 1 – 3, General Exam (50 marks)

Overall 6/20 passes, average mark 44.3%, range 29% to 67%. 5 candidates failed all three questions, 3 passed all three questions.

This was a very disappointing result on three straight-forward questions on predictable core topics. The avoidance of or weakness in numerical calculations is concerning as was the ability to quote financial formulae but without a thorough understanding of the financial concepts behind them and the practical applications.

Summary of Questions 4-7, General Exam (50 marks)

Overall 10/20 passes average mark 49.5%, range 24% to 70%.

A noticeable weakness, as with Q1-3, was an apparent lack of facility with numbers, eg Q5 Parts a, b, and Q6 Part a; another was the ability to identify the features of business operations which are the raw material for the treasury function, eg Q4 (acquisition process) and Q6 (type of “stock”).